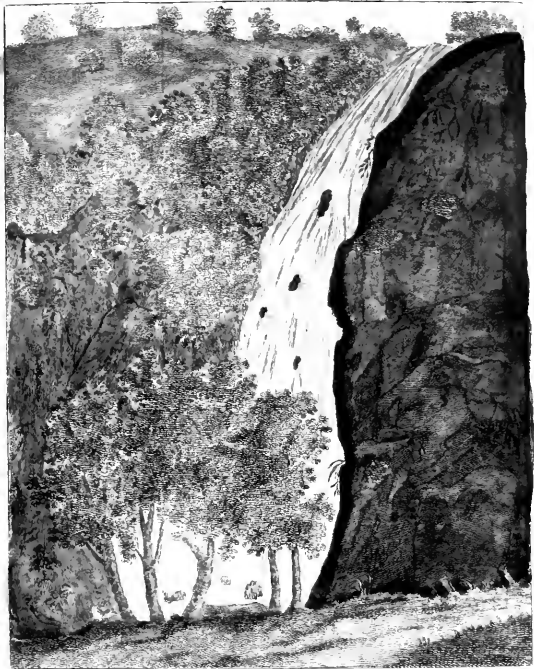


JRENE DWEN ANDREWS

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18-91







A
T O U R
I N
I R E L A N D:
W I T H
G E N E R A L O B S E R V A T I O N S
O N T H E
P R E S E N T S T A T E O F T H A T K I N G D O M.
M A D E I N

T H E Y E A R S 1776, 1777, and 1778.

A N D

B R O U G H T D O W N T O T H E E N D O F 1779.

B Y A R T H U R Y O U N G, E S Q; F. R. S.

H o n o r a r y M e m b e r o f t h e S o c i e t i e s o f D U E L I N, Y O R K a n d M A N -
C R E S T E R; t h e O e c o n o m i c a l S o c i e t y o f B E R N E; t h e P a l a t i n e
A c a d e m y o f A g r i c u l t u r e, a t M A N H E I M, a n d t h e
P h y s i c a l S o c i e t y a t Z U R I C H.

D U B L I N:

P R I N T E D B Y G E O R G E B O N H A M,

F O R M E S S R S. W H I T E S T O N E, S L E A T E R, S H E P P A R D,
W I L L I A M S, B U R N E T, W I L S O N, J E N K I N,
W O G A N, V A L L A N C E, W H I T E, B E A T T Y,
B Y R N, A N D B U R T O N.

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M. DCC. LXXX.



P R E F A C E.

NUMEROUS as the publications on husbandry have become in almost every part of Europe, few of them let us into its actual state in any country. Authors seem to have disdained recording the practice, so much have they been employed in prescribing alterations. Several reasons may be assigned for this omission: to describe the agriculture of a province, it is necessary to travel into it, and among the writers who have been most voluminous upon this subject, the greater number have been confined to their own farms,---perhaps to their fire sides. It was impossible for them to have given detailed descriptions of what they had never seen.

There is also a greater temptation to the production of such didactic works as are most usual in agriculture, than to the less entertaining minutiae of common management. The man who composes a piece for instructing others how to conduct their lands, generally includes all sorts of soils, situations, and circumstances; his views are great, his work comprehensive, round, and complete, and every reader finds something that suits him. The success which has attended the *complete bodies*, *general treatises*, and *dictionaries* of the subject, though compiled by men as much acquainted with astronomy, as with agriculture, must have been owing to these circumstances: as the good reception of well written, though erroneous theories is, to *the agreeable* bearing away the palm due to *the useful* alone. But a reader who would wish to receive real information, should readily give up the pleasure of being amused for the use of being instructed; the number of such, however, will always be comparatively

paratively small, and the writer who aims simply at utility, must expect his productions to give place to those of a more amusing turn. When a long course of years has proved the importance of the facts he has collected, his labours will probably have their due estimation.

The details of common management are dry and unentertaining; nor is it easy to render them interesting by ornaments of style. The tillage with which the peasant prepares the ground; the manure with which he fertilizes it; the quantities of the seed of the several species of grain which he commits to it; and the products that repay his industry, necessarily in the recital run into chains of repetition, which tire the ear, and fatigue the imagination. Great however is the structure raised on this foundation: it may be dry, but it is important, for these are the circumstances upon which depend the wealth, prosperity, and power of nations. The
 minutiae

minutiæ of the farmer's management, low, and seemingly inconsiderable as he is, are so many links of a chain which connect him with the State. Kings ought not to forget that the splendour of majesty is derived from the sweat of industrious, and too often oppressed peasants. The rapacious conqueror who destroys, and the great statesman who protects humanity, are equally indebted for their power to the care with which the farmer cultivates his fields. The monarch of these realms must know, that when he is sitting on his throne at Westminster, surrounded by nothing but state and magnificence, that the poorest, the most oppressed, the most unhappy peasant, in the remotest corner of Ireland, contributes his share to the support of the gaiety that enlivens, and the splendour that adorns the scene.

If such is the importance of these little movements in the great machine of the State, to know and to understand them,

them, surely deserves the attention of men, who are willing to sacrifice their amusement to their information. This is in other words saying, that the state of common husbandry, in all its variations and connections ought to be well understood. Of little consequence must precepts, maxims, and directions for a better conduct appear, unless we really know the evils that are to be remedied, and the practices that are to be condemned. Without this necessary knowledge, the recommendations of the most ingenious speculative author, must be almost useless; and the labours of the experimentalist, want much of the application which is to render his facts important. The object of every writer in rural œconomics is to make husbandry better. But before they attempt that, should they not know what it is? This idea has often made me, in reading books of agriculture, lament that the first chapter of every practical work, was not a plain detailed account of the common management in the parish or neigh-

neighbourhood, where the author lived and wrote.

To render this sort of knowledge general and complete, it is necessary that every gentleman residing in the country, and practising agriculture, should write and publish an account of so much as falls within the sphere of his observation: The experience of centuries has shewn us how much this may be expected. Were it done, such journies as I have registered and published, would have been perfectly unnecessary. A man who has attended some years to husbandry in one place, would have it in his power to gain a far better and more particular account of every circumstance than it is possible a traveller should procure.

These accounts however having no existence, such as I have more than once offered to the public, may have their use: what should chiefly induce the reader to think so, is their being
taken

taken on the spot, from the mouths of gentlemen or farmers who reside in the districts, they describe---that the accounts are however perfect, cannot be expected---they are proportionally so to the sagacity, information, and experience of the person who speaks. When my intelligence was received from a company of gentlemen, I always waited for their settling among t' emselves any difference of opinion before I entered the minute; and if they did not agree, took the average of the sums or quantities in question.

The unbounded hospitality of a kingdom in which every country gentleman is by necessity a farmer, left me under very few difficulties, in gaining intelligence: but I did not trust entirely to this source, having upon most occasions common farmers summoned to assist at the consultations, the design of which was my information. Nor did I neglect opportunities of making enquiries of the cottagers, and of examining

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mining into their situation and way of living---the information I procured in this line, I apprehend to be of consequence: in England we know pretty well the state of the poor, but their circumstances in other countries ought to be one of the first objects of a traveller's attention, since from their ease or oppression, a multitude of conclusions may be drawn relative to government, wealth, and national prosperity.

That the agriculture of both these islands is of the highest importance, no one will deny, and perhaps, when the present state of Europe is well considered, it will in a political light be deemed more so than ever it was at any former period. It is true we are at present in a war with France, but I must own, the period appears to me fast approaching, when all the western part of Europe will find an absolute necessity of uniting in the closest bands. If the scene which has annihilated Dantzick, was now acting at Hamburgh and Amsterdam,

dam, I do not see where the power is to be found, to prevent or revenge it. The consequence of France has been long declining, and the transfer of her exertions from the land to the sea service, may be fatal to the liberties of Europe. If ever the fatal day comes, when that exertion is to be made, all her neighbours would feel it their common interest to second and support her. Much would it then be regretted, that the strength and resources of those powers should have been so exhausted by wars among themselves, as to be disabled in the moment when most signally wanted. Then it would appear, that France should have directed all her attention to her army, and Britain to her navy, as the best united means of resisting what Lord Chesterfield very justly terms, "new devils," arising in Europe. But from whatever quarter danger may arise to Great Britain, it much behoves her, while other powers are rising so incredibly in force, to take every means that providence permits,

to

to strengthen herself; and that the most secure and solid way of doing this, is by carrying all the arts of cultivation in both islands, to the highest pitch of perfection that is practical, no body will apprehend deny.

That too much national attention cannot be given to agriculture, never appeared so strong as it does in the present period. The legislature of this kingdom has for a century bent all its endeavours to promote the *commercial system*. The statute book is crowded with laws for the encouragement of manufactures, commerce, and colonies, and in some instances at the expense of the improvement of the national soil. Yet in that period only one great agricultural measure was embraced, the bounty on the export of corn, frittered down to the present system, which turns out with or without, but certainly by the connivance of law, to be a constant *import scheme*, in order to reduce the prices of the earth's products, in favour of those

those classes whose monopolizing spirit has had the direct tendency to beggar and ruin the kingdom. Whoever considers attentively the *commercial* conduct of Great Britain, will not think there is any thing paradoxical in this assertion.

The entire administration of the colonies has been commercial. It has been made a trader's project, and the spirit of monopoly pervaded every step of our progress in planting and rearing those settlements. They were governed by the narrow spirit of a counting house, which in the plantation of countries formed to be the residence of great nations, neither saw nor permitted any thing better than a monopolized market. It was this spirit that shackled those countries in such commercial fetters as to render them incapable of contributing to the necessities of the general government of the empire. Had a more liberal policy been embraced, such contributions would have been early introduced, with a capability (from a free
com-

commerce) of supporting them. The commercial government gave up the advantage of all contribution for the greater profit of monopoly: it was evident that *both* could not be had, till those countries became too great and powerful to be forced into new and unjust habits. Nothing therefore can be more idle than to say that this set of men, or the other administration, or that great minister, occasioned the American war. It was not the stamp act, nor the repeal of the stamp act; it was neither Lord Rockingham nor Lord North, but it was that baleful monopolizing spirit of commerce that wished to govern great nations, on the maxims of the counter. That did govern them so; and in the case of Ireland and the Indies does still govern them so. Had not the trader's system been embraced, America would, in consequence of taxation, have been long ago united with Britain; but our traders knew very well that a free commerce would follow a union.

Nor

Nor is it only in the loss of vast territories that we feel the direful effects of the monopolizing spirit. The greatest part of the national debt is owing to the two last wars, which cost us one hundred millions sterling, and arose from mercantile causes: that of 1740 was a war for the protection of English smugglers: and that of 1756, sprung from an apprehension that the French would divide the American market with our traders: the present, which may be as expensive before it is finished as either of the former, was owing to a determination to secure the market we had gained. But all the wars are for markets or smuggling, or trade or manufacture: That vast debt which debilitates the kingdom, those taxes we pay for having lost thirteen provinces and the hazard we now run of losing or ruining Ireland, are all owing to the former predilection of our government for the trading system.

I should go much beyond the line of truth to declare, that trade and manufacture

facture are necessarily ruinous. The very contrary is my opinion; extensive manufactures, and a flourishing commerce, are the very best friends of agriculture, as I have endeavoured to shew more at large in my *Political Arithmetic*. What I would urge here is, that trade is an admirable thing; but a trading government a most pernicious one. Protect and encourage merchants and manufacturers in every exertion of their industry; but listen not to them in the legislature. They never yet were the fathers of a scheme that had not monopoly for its principle. It has been the fatality of our government to attend to them on every occasion. We are, at this moment, in the full maturity of the evils which a legislature, influenced by traders, can bring upon a country. Nor can I without astonishment view the commercial jealousy that has arisen in Europe in the last 50 years. Other nations have caught of us the commercial spirit. They have attributed the effects of the noblest and
most

most perfect system of freedom the world has ever seen, to the *trade* of the country. Deluded mortals! Give your subjects the liberty which Englishmen enjoy, and trade will spring up one among the many luxuriant branches of that wide extended tree. LIBERTY, not trade, has been the cause of England's greatness. Commerce and all its consequences have been the *effect*, not the cause of our happiness. France has, with the same sort of folly, overlooked the simple and obvious advantage of improving her noble territory for the more precarious profits of trade: and what are the consequences? She too has hazarded those wars for commerce, which have exhausted her resources, mortgaged her revenues, and debilitated every principle of her national strength.

When the present monopoly (the true characteristic of the commercial system) has half beggared Europe with the thirst of wealth; and that nations have grown wiser by experience, they

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will,

will, it is to be hoped, found their greatness in the full cultivation of their territories; the wealth resulting from that exertion, will remain at home, and be secure; nothing in that progress will kindle the jealousy of neighbours ---no vile monopolies---no restrictions ---no regulating duties are wanting: perpetual wars, heavy debts, and ruinous taxes, will not be necessary to extend and promote agriculture, inseparable as they have been from commerce.

To a philosophical eye the present conduct of commercial Europe is an inexplicable enigma. The mercantile system of England having grasped at and possessed the monopoly of the North American market, France, in the transactions which preceded the war of 1756, manifested the plainest jealousy of our power in North America: the most ill founded jealousy, as experience has shewn, that could actuate a nation. The two countries engaged in the war upon a subject merely commercial; and it cost, between them, above an hundred

dred millions sterling, the one to be driven out of Canada, and the other to lose America by rebellion. Is it possible that the rulers of these two kingdoms, if they had an inclination to amuse themselves with expending such a sum, had so poor a genius that they could not devise the means of doing it *at home*, in the encouragement of agriculture and arts; in inclosures, navigations, roads, harbours, the cultivation of wastes, draining marshes, raising palaces? &c.

In the Duke de Choiseul's ministry we were on the point of another commercial war, we had a greater trade to India than France, and in order to balance it that kingdom was ready to expend fifty millions more. Then Spain takes commercial umbrage, at our settling with commercial views on a rock, the great products of which are seals and penguins; the affair could not cost less than five millions; but that is a trifle in the affairs of trade---For see, we are now engaged in a fresh career of

commerce with America, and the whole house of Bourbon. Upon a moderate computation, France, Spain, and Britain, will each of them spend enough in it to improve three or four provinces to the highest pitch of cultivation; which instead of slaughtering three or four hundred thousand men, and leaving thrice that number of widows and orphans, would render a greater number of families happy for life, and leave a rich and increasing legacy of ease and plenty to their posterity: and all the slaughter, ruin, poverty and destruction, that is thus brought on the human species, is for the sake of commerce.

It was the commercial system that founded those colonies--commercial profits reared them---commercial avarice monopolized them-- and commercial ignorance now wars to recover the possession of what is not intrinsically worth the powder and ball that are shot away in the quarrel. The same baneful commercial genius influences France and Spain to exhaust their revenues, ruin their
their

their subjects, and stagnate every branch of domestic industry, for distant, ideal, and precarious commercial advantages.

But to return---The manufactures, commerce, and fisheries of Ireland, are objects of much importance to Great Britain, and as the information I procured concerning them, was chiefly gained on the spot, and given me without those intentions of deceiving, which are too common, when such particulars are introduced politically to the world, I believe the reader will not be sorry at my having given them a place.

The general view of the kingdom I have given from the whole of the intelligence, will I flatter myself, throw Ireland into that just light, in which she has not hitherto appeared. The many erroneous ideas concerning the rental, wealth, and consequence of that island, with which every book is filled that treats of it, will be here explained. The reader will find the progress of national prosperity, its present state, and
the

the vast field of improvement which Ireland will continue, until it comes to be every thing to Britain which the warmest patriot could wish. For so happy a state to arrive, nothing is wanting but this country to change her policy, and cherish that industry she has hitherto seemed so anxious to shackle.

After having travelled through the greatest part of the kingdom, I found, upon sitting down to give an account of these circumstances, not immediately arising from the husbandry of the country, that I was in want of many public accounts of trade, manufactures, taxes, &c. not to be procured upon a journey. I was for some time in correspondence with some friends in Dublin to gain these, but after passing near a twelve-month in expectation, I found it would be impossible to procure the necessary papers without going thither; I accordingly went and resided nine weeks in that city, very busily employed in examining and transcribing public records and accounts, which enabled me to give
such

such a detail of those subjects, as has not hitherto been laid before the public. I may without exaggeration assert, that all these objects for want of industry in those who have written concerning Ireland, have been treated in the way of guesses, conjecture, and declamation, to answer particular purposes, instead of any detail of facts. Part of these enquiries may be uninteresting to those who do not reside in the country, but I am nevertheless so much convinced of their importance to England, as well as to Ireland, that I have determined to explain them as fully as I was able, tedious as they may appear to those, who read rather for amusement, than information. Perhaps there would be no impropriety in prefixing to all the productions I venture before the public, this caution: I have been reproached for being tedious, but I profess, to treat that subject which I think (vainly perhaps) I understand, in so detailed a manner, that if my pieces were not unentertaining, they would very indifferently answer the end, to accomplish which, I have travelled, practised and written.

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Husbandry is an art that has hitherto owed less to reasoning than I believe any other. I know not of any discoveries, or a single beneficial practice that has clearly flowed from this source. But every one is well acquainted with many that have been the result of experiment and registered observation. There is no people existing so backward but have some good practices to copy, as well as errors to avoid. To describe both is to give a chain of connected facts that must, in the end, prove useful to such as will read and digest them with attention and reflection: but I am ready to admit that this is a study very far from amusing. The registers of such journies, as I have employed a great deal of time and expense in making, must necessarily be exceedingly dull to those who read for pleasure: so disagreeable, that they will certainly throw down the volume with as much disgust as they would tables of arithmetic. The flattering circumstance of a successful publication is not thus to be expected. The present age is much too
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idle to buy books that will not banish *l'ennuye* from a single hour. Success depends on amusement. The historical performances of this age and nation, which have proved so honourable to their authors, would have met with a less brilliant success, had not the charms of style rendered them as amusing as a romance. Their extreme popularity is perhaps built on rivalling, not only the authors that had before treated the same subjects, but Sir Charles Grandison and Julia. That this observation, however, when applied to books of agriculture is just, will appear from the very ill success met with by authors of capital merit, and the great sales that have attended the most miserable performances. The merit of Mr. Lisle's husbandry has, in many years, carried it but into the second edition. Mr Hitt's treatise on husbandry has not been re-printed, and is very little known, yet there are particulars in it of more merit than half a score volumes that have been successful. Even the elegant essays on husbandry of my old and much regretted friend Mr.

Harte,

Harte, have not been re-printed. Proofs to which many more might be added, that the public reception does not always mark the merit of a book.

Any real utility that may result from this work out of Ireland, can only be from those who determine steadily to become acquainted with all the facts they can procure, in order to compare, combine, and draw conclusions from them. To men thus scientific, too many facts can never be published; and with such, I flatter myself, I shall be readily pardoned for having added so many to the number. Indeed I sometimes smile in reading performances, the authors of which think me of importance enough to do me the honour of abusing for whole pages together, at the very time that they make extremely free with information they never might have known, had my labours been wrought like their own, at a fire side. But while I am happy in the good opinion, and instructed in the correspondence of some of the first characters in
Europe

Europe---while my writings will stand the test with such men as a Harte, a Haller, and an Arbuthnot, I am perfectly indifferent to the ideas of the Moores, Shirleys, Marshals, and Wimpeys of the age.

There is one part of these papers which particularly demand an apology. I have ventured to recommend to the gentlemen of Ireland several courses of husbandry, as improvements upon what I found them practising, and have given directions how they should be performed. This is going a little out of my way; for it is that species of writing which I am apt to condemn. Instructions in this subject should, more than in any other, be gathered simply from the register of experiments and repeated observations: but having been requested by many gentlemen on the journey to do it, I have submitted to their opinion, rather in contradiction to my own. I have reflected attentively on the circumstances of Ireland before I drew up these recommendations; and
I believe,

I believe, that those who are best acquainted with the kingdom, will not think what I have proposed entirely inapplicable.

Having given such explanations of the design of this work as appeared necessary, there only remains to insert the names of those who were pleased to favour me with their assistance in executing it.

To the following persons only I was indebted for recommendations to Ireland :

The Earl of Shelburne.	John Arbuthnot, Esq;
The Dowager Lady Middleton.	Governor Pownal.
Mrs. Vesey.	Lord Kenmare.
Edmund Burke, Esq;	John Baker Holroyd, Esq;
Samuel Whitbread, Esq;	David Barclay, Esq;

Such were the small number of persons in England, who, before I went, took the trouble to interest themselves in the undertaking. As to the great body of absentees, knowing that there was not one but could contribute to my being well informed, by cards to their agents,

agents, I took the most effectual means of letting them know my intention; but except the few just named, the design was not happy enough to appear in such a light, as to induce them to contribute to it. Indeed there are too many possessors of great estates in Ireland, who wish to know nothing more of it than the remittance of their rents.

The circumstance was rather discouraging, and I began to apprehend that I might want information; but the reception I met at Dublin immediately removed it; and the following list of those who were so obliging as to take every means of having me perfectly well informed, will shew that I was not disappointed.

The Earl of Harcourt,	Duke of Leinster, <i>Castleton</i>
Lord Lieutenant	———— Jones, Esq; <i>Dol-</i>
Earl of Charlemont, <i>Dub-</i>	<i>leston</i>
<i>lin</i>	Rt. Hon. H. L. Rowley,
Mr. Machpharland, <i>Lut-</i>	<i>Summer Hill</i>
<i>trell's Town</i>	Earl of Mornington
Rt. Hon. Thomas Conolly	Rt. Hon. William Burton,
———— Clements, Esq;	<i>Slaine Castle</i>
<i>Killadon</i>	———— Jeb, Esq; <i>Slaine</i>
Colonel Marley, <i>Cambridge</i>	Mr. Gerard, <i>Gibbstown</i>
	Earl

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Earl of Beſſive, *Heardfort*
 Lord Longford, *Packen-*
ham

Captain Johnſton
 Rev. Dean Coote, *Sbaen*
Caſtle

———— Brown, Eſq;
 Mr. Butler, near *Carlow*

———— Mercer, Eſq;
Laughlin-bridge

Gervas Parker Buſh, Eſq;
Kilfaine

Colonel Nun
 Earl of Courtown

Lieut. General Cunning-
 hame, *Mount Kenney*

Baron Hamilton, *Ball-*
briggen

Lord Chief Baron Forſter,
Cullen

Lord Goſfort, *Market-hill*
 His Grace the Lord Pri-
 mate, *Ai magb*

Mr. Wm. Macgeough,
ditto

Biſhop of Clonfert
 Maxwell Cloſe, Eſq;

———— Richardſon, Eſq;

———— Leſlie, Eſq; *Glaſlough*

———— Workman, Eſq;
Makon

Right Hon. Wm. Brown-
 low, *Lurgan*

———— Warren, *War-*
renſtown

Mr. Clibborn, *ditto*
 The Biſhop of Down,
Liſburne

John Alexander, Eſq; *Bel-*
faſt

———— Portis, Eſq; *ditto*
 Arthur Buntin, Eſq; *ditto*

Mr. Holmes, *ditto*
 Dr. Halliday, *ditto*

Patrick Savage, Eſq; *Por-*
ta Ferry

———— Ainſworth, Eſq;
Strangford

John O'Neal, Eſq; *Shane*
Caſtle

James Leſlie, Eſq; *Leſlie*
Hill

Rev. Mr. Leſlie
 Right Hon. Richard Jack-

ſon, *Coleraine*

Robert Alexander, Eſq;
Derry

Rev. Mr. Bernard
 Rev. Mr. Golding, *Clon-*
leigh

Alexander Montgomery,
 Eſq; *Mount Charles*

Thomas Neſbit, Eſq;
 Sir James Caldwell, Bart.

Caſtle Caldwell
 The Earl of Roſs, *Belleiſle*

Lord Viſc. Inniskilling,
Florence Court

Earl of Earnham, *Farnham*
 W. G. Newcomen, Eſq;

Ballyclough
 Thomas Mahon, Eſq;

Strokeſtown
 The Biſhop of Elphin,
Elphin

Biſhop of Kilmore
 The Hon. Thomas Fitz-

maurice, *Ballymoat*
 The Right Hon. Joſhua
 Cooper, *Meera*

P R E F A C E. xxxi

- Lewis Irvine, Esq; *Tan-
rego*
 — Brown, Esq; *Sort-
land*
 Rt. Hon. Thomas King,
Ballyna
 Bishop of Killala, *Killala*
 — Hutchinſon, Esq; *do.*
 The Earl of Altamont,
Westport
 Mr. Lindſay, *Hollymount*
 His Grace the Archbiſhop
 of Tuam, *Tuam*
 Robert French Esq; *Mo-
niva*
 Mr. Andrew Trench, *Gal-
way*
 Frederic Trench, Esq;
Woodlawn
 Robert Gregory, Esq;
Kiltartan
 Sir Lucius O'Brien, Bart.
Drummoland
 Mr. Robert Fitzgerald
 Mr. Singleton
 Mr. Thomas Marks, *Li-
merick*
 Richard Aldworth, Esq;
Annſgrove
 Lord Donneraile, *Donne-
raile*
 Denham Jephſon, Esq;
Mallow
 Denham Jephſon, jun.
 Esq; *ditto*
 Robert Gordon, Esq;
Newgrove
 St. John Jefferyes, Esq;
Blarney Caſtle
 Dominick Trent, Esq;
Dunkettle
 The Earl of Shannon,
Caſtle Martyr
 Robert Longfield, Esq;
Caſtle Mary
 Earl of Inchiquin, *Roſ-
tellan*
 Rev. the Dean of Corke,
Corke
 Rev. Archdeacon Oliver
 Sir John Croulthurſt, Bart.
 — Herbert, Esq; *Mu-
crus*
 Arthur Blennerhaſſet, Esq;
Arbella
 Earl of Glandore, *Ardfer-
t*
 Lord Croſbie, *ditto*
 Robert Fitzgerald, Esq;
Woodford
 Edward Leſlie, Esq; *Tar-
bat*
 Mrs. Quin, *Adair*
 Right Hon. Silver Oliver,
Caſtle Oliver
 Earl of Clanwilliam
 — Macarthy, jun.
 Esq; *Spring Houſe*
 Mr. Allen
 Lord de Montalt, *Dun-
drum*
 Right Hon. Sir Wm. Of-
 borne, Bart. *Newtown*
 — Moore, Esq; *Marle-
field*
 Earl of Tyrone, *Curragh-
moor*
 Cornelius Bolton, Esq;
Ballycavern

Cornelius

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Cornelius Bolton, jun. Esq; <i>ditto</i>	Peter Holmes, Esq; <i>Johnstown</i>
Richard Nevill, Esq; <i>Furness</i>	Michael Head, Esq; <i>Derry</i>
John Lloyd, Esq; <i>Glester</i>	Rev. Mr. Lloyd, <i>Cullen</i>
	Lord Visc. Kingsborough, <i>Mitchellstown</i>

Such are the contributors to this work. It is with the utmost pleasure I reflect on the liberal, polite, and friendly manner in which I was received by such a number of persons, among whom are many of the most distinguished characters in Ireland---Characters that would reflect a lustre upon any nation.

The most careless eye will discern at once the great advantages, which the uncommon, but polite hospitality of the nation, united with an eagerness to do whatever had the most distant appearance of being serviceable to their country, gave me in describing it. If, with all these advantages, Ireland is not in future much better known than ever she was before, the fault is entirely mine, and I have little to plead in extenuation of it.

A T O U R,

A

T O U R, &c.

JUNE 19th, 1776, arrived at Holyhead, after an instructive journey through a part of England and Wales I had not seen before. Found the packet, the Claremont, captain Taylor, would sail very soon. After a tedious passage of twenty-two hours, landed on the 20th, in the morning, at Dunleary, four miles from Dublin, a city which much exceeded my expectation; the public buildings are magnificent, very many of the streets regularly laid out, and exceedingly well built. The front of the parliament-house is grand; though not so light as a more open finishing of the roof would have made it. The apartments are spacious, elegant, and convenient, much beyond that heap of confusion at Westminster, so inferior to the magnificence to be looked for in the seat of empire. I was so fortunate as to arrive just in time to see Lord Harcourt, with the usual
VOL. I. B ceremonies,

ceremonies, prorogue the parliament. Trinity college is a beautiful building and a numerous society; the library is a very fine room, and well filled. The new exchange will be another edifice to do honour to Ireland; it is elegant, cost 40,000*l.* but deserves a better situation. From every thing I saw, I was struck with all those appearances of wealth which the capital of a thriving community may be supposed to exhibit. Happy if I find through the country in diffused prosperity the right source of this splendor! The common computation of inhabitants 200,000, but I should suppose exaggerated. Others guessed the number 140, or 150,000.

JUNE 21st, introduced by Colonel Burton to the Lord Lieutenant, who was pleased to enter into conversation with me on my intended journey, made many remarks on the agriculture of several Irish counties, and shewed himself to be an excellent farmer, particularly in draining. Viewed the Duke of Leinster's house, which is a very large stone edifice, the front simple but elegant, the pediment light, there are several good rooms; but a circumstance unrivaled is the court, which is spacious and magnificent, the opening behind the house is also beautiful. In the evening to the Rotunda, a circular room, 90 feet diameter, an imitation of Ranelagh, provided with a band of musick.

The barracks are a vast building, raised in a plain stile, of many divisions, the principal front is of an immense length. They contain every convenience for ten regiments.

June 23d. Lord Charlemont's house in Dublin, is equally elegant and convenient, the apartments large, handsome, and well disposed, containing some good pictures, particularly one by Rembrandt, of Judas throwing the money on the floor, with a strong expression of guilt and remorse; the whole group fine. In the same room is a portrait of Cæsar Borgia by Titian. The library is a most elegant apartment, of about 40 by 30, and of such a height, as to form a pleasing proportion, the light is well managed, coming in from the cove of the ceiling, and has an exceeding good effect; at one end is a pretty anti-room, with a fine copy of the Venus de Medicis, and at the other, two small rooms, one a cabinet of pictures, and antiquities, the other medals. In the collection also of Robert Fitzgerald, Esq; in Merrion Square, are several pieces which very well deserve a traveller's attention.—It was the best I saw in Dublin. Before I quit that city, I observe, on the houses in general, that what they call their two-roomed ones, are good and convenient. Mr. Latouche's, in Stephen's-Green, I was shewn as a model of this sort, and I found it well contrived, and finished elegantly. Drove to Lord Char-

lemont's villa at Marino, near the city, where his Lordship has formed a pleasing lawn, margined in the higher part by a well-planted thriving shrubbery, and on a rising ground a banqueting room, which ranks very high among the most beautiful edifices I have any where seen; it has much elegance, lightness, and effect, and commands a fine prospect; the rising ground on which it stands slopes off to an agreeable accompaniment of wood, beyond which, on one side, is Dublin harbour, which here has the appearance of a noble river crowded with ships moving to and from the capital. On the other side is a shore spotted with white buildings, and beyond it the hills of Wicklow, presenting an outline extremely various. The other part of the view (it would be more perfect if the city was planted out) is varied, in some places nothing but wood, in others, breaks of prospect. The lawn, which is extensive, is new grass, and appears to be excellently laid down, the herbage a fine crop of white clover, (*trifolium repens*), trefoile, rib-grass, (*plantage lanccolata*), and other good plants. Returned to Dublin and made inquiries into other points, the prices of provisions, &c. (for which see the tables at the end of the book). The expenses of a family in proportion to those of London are, as 5 to 8.

Having the year following lived more than two months in Dublin, I am able to speak to a few points, which, as a mere traveller I could

could not have done. The information I before received of the prices of living is correct. Fish and poultry are plentiful and very cheap. Good lodgings almost as dear as they are in London; though we were well accommodated (dirt excepted) for two guineas and an half a week. All the lower ranks in this city have no idea of English cleanliness, either in apartments, persons, or cookery. There is a very good society in Dublin in a parliament winter—a great round of dinners, and parties; and balls, and suppers every night in the week, some of which are very elegant, but you almost every where meet a company much too numerous for the size of the apartments. They have two assemblies on the plan of those of London, in Fishamble-street, and at the Rotunda; and two gentlemens clubs, Anthry's and Daly's, very well regulated; I heard some anecdotes of deep play at the latter, though never to the excess common at London. An ill-judged and unsuccessful attempt was made to establish the Italian Opera, which existed but with scarcely any life for this one winter; of course they could rise no higher than a comic one. *La buona Figliuola*, *la Frascatana*, and *il Gelofo in Cimento*, were repeatedly performed, or rather murdered, except the parts of *Settini*. The house was generally empty and miserably cold. So much knowledge of the state of a country is gained by hearing the debates of a parliament, that I often frequented the gallery of the house
of

of commons. Since Mr. Flood has been silenced with the vice-treasurership of Ireland, Mr. Daly, Mr. Grattan, Sir William Osborne, and the prime serjeant Burgh, are reckoned high among the Irish orators. I heard many very eloquent speeches, but I cannot say they struck me like the exertion of the abilities of Irishmen in the English house of commons, owing perhaps to the reflection both on the speaker and auditor, that the attorney general of England, with a dash of his pen, can reverse, alter, or entirely do away the matured result of all the eloquence, and all the abilities of this whole assembly. Before I conclude with Dublin I shall only remark, that walking in the streets there, from the narrowness and populousness of the principal thoroughfares, as well as from the dirt and wretchedness of the canaille, is a most uneasy and disgusting exercise.

June 24th, left Dublin and passed through the Phoenix-park, a very pleasing ground, at the bottom of which, to the left, the Liffey forms a variety of landscapes: this is the most beautiful environ of Dublin. Take the road to Luttrell's town through a various scenery on the banks of the river. That domain is a considerable one in extent, being above 400 acres within the wall, Irish measure; in the front of the house is a fine lawn bounded by rich woods, through which are many ridings, four miles in extent. From the

the road towards the house, they lead through a very fine glen, by the side of a stream falling on a rocky bed, through the dark woods, with great variety on the sides of steep slopes, at the bottom of which the Liffey is either heard or seen indistinctly; these woods are of great extent, and so near the capital, form a retirement exceedingly beautiful. Lord Ingham and Colonel Luttrell have brought in the assistance of agriculture to add to the beauties of the place, they have kept a part of the lands in cultivation in order to lay them down the better to grass; 150 acres have been done, and above 200 acres most effectually drained in the covered manner filled with stones. These works are well executed. The drains are also made under the roads in all wet places, with lateral short ones to take off the water instead of leaving it, as is common, to soak against the causeway, which is an excellent method. Great use has been made of lime-stone gravel in the improvements, the effect of which is so considerable, that in several spots where it was laid on 10 years ago, the superiority of the grass is now similar to what one would expect from a fresh dunging.

Mr. Macfarlan the steward has at some distance from the grounds a farm which he is bringing into high order. His ditches are large, deep, and well cut, and he has made many drains. Lime he has used much, and experimentally against spots unlimed, and
found

found the benefit very great; the soil, a strong, wet, stoney loam or lime stone. He lays 160 barrels an acre, at the expense of seven pence a barrel, and finds that it will last as long as the gravel. For meadow lands, he prefers it mixed with earth, but on tillage gravel. Soot he buys at Dublin for sowing over the wheat in April to kill the red worm, for which it answers, and also improves the crop. Another circumstance in which he differs from the farmers, is cutting straw into chaff, and also in beginning to plough his fallows in autumn. He much prefers ploughing with oxen to horses. The following particulars he gave me of the general state of husbandry in the county of Dublin: farms about 100l. a year, more above than under, some to 300l. a year. The soil on the surface a stoney yellow clay, 18 inches deep on lime-stone gravel, with some exceptions of slate-stone, rents about 1l. 11s. 6d: from 10s. 6d. to 3l. 3s. courses most general,

1. Fallow.

2. Wheat. Sow 1 barrel, and get on an average 8 barrels.

3. Oats. Sow 2 barrels, get from 12 to 20.

Sometimes 1. Fallow. 2. Wheat. 3. Oats. 4. Clover. 5. Wheat. 6. Oats. They plough four times for wheat, on clover but once, feed their clover the year through. No sainfoine.

Many

Many potatoes in the ridgeway 7 feet broad, and the furrows $3\frac{1}{4}$. Cut generally 18 to 24 inches deep, in order to throw up some lime-stone gravel: always dung for them 320 one horse loads to an acre at about 5 or 6 to a ton, are spread over the 7 feet. Lay the sets upon the dung, dig a spit and shovel it; then dig another spit, and another shovelling, the sets 12 inches asunder; from 4 to 5 barrels plant an acre. Weed, but no hoeing; take them up with the spade, and the crop from 60 to 70 barrels: all are planted for home-use, but they give their pigs the small ones, boiled, and they will fatten them to be fine bacon, but give some butter-milk, and a week or two before they are killed some offal corn. For fowls, boil them to a mash, and mix with butter-milk, which fattens them exceedingly well. The price of potatoes on an average 20d. per cwt. the most productive sorts are the white kidney, and the white Munster. Lime-stone gravel the general manure of the country; they lay 3 or 400, one horse-cart loads per acre; it will last from 15 to 20 years, and is of the greatest benefit; it appears immediately: the expense usually 1l. 11s. 6d. per acre. Spread it on the fallow, after the first plowing. They go much to Dublin for fullage of the streets to lay on their hay grounds.

Good grass-land lets at 40s. an acre; five miles round Dublin from 40s. to 10l. on an average about 3l. 8s. Mow most of it for
hay;

hay; a good crop 20 load at 4 cwt. an acre round Dublin; through the county 12 load an acre. Many dairies kept for letting from 5 l. 15 s. to 6 l. 5 s. per cow; the dairyman finds labour, but has horses enough kept him to draw the milk to Dublin.

On an average a cow will require, for her summer and winter food, an acre and an half, but not of the best grass.—Of that an acre would do.—The breed the old Irish; the English cows do not give so much milk, from 4 to 6 lb. of butter a cow the produce per week: the butter-milk sells from 4 s. to 6 s. per barrel. A good cow should give 8 quarts a day, if less the cowman rejects her. The winter food hay. Very few swine kept, except by cottagers. Sheep they buy in June or July, and sell them from September until March; buy in wethers three years old, at 20 s. and sell them out at 1 l. 11 s. 6 d. but give them hay. Plough with oxen four in a plough; but in *goring*, or *cross-plowing*, six, and do half an acre a day. To 100 acres arable there must be six bullocks and eight horses.

Plough nine inches deep at *goring*; price of ploughing, sowing, and harrowing, 16 s. to 20 s. an acre. Lay their fields in 4 foot lands. Keeping horses, 9 l. a year each. No cutting of straw into chaff among the common farmers: the plough oxen they work on straw. They have more horses than oxen ;
put

put them to work at three years old, keep them at it till nine, then fatten them. They break their stubbles in May or June, In hiring and stocking farms, they will, with 80 l. take as many acres, dividing it as follow, on 80 acres.

	£.	s.			£.	s.	d.
6 Horses at	3	3	-	-	18	18	0
4 Oxen	3	0	-	-	12	0	0
4 Cows	2	10	-	-	10	0	0
2 Pigs		18	-	-	1	16	0
4 Irish cars	1	7	-	-	5	8	0
2 Ploughs	-		-	-	1	1	0
2 Harrows	-		-	-	0	16	0
Harnes	-		-	-	4	4	0
Sundries	-		-	-	5	0	0
Furniture	-		-	-	5	0	0
House-keeping the first year					6	0	0
1 Man 4 l. and 1 boy, 2 l. wages					6	0	0
1 Maid	-		-	-	1	10	0
Seed 13 acres, wheat 20 s. }							
Oats 13 acres - 16 s. }							
					23	8	0
<hr/>							
£. 101 1 0							
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For

For part of which he will run in debt. Land sells in general, through the county, at 22 years purchase. Till within three years it rose much, from 1762 to 1772; since that it has rather fallen. Tythes none taken in kind, compounded by the acre. Wheat and barley 5s. 6d. Oats 2s. 9d. near Dublin 5s. or 6s. Most of the people drink tea, and consume plenty of whisky and tobacco. Leases 41 or 61 years; many on lives, and also renewable for ever.

Rent of cottages 26s. to 30s. with a potatoe garden. No emigrations. The religion in general catholic. Labour through the year 10d. a day, about Dublin 1s. A ditch of 6 feet wide 5 feet deep perpendicular, and $2\frac{1}{2}$ at bottom earth all on one side 2s. 6d. a perch. Threshing and cleaning wheat 9d. per barrel; barley 6d $\frac{1}{2}$. Oats 4d $\frac{1}{2}$.

P R O V I S I O N S.

Bread 10lb. of 14 oz. for 12d.

Bacon 6d.

Butter-milk 1d $\frac{1}{2}$. a quart.

New milk 2d a quart. Potatoes 1s. 6d. per cwt.

Candles 5d $\frac{1}{2}$. per lb. Soap 6d. Firing all stolen.

BUILD-

B U I L D I N G.

Irish slate 15s. per 1000. English 20s.

Oak timber rather fallen in price in 10 years.

Elm 1s. 4d. Beech 1s. Soft wood 8d.

Firs at 60 years growth, 1 ton to $1\frac{1}{2}$ of timber, and worth 2l. 2s. Walling 1s. a perch, for labour of 7 feet high and 18 inch thick. Building a cottage 3l. ditto a farm-house, and all offices for 80 acres, 20l.

Leaving Luttrell's town, I went to St. Wolfans, which Lord Harcourt had been so obliging as to desire I would make my quarters, from whence to view to the right or left.

June 25th, to Mr. Clements, at Killadoon, who has lately built an excellent house, and planted much about it, with the satisfaction of finding that all his trees thrive well; I remarked the beech and larch seemed to get beyond the rest. He is also a good farmer. Cabbages he has repeatedly tried, and used them generally for fattening sheep, and finds them much better for the purpose than turnips.

Potatoes he cultivates largely, not only for family use, but also for fattening swine; boils them, and they fat exceedingly well, without any mixture of meal, both porkers and for bacon, giving them oats for three weeks at last.

He

He has been very attentive to bring his farm into neat order respecting fences, throwing down and levelling old banks, making new ditches, double ones six feet wide and five deep, with a large bank between for planting, more effectually than ever I saw in England: also in hollow drains his wet lands.

Remarking in one of his fields under oats one part, about an acre incomparably beyond the rest of the field, I enquired into the cause of it, and found it sown with an English oat, no other difference in the circumstances.

His system of sheep is to buy ewes, in September, at 14s. 6d. and to fatten both lamb and ewe, selling the first at 9s. and the latter at 18s. The wool is 4s. They lamb the beginning of March. Observing the legs being long, his man assured me that the longer the legs, the better the sheep sold in Smithfield. A ridiculous prepossession! not peculiar to Ireland; Wiltshire has it.

June 26th, breakfasted with Colonel Marlay, at Cellbridge, found he had practised husbandry with much success, and given great attention to it from the peace of 1763, which put a period to a gallant scene of service in Germany; walked through his grounds, which I found in general very well cultivated; his fences excellent, his ditches 5 by 6, and 7 by 6; the banks well made, and planted with quicks; the borders dug away covered
with

with lime, till perfectly slacked, then mixed with dung, and carried into the fields: a practice which Mr. Marlay has found of very great benefit. He has cultivated the large Scotch cabbage for two or three years, which came to 16 or 17 lb. on an average, applied them to fattening oxen that had been fed on grass; began to give them in November; has had $2\frac{1}{2}$ acres: they fattened the beasts very well, full as well as turnips, but did not think they answered the expense, as they require in order to have them of a great size an immense quantity of dung.

T U R N I P S.

He has sown every year since 1763, always had from 4 to 17 acres, has usually drilled them in rows, the distances various; but those which answered best, were double rows at 12 inches, with intervals of three feet, horse hoed, hand hoed, and weeded them. Prepared for them by lime and dung; the crops fine, up to 21 lb. a turnip, but on an average about 8 lb. Generally fed beasts with them that had the summer's grass, but with both gave some hay, and were very fat in four months. Continued them in the same ground for six or seven years together, manuring for them every second year. It is rather to be regretted that he did not every year change the land.

P O T A T O E S.

Plants them with the plough, drawing furrows five feet afunder, filled with dung, the sets on the dung, and then covered with the plough, and horse-hoed them backwards and forwards, the crop 28 barrels per acre of very large ones.

C L O V E R.

Mr. Marlay has introduced this plant so generally, that he sows no corn without it. The profit exceedingly great, more than that of any other improvement.

L I M E.

Used much, mixed with earth, and found great success from it, even on lime-stone land. Burns at 7d. a barrel; always leaves it on the ditch-earth to slack, and then mixes it before dung is put to it.

D R A I N I N G.

Has drained much in the hollow way, filling with stones, and found the benefit exceedingly great, can cart on the wettest lands at any time, two years have paid the expense.

P L O U G H I N G.

Instead of the common draught of the country, he uses often only two oxen in a plough, for he has many sorts of ploughs from Mr. Baker and from England.

Cows.

C o w s.

From three Kerry cows, from the middle of May to the middle of September, he had 24 lb. of butter a week.

The Colonel favoured me with the following particulars of the common husbandry about Cellbridge. Farms generally 100 acres; the medium of the county from 20l. to 100l. Soil various; stoney loams, gravels and clays, and on lime-stone quarries. Rents about 1l. 10s on an average. Their course,

1, Fallow.

2. Wheat, sow a barrel and get 7.

3. Oats, sow two barrels and get 14.

4. Oats.

A little barley is cultivated.

They plough three or four times for wheat. Turnips were sown in fields 30 years ago, but left off on account of the poor stealing them. Great quantities of potatoes planted in the trenching way, the expence 3l. in labour only to put in if done by hire, and 40s. if for themselves. The cottagers pay the farmers 8l. an acre for the land ready dunged, and they require three car loads to every square perch.—This great manuring swallows up not only all the dung of the farm, but nine tenths of that of the kingdom. They begin to plant in March, and continue it to the end of May, most of them weed, the crop upon an

average about 100 barrels, at 5s. each. They are obliged to clear the land by the first of November, when the farmer ploughs and sows wheat and gets fine crops. The apple potatoe is liked best, because they last till the new ones come in.

In respect to manuring they use but little lime, but depend principally on lime-stone gravel, 300 car loads to an acre; if taken out of the ditch as on the spot, it costs about 18 or 19s. an acre. It will last about five or six years good.

As to laying lands to grafs the tenants do it very often; but their only way is to let it cover itself with such vegetables as may come, and upon some land it forms very good grafs.

But few cows kept. They apply their grafs chiefly to fattening cows; there is some good meadow on the river, and in grazing, two acres will fatten three cows; besides some sheep and winter food. Flocks rise to 3 or 400—buy in wethers half fat, which turn into after-grafs till Christmas, then to hay, and sell in February and March; buy at 18 to 20, sell at 30 to 35. They plough with both horses and oxen, the draft four oxen or two oxen and two horses. To a farm of 117 acres, ten horses and two oxen.

They plough five inches deep, and do one half, or three fourths of an acre a day. Lay their
their

their lands in three feet ridges—No cutting straw into chaff. The draft oxen have hay when worked. Hire of a boy, a horse and car, 1s. 6d. a day; two cars and one man 1s. 6d. In hiring and stocking farms—for 50 acres

	£.	s.	d.
4 Horses, at 3l. 3s.	-	12	12 0
3 Cows, at 3l. 3s.	-	9	9 0
2 Young cattle, at 16s.	-	1	12 0
2 Pigs 5s.	-	0	10 0
2 Cars 40s.	-	4	0 0
1 Plough	-	0	6 0
Harrows	-	0	5 0
No harness			
Sundries	-	1	0 0
Furniture	-	1	0 0
Housekeeping 1s. 4d. a day for half a year	-	12	0 0
Harvest, labouring, &c.	-	10	0 0
Seed, 10 acres, 10 bars. wheat	10	0	0
10 Acres oats, 20 ditto	6	0	0
5 Ditto bere, 5 ditto	3	0	0
		<u>19</u>	<u>0 0</u>
		£.	71 14 0

P R O D U C E.

3 Cows 5lb. butter a week, from 1st May to end of Sept. 100lb. at 8d.	3	6	8
2 Pigs	1	4	0
50 Barrels of wheat	50	0	0
10 Acres wheat straw	10	0	0
10——oats, 100 barrels	30	0	0
5——bere, 13 ditto	48	15	0
	<u>143</u>	<u>5</u>	<u>8</u>
	£.	143	5 8

E X P E N S E S.

Labour	_____	£. 10	
Rent and cefs	_____	80	
			<u>90 0 0</u>

A farmer that has a plough, a harrow three cars, four horses and fix cows with 50l. in his pocket, will take a farm of 100 acres. Tythes for wheat 7s. for oats and bere 3s. for mowing ground 5s. Land sells at 22 years purchase, has fallen since 1772 one or two years. County cefs paid by tenant for roads 1s. an acre. Leases usual three lives or 31 years, some renewable for ever. People rather increased. Rent of a cabin and half an acre of land, 40s. All Catholics. Building a new cottage 10l. which with one half an acre lets at 40s. for a farm of 50 acres, 40 to 50l. Building a wall 10 feet high, 18 inches thick, and 21 foot long, 34s. with mortar dashed 8s. less, flating a guinea a square.

Walked through Laughlinstown, the farm of the late Mr. John Whyn Baker, to whom the Dublin Society, with a liberality that does them great honour, gave for several years 300l. annually in order to make experiments.

I had had the pleasure of corresponding with him several years, and melancholy it was to see the land of a man of so much ingenuity no longer his, and more so, to hear with all his exertions he was not able to answer the expectations raised of him. I found
what

what I had suspected from reading his experiments, that he wanted capital; without a sufficient one it is impossible to farm well:— A man may have all the abilities in the world, write like a genius, talk like an angel, and really understand the business in all its depths, but unless he has a proper capital, his farm will never be fit for exhibition;—and then, to condemn him for not being a good farmer in practice as well as theory, is just like abusing the inhabitants of the Irish cabbins for not becoming excellent managers. No idea could be more useful, than that of encouraging such a man as Mr. Baker, but a capital should have been furnished him for bringing his farm into order, and when it was so, he should have been directed not to try any experiments; because those trials were for the acquisition of knowledge in disputable points, and the society wanted no such disquisitions, but the exhibition of a farm, cultivated in a manner which experience has rendered indisputable in England or elsewhere.

Viewed Lucan, the seat of Agmondisham Vesey, Esq; on the banks of the Liffey; the house is rebuilding, but the wood on the river, with walks through it, is exceeding beautiful. The character of the place is that of a sequestered shade. Distant views are every where shut out, and the objects all correspond perfectly with the impression they were designed to raise: it is a walk on the banks

of the river, chiefly under a variety of fine wood, which rises on varied slopes, in some parts gentle, in others steep; spreading here and there into cool meadows, on the opposite shore, rich banks of wood or shrubby ground. The walk is perfectly sequestered, and has that melancholy gloom which should ever dwell in such a place. The river is of a character perfectly suited to the rest of the scenery, in some places breaking over rocks; in others silent, under the thick shade of spreading wood. Leaving Lucan, the next place is Leixlip, a fine one, on the river, with a fall, which, in a wet season, is considerable. Then St. Wolfans, belonging to the dean of Derry, a beautiful villa, which is also on the river; the grounds gay and open, though not without the advantage of much wood, disposed with judgment. A winding shrubbery quits the river, and is made to lead through some dressed ground that is pretty and chearful.

Mr. Conolly's, at Castle-town, to which all travellers resort, is the finest house in Ireland, and not exceeded by many in England; it is a large handsome edifice, situated in the middle of an extensive lawn, which is quite surrounded with fine plantations disposed to the best advantage: to the north, these unite into very large woods, through which many winding walks lead, with the convenience of several ornamented seats, rooms, &c. On the

the other side of the house, upon the river, is a cottage, with a shrubbery, prettily laid out; the house commands an extensive view, bounded by the Wicklow mountains. It consists of several noble apartments. On the first floor is a beautiful gallery, 80 feet long, elegantly fitted up.

June 27th, left Lord Harcourt's, and having received an invitation from the Duke of Leinster, passed through Mr. Conolly's grounds to his Grace's seat at Cartown, the park ranks among the finest in Ireland. It is a vast lawn, which waves over gentle hills, surrounded by plantations of great extent, and which break and divide in places, so as to give much variety. A large but gentle vale winds through the whole, in the bottom of which a small stream has been enlarged into a fine river, which throws a cheerfulness through most of the scenes: over it a handsome stone-bridge. There is a great variety on the banks of this vale; part of it consists of mild and gentle slopes, part steep banks of thick wood; in another place they are formed into a large shrubbery, very elegantly laid out, and dressed in the highest order, with a cottage, the scenery about which is uncommonly pleasing: and farther on, this vale takes a stronger character, having a rocky bank on one side, and steep slopes scattered irregularly, with wood on the other. On one of the most rising grounds in the park is a tower, from the
top.

top of which the whole scenery is beheld; the park spreads on every side in fine sheets of lawn, kept in the highest order by 1100 sheep, scattered over with rich plantations, and bounded by a large margin of wood, through which is a riding.

From this building his Grace has another sort of view, not every where to be met with; he looks over a great part of 60,000 acres, which lie around him nearly contiguous; and Ireland is obliged to him for spending the revenue on the spot that produces it. At a small distance from the park is a new town, Manooth, which the duke has built; it is regularly laid out, and consists of good houses. His Grace gives encouragement to settling in it, consequently it increases, and he meditates several improvements.

Reached Kilcock.

June 28th, breakfasted with Mr. Jones of Dollestown, who was so obliging as to answer my enquiries concerning the husbandry of his neighbourhood. He informed me, that the town of Kilcock contained six great distilleries for making whisky, and that all the wash and grains were used in fattening either hogs or beasts, generally the latter. About November they put them to it, and though quite lean, they will be completely fat by Easter: those who are more attentive than

than common, give them also some bran or hay. Mr. Foster of Branchale, at some distance from the town, has a more complete distillery, and fats more beasts than any other person.

Farms here rise from 20 to 100 acres, at 21s. an acre, except about the town, where they are higher: but they have fallen 5s. an acre in five or six years.

The course most common is,

1. Potatoes, which yield 60 barrels an acre.
2. Bere sown in November, $\frac{3}{4}$ of a barrel per acre, the crop 13 or 14.
3. Oats, $1\frac{1}{2}$ to two barrels sown, the produce 13.
4. Oats.
5. Summer fallow.
6. Wheat, sow $\frac{3}{4}$, get 7.
7. Oats.
8. Oats.

They plant some potatoes on lays without dung; but for this the land must be very good, or the lay old: it is not esteemed so good a way as on stubble. The cottars give 5l. 5s. to 6l. an acre dunged for planting potatoes, and their expenses are as follow;

Rent

Rent	-	-	-	£. 5 15 0
Digging and putting in	-			3 10 0
10 barrels of seed, at 5 s. per barrel,				2 10 0
Planting and spreading the dung	-			0 10 0
Digging and gathering	-	-		3 10 0
				<hr/>
				£. 15 15 0
				<hr/>

The cutting the fetts and weeding done in broken days.

Sixty barrels at 5 s.—15 l. Consequently the prime cost to them is 5 s. a barrel, or 1 s. 3 d. a bushel, English, which is an evident proof that this is the worst mode of planting in the world. They have not done taking them up till Christmas.

Limestone gravel is the general manure of the country; it is found at two feet depth, and the worse the ground is the better the gravel does upon it. They use it only for ploughed land. A good dressing of it costs 50 s. an acre, and it lasts seven years. But few cattle or sheep kept, for tillage has increased within twenty years very much, owing to the culture of potatoes, not to the bounty on the inland carriage of corn.

They plough entirely with horses, use four in a plough, and do three-fourths of an acre a day. In laying their wheat and bere lands, they are very attentive to do it well; if the soil is dry on broad lands, if wet, on narrow; and

and after it is sown and harrowed, they go once with the plough in every furrow, and shovel out all the loose moulds: a practice which cannot be praised too much. They are so far from cutting straw into chaff, that they throw away that of their crops. They are, upon the whole, in much better circumstances than formerly, have fewer holidays, and more industry. Tythes are compounded. Meadow 3s. Wheat 5s. Bere 5s. Oats 3s. Leases are from 21 to 31 years. Rent of a cabin and small garden 40s. Building one 5l. A farm-house, and offices for 50 acres, 40l. I remarked, all the way I came, great quantities of poultry in the cabins and farms.

Mr. Jones, in an attentive practice of agriculture, has tried some experiments of consequence. Potatoes he has cultivated for cattle; and had, at one time, twelve score bullocks keeping upon them—they liked them much, and eat three barrels a day. They weighed 5 cwt. each; and had they been kept long enough on the potatoes, would have been fattened. For his horses, he boils the potatoes, gives them, mixed with bran, and finds that they do very well on them, without oats.

Mr. Armstrong, of King's-county, had 80 sheep in the snow last winter, which got to his potatoes, and eat them freely, upon which he picked 40 of them, and put them to that food regularly; they fattened very quick,
much

much sooner than 40 others at hay, and yielded him a great price at Smithfield.

Mr. Jones has improved some poor rough land that produced nothing, first by hollow draining thoroughly, and then manuring it with limestone gravel, which brought up a great crop of white and red clover, and trefoile. He also spreads this manure on lays he intends breaking up; and observes that the use of it is very great, for, when dug out of ditches, you gain at once manure, drains and fences. He has seen some of it dropt on a bog in carting, and where-ever it falls, is sure to bring up the white clover.

From hence took the road to Summerhill, the seat of the Right Hon. H. L. Rowley, the country is chearful and rich; and if the Irish cabbins continue like what I have hitherto seen, I shall not hesitate to pronounce their inhabitants as well off as most English Cottagers. They are built of mud walls 18 inches or 2 feet thick, and well thatched, which are far warmer than the thin clay walls in England. Here are few cottars without a cow, and some of them two. A belly full invariably of potatoes, and generally turf for fuel from a bog. It is true they have not always chimneys to their cabbins, the door serving for that and window too: if their eyes are not affected with the smoke, it may be an advantage in warmth. Every cottage swarms with poultry, and most of them have
pigs.

pigs. It is to the polite attention of Mr. Rowley, I owe the following information. About Summerhill the soil is mostly strong stony land, on clay, but naturally fertile. He lets it at about 20s. an acre, which is the average rent of the whole county of Meath to the occupier; but if the tenures of middle men are included, it is not above 14s. This intermediate tenant, between landlord and occupier, is very common here. The farmers are very much improved in their circumstances since about the year 1752. At a rack-rent, the land sells at 21 years purchase; but according to circumstances, to 26 and 27. Whenever a number of years purchase of land is mentioned in Ireland, it implies a neat rent, without any deductions whatever. A course of crops very common here is from the lay.

1. Wheat, the crop 6 barrels.
2. Wheat.
3. Oats, the crop 10 barrels.
4. Oats.
5. Clover.
6. Clover.

Potatoes are much planted, the best land yields 100 to 120 barrels per acre, but a middling produce 80, at 32 stone the barrel. The poor pay 6l. or 6l. 6s. an acre rent for grass land to plant, and 3l. or 4l. for a second crop. They are every where used for feeding hogs and poultry. Mr. Rowley has fattened worked oxen of five years old in eight weeks on them parboiled, with hay besides.

sides. Much marle is used here on the lighter lands, but for the heavy soils lime-stone gravel is preferred. In hiring farms, the lower tenants will take them of 50 acres, if they have a few cows and horses, without a shilling in their pockets. Mr. Rowley keeps a very considerable domain in his hands; adjoining to it is a black turf bog of admirable use for firing. I viewed it attentively, and am clear, that all such bogs as this with a fall from them for draining, might very easily be improved into excellent meadow. The surface is covered with heath about a foot high, and under that eight or nine feet deep of puffy stuff, which when burnt yields no ashes; then the bog turf ten feet deep cuts like butter, and under that a marley lime-stone gravel. They have found at 14 feet deep evident marks of the plough in the soil at bottom, also remains of cabbins, cribs for cattle, mooses horns, oaks, yews, and fir, being good red deal. In working for fuel, they dig out the black bog and throw the upper stratum in its place, through which open drains being kept, the turfs, as they are dug are spread on it for drying. In many spots I remarked the vernal grass (*anthoxanthum odoratum*), the holcus (*lanatus*), narrow leaved plantain (*plantagolanceolata*), docks (*rumex*), white and red clover; and on the banks of the master drains a full crop of fern (*pteris aquilina*). Upon cutting small surface drains on the bog the heath (*erica*) doubles its growth. The expense of cutting drains in the bog six feet

feet wide at top, six deep, and one wide at bottom, is 8d. or 9d. a perch of 21 foot. The plantations and ornamented grounds at Summerhill are extensive, and form a very fine environ, spreading over the hills, and having a noble appearance from the high lands above the bog. The house is large and handsome, with an elegant hall, a cube of 30 feet, and many very good and convenient apartments.

Went in the evening to Lord Mornington's at Dangan, who is making many improvements which he shewed me; his plantations are extensive, and he has formed a large water, having five or six islands much varied, and promontories of high land shoot so far into it as to form almost distant lakes, the effect pleasing. There are above 100 acres under water, and his Lordship has planned a considerable addition to it. Returned to Summerhill.

June 29th, left it. taking the road to Slaine, the country very pleasant all the way; much of it on the banks of the Boyne, variegated with some woods, planted hedge-rows, and gentle hills: the cabbins continue much the same, the same plenty of poultry, pigs, and cows. The cattle in the road have their fore legs all tied together with straw to keep them from breaking into the fields; even sheep, and pigs, and goats are all in the same bondage. I had the pleasure of meeting Colonel
Burton

Burton at the castle, in whom I was so fortunate as to find, on repeated occasions, the utmost assiduity to procure me every species of information, entering into the spirit of my design with the most liberal ideas. His partner in Slaine Mills, Mr. Jebb, gave me the following particulars of the common husbandry, which, upon reading over to several intelligent farmers, they found very little occasion to correct. Farms rise from 100 to 300 acres, the soil, a stoney loam upon a rock, and lets on an average at 25 s. and the whole county throughout the same. The courses of crops,

1. Fallow with lime, 120 barrels an acre, at 7 d besides carriage.
2. Wheat, sow a barrel, and get 6 to 7, sometimes 11.
3. Barley or oats, if barley, sow $1\frac{1}{4}$. and get 13.
4. Oats, sow two barrels, the crop 16. Also,
 1. Fallow, 2. wheat, 3. barley, 4. oats, 5. clover, for

Two Years 6. barley.

Another, 1. fallow, 2 wheat, 3. spring corn, 4. spring corn, 5. fallow, 6. wheat, 7. barley, and red or white clover or trefoile and hay feeds. Another, 1 fallow, 2. wheat, 3. clover, 2 years, 4. barley, 5. oats. A common practice is, for the farmers to hire any kind of rough waste land, at three guineas, or three pound an acre for three crops, engaging to lime it if the lime is found them; 120 barrels per acre, which comes to 3l. 10s. from 9l. 9s.

9 s. leaves fix for three years. They cultivate it in the common course of 1. fallow, 2. wheat, 3. barley, and 4. oats. Turnips not generally come in, but farmer Macguire has 20 acres to 40 every year, but does not hoe them, he feeds sheep on the land and then sows barley and clover. Clover would be more general, was it not for the expence of picking the stones for mowing, which costs 10s. or 12s. an acre. Sometimes mow it once, and feed afterwards; the crops exceedingly great. A few tares sown for the horses. On the banks of the Nanny water, many white pease sown, instead of a fallow, and good crops, wheat sown after them. They also sow beans about Kilbrue. Every farmer has a little flax, from a rood to an acre, and all the cottagers a spot, if they have any land, they go through the whole process themselves, and spin and weave it. From hence to Drogheda, there is a considerable manufacture of coarse cloth, which is exported to Liverpool, about 1 s. a yard. At Navan there is a fabrick of sacking for home consumption; the weavers earn 1 s. a day at these works.

Potatoes are a great article of culture; the cottagers take land of the farmers, giving them 4l. 10s. an acre, dunged. All in the trenching way, the ridge six feet, the furrow two and a half; always weed them, the best season for planting the middle of April. The crop 64 barrels on an average, and the price 3s. 6d. a barrel. They have got much into the apple potatoe.

	£.	s.	d.
Rent - - -	4	11	0
Spreading dung -	0	2	0
Seven barrels of feed 3s. 6d. -	1	4	6
Cutting and laying - -	0	6	6
Trenching and earthing up -	4	0	0
Taking up picking 1d ½. a barrel, 64	0	8	0
	<hr/>		
	10	12	0
	<hr/>		

From whence it appears, that the prime cost of the potatoes is 4s. a barrel. Wheat is sown after them, and sometimes barley; the wheat is generally a bad crop and bad grain, but the barley good. For fat hogs they boil them, and at last mix some bran or oats; a hog of 2 cwt. will fatten in two months, on six barrels and one barrel of oats. Much poultry is also reared and fed in all the cabins by means of potatoes.

Waste lands have been brought in and cultivated at Grange Geath, the soil stony and over-run with heath (*erica vulgaris*) and whins, (*ulex europæus*) let before the improvement at 4s. but lets now at 20s. They ploughed up the surface and spontaneous growth, summer fallowed and lined at 150 barrels an acre, sowed wheat, and pursued the course above mentioned, the crops of oats exceedingly great, 20 barrels an acre; of this land there were 2500 acres. The great manure of the country is lime, which is always laid on fallow; they

they find the advantage of it so clearly as to be seen in the effect to an inch: but when land is got much out of heart, then the lime will not do; and they lay it down to clover for several years till there is something of a turf, after which it will answer well. Hollow draining is generally used, even by the common farmers, who have found by experience that their lime will do no good till the land is drained. The fences about new inclosed pieces, and those made in general by gentlemen, are ditches six feet deep, seven feet wide, and 14 inches at bottom, with two rows of quick in the bank, furz sown on the top, or a dead hedge of brush. Good grass land for meadow lets for 3 or 4l. an acre; mow it all and get three ton of hay an acre or fifteen Irish load. Many dairies of cows, up to 50 and 60, kept here for butter. Mr. Kelly, near the obelisk, Drogheda, has 200 cows let at 5l. The breed is half English and half Irish, worth 5 to 7l. each; the farmers let theirs to dairy-men, who are common labourers. at 4l. a piece, but if they won't give five to seven quarts at a meal they may be rejected; a good one will give ten quarts of milk per meal, the produce about 5l. consequently there is 20s. a head profit. As butter-milk is all the food of the people, the number of swine kept is very small: it is carried to Drogheda, and sold at six quarts a penny. The cows are fed in winter on hay alone; all are kept abroad in the day, but housed at night. They rear almost all the calves, wean-

ing them at six weeks or two months old: at a fortnight they sell at 3 or 4s. Some, but not dairy-men, give them in rearing hay-tea. They fatten many cows, having much grass; an acre to a cow. Swine fatten from one to two cwt. Many are kept upon potatoes alone, and fattened intirely upon that root, which is thought to be a very profitable use; the potatoe fed pork much firmer than that on pollard. There is a great demand this year, many ship loads alive being bought up for England; and the price good, encourages the breed incredibly. Many sheep are kept, bought in every year in autumn, mostly ewes, but some wethers, at 12 to 15s. Sell the lambs fat in May or June at 10s. cut four or five pound of wool, worth 5s. and fat the ewe to 19 or 20s. profit 1l. 1s. a head. Buy wethers at 20 to 25s. sell at 30 to 42s. with a fleece of seven pound; in winter they have hay, and some sheaf oats. No rot here. Plough all with horses, six to a plough, and do an acre a day, working often from six in the morning to eight at night, and stirring eight or nine inches deep. They keep 10 or 12 horses to 100 acres in tillage, and breed them all themselves. The price of ploughing 8s. an acre. The whole preparation of a fallow worth 25s. an acre; and for barley 12s. The form of lands narrow ridges three or four feet wide; the year's expense to a farmer 5l. each horse; very seldom give them any oats. They cut no straw into chaff; and as all their corn is winnowed in the road, the chaff of it

is lost. They never break their stubbles till about Christmas; the plough generally used, is an imperfect swing one. In hiring and stocking farms, they will take 100 acres or more with scarce any money; but then they must have to the value of

			£.	s.	d.
8 Horses at 5l.	-		40	0	0
4 Cows 5l.	-		20	0	0
2 Sows 10s.	-		1	0	0
6 Cars 3l.	-		18	0	0
2 Ploughs 12s	-		1	4	0
2 Harrows	-		1	13	0
No rollers used					
Harnesses 10s. a horse	-		3	0	0
Sundries	-		10	0	0
Household furniture	-		5	0	0
1 Sack of oat-meal	-		1	0	0

Labour supplied by letting land to others for potatoes; no seed, as he pays the preceding tenant the eighth sheaf of the winter corn, and the fourth of the spring, in lieu of the seed and sowing.

100 17 0

A very intelligent labourer, sent for by Mr. Burton, gave me the following account for 40 acres, 10 of them grass

			£.	s.	d.
4 Horses	-		18	4	0
4 Cows	-		20	0	0
			<hr/>		
			38	4	0

Brought

		Brought over	£.	s.	d.
		38	4	0	
10	Sheep	-	-	7	0 0
1	Sow	-	-	0	15 0
1	Plough and harness	-	-	2	5 6
2	Harrows	-	-	1	2 9
10	Sacks	-	-	1	0 0
	Winnowing sheet	-	-	0	10 0
	Furniture	-	-	10	0 0
15	Acres oats feed, to barrels and a half an acre,	-	-	18	10 0
6	Acres barley one and a half, 9 bar- rels 12s.	-	-	5	8 0
	Labourers	-	-	20	16 0
2	Boys and a maid servant	-	-	3	8 3
	Provision 8 cwt. of oatmeal			3	4 0
4	Barrels melfin at 16s.	-	-	3	4 0
	Wear and tear	-	-	2	5 6
4	Cars	-	-	9	2 0
	Poultry	-	-	0	13 3
				<hr/>	
				127	8 3
				<hr/>	

With this expenditure they fare no better than common labourers, and do not improve in their circumstances. Land sells at rack rent 22 and 23 years purchase, as well now as in 1768; the bankruptcies in 1772 did not affect the purchase of land. County cess 8d. to 1s. an acre; tythes for wheat 7s. barley 5s. oats 3 to 4s. mowing ground 3s. 6d. nothing for land fed, and no small tythes; no tea drunk among the cottagers. Leases in general 31 years to catholics; to protestants three lives or 31 years.

31 years. Rent of cabbins 40s. with a potatoe garden ; if a cow is kept 40s. more. No emigrations. The catholic religion general among the lower classes.

L A B O U R.

Ditching 6 feet by 5, 20d. a perch

4 by 5, 1s. 2d.

6 by 7, 2s. 6d.

Threshing wheat 1s. a barrel

Barley 8d.

Oats 5d.

No servants hired at all.

Women a day in harvest 8d.

Rise in the price of labour in ten years, from 5d. and 7d. to 8d. and 10d. but they work harder and better.

P R O V I S I O N S.

Bacon 5d. bread 1d. potatoes 2½d. a stone, new milk 1d. a quart, ducks 3d. candles 6¼d. soap 6½d. firing of the poor furz and coals to a trifling amount. The farmers burn their straw, *for which they deserve to be hanged.*

B U I L D I N G.

Slate 12s. per 1000.

Elm 2l. 10s. to 3l. a ton.

Fir 3l.

Dry walls dashed 2s.

Building a cabin 5l.

Ditto a farm house and offices for 100 acres
50l.

Hire

Hire of four cars, one man and a boy 4s. a day; 23 miles from Dublin it takes the whole week to go twice. The price to go there 10s. a week, 4s. of it expenses on the road. The load six cwt. each car. But Mr. Jebb has sent 18 cwt. to Dublin with one horse, and not an extraordinary one, 15 or 16 cwt. often.

In the improvements making about the castle, it was necessary to move a large hill of lime stone, and as the readiest way, Colonel Burton is burning it to lime. The kiln, like most I have seen in Ireland, is a very good one. It is in the shape of an egg, 19 feet deep, and 9 diameter in the swell; when new it burnt 400 barrels in a week, each three bushels; but as the lining is worn, it is now from 350 to 400. A ton of culm, which costs at Drogheda 13s. and 2s. freight from thence, burns 50 barrels of lime. Quarrying and burning the stone is 1½d. a barrel, expenses in all 5½d. and it sells at the kiln for 7d. The stone is laid in layers eight or nine inches thick, and is always kept supplying at top and emptying at bottom. The kiln cost 35l. building, and it employs three hands.

Lord Conyngham's seat, Slaine Castle, on the Boyne, is one of the most beautiful places I have seen; the grounds are very bold and various, rising around the castle in noble hills or beautiful inequalities of surface, with an outline of flourishing plantations. Under the castle flows the Boyne, in a reach broken
by

by islands, with a very fine shore of rock on one side, and wood on the other. Through the lower plantations are ridings, which look upon several beautiful scenes, formed by the river, and take in the distant country, exhibiting the noblest views of waving Cultinald Hills, with the castle finely situated in the midst of the planted domain, through which the Boyne winds its beautiful course.

Under Mr Lambert's house, on the same river, is a most romantic and beautiful spot; rocks on one side, rising in peculiar forms very boldly; the other steep wood, the river bending short between them like a land-locked basin.

Lord Conyngham's keeping up Slaine Castle, and spending great sums, though he rarely resides there, is an instance of magnificence not often met with; while it is so common for absentees to drain the kingdom of every shilling they can, so contrary a conduct ought to be held in the estimation which it justly deserves.

June 30th, rode out to view the country and some improvements in the neighbourhood: the principal of which are those of lord chief baron Foster, which I saw from Glaston-Hill, in the road from Slaine to Dundalk. Adjoining to it is an extensive improvement of Mr. Fortescue's; ten years ago the land was let at 3 s. 6 d. now it is a guinea, which

which great work was done by the tenants, and lime and fallon the means pursued. These and other improvements, with the general increase of prosperity, has had such an effect in employing the people, that Colonel Burton assured me, that 20 years ago, if he gave notice at the mass houses, that he wanted labourers, in two days he could have 2 or 300; now it is not so easy to get 20, from the quantity of regular employment being so much increased. I observed weavers looms in most of the cabbins, went into one, and the man informed me that he could weave a web 65 or 66 yards long, and 26 inches wide, at 8d. a yard price, in a week. 34 to 36 lb. of yarn makes it, which costs 15d. per lb. he and his journeyman could earn 7 or 8s. a week by it. He paid 4l. 4s. for the grazing of a cow, a rood of potatoe garden, and the cabin. They were burning straw, which I forgot to remark I have found very common where there is no turf: a most pernicious custom, it is in fact what I have often heard literally reported, that they burn their dung-hills in Ireland.

Passed through several farms much improved, and found great attention given to fences, the ditches very large, and the banks well planted.

Lord Boyne's estate appears to be very rich, and the tenants beyond the common run.

The

The country is well wooded, and has an appearance of some of the best parts of England.

Walked into Mr. Maurice's fields; he is a considerable farmer, buys his fattening cows in May from 3l. to 6l. 6s. sells fat from August to Christmas, with 30s. profit: he has laid down a meadow to grafs with so much care that the expenfe was 10l. an acre. In one of his fields he sowed red clover, with the third crop of corn, it failed, but an amazing sheet of white clover came, which I saw, and was indeed surpris'd at such a proof of the excellency of the soil, even under such exceeding bad management; but not a human being that I have met with has any notion of sowing clover with the first crop.

Returning to Slaine, dined with Mr. Jebb, and viewed the mill, which is a very large edifice, excellently built; it was begun in 1763, and finished in 1766. The water from the Boyne is conducted to it by a wear of 650 feet long, 24 feet base, and 8 feet high, of solid masonry: the water let into it by very complete flood gates.

The canal is 800 feet long, all faced with stone, and 64 feet wide; on one side is a wharf completely formed and walled against the river, whereon are offices of several kinds, and a dry dock for building lighters. The mill is 138 feet long, the breadth 54, and the height

height to the cornice 42, being a very large and handsome edifice, such as no mill I have seen in England can be compared with. The corn upon being unloaded, is hoisted through doors in the floors to the upper story of the building, by a very simple contrivance, being worked by the water-wheel, and discharged into spacious granaries which hold 5000 barrels. From thence it is conveyed, during seven months in the year, to the kiln for drying, the mill containing two, which will dry 80 barrels in 24 hours. From the kiln it is hoisted again to the upper story, from thence to a fanning machine for re-dressing, to get out dirt, soil, &c. And from thence, by a small sifting machine, into the hoppers, to be ground, and is again hoisted into the bolting mills, to be dressed into flour, different sorts of pollard and bran. In all which progress, the machinery is contrived to do the business with the least labour possible: it will grind with great ease 120 barrels, of 20 stone each, every day. Beginning in 1763, for a few years, about 13000 barrels *per ann.* were ground, of late years up to 17000 barrels. It may be observed, that this mill is very different from the English ones, they not being under the necessity of kiln drying or dressing. The expense, per barrel, of the drying in coals and labour is 3 d. and the waste is 1-20th in the weight: but the contrivance reduces the expense of dressing to a trifle. The whole charge of manufacturing the wheat into flour in mere labour, is 9 d. a barrel,
and

and the 3d. drying makes 1s. The barrel weighs 20 stone, 14 lb. to the stone, of which

Flour -	14	ft.	8	lb.	
Bran	}	4	ft.		
Pollard					
Dirt, waste, grinding and dressing -	}	1	ft.	6	lb. { on average of the year
<hr style="width: 50%; margin: 0 auto;"/>					
20					
<hr style="width: 50%; margin: 0 auto;"/>					

The waste, in re-dressing the corn, (which is what the farmers ought to do) is about 3 lb. a barrel.

The pollard Mr. Jebb tried, for six years, in giving to pigs. Bought in *stores* in September, at 7s. to 20s. each, and put them to pollard given wet, about the thickness of gruel; it could have been sold for 2s. a barrel of 6 stone, and in feeding, it did not produce more than 10d. a barrel; pork from 18s. to 20s. per cwt. Thinks it would not more than pay the 2s. a barrel if pork was 40s. per cwt. Tried also breeding sows, bought Berkshire sows fed upon the pollard, but it did not answer better than the other method. The pork fed upon it was soft, and not near so good as potatoe fed. Mr. Jebb thinks, however, that if he had had plenty of straw litter, as the stone-yard foundered them and clover for the summer food, that it would have paid the 2s. a barrel, but not more, the
dung

dung being then the profit. The sows did exceedingly well, and the pigs also in rearing.

The corn is brought to the mill from all the country round to the distance of 10 miles. The farmers send it in, and leave the price to be fixed. The raising the mill and offices, complete, cost 20,000*l.* and has established, in a fine corn country, a constant market; and has preserved the tillage of the neighbourhood, which would have declined from the premium on distant carriage.

The flour is sent to Dublin, and the manufacturing country to the North about Newry, &c.

It employs constantly from 10 to 12 hands; the common ones, 6*s.* 6*d.* a week.

They sow much earlier, and the corn is drier of late years than at first.

The carriage of all the flour that is not sent by the navigation is by one horse cars, which carry 6*cwt.* of flour twice a week to Dublin.

The parish of Monknewton, in the county of Meath, lying between Drogheda and Slaine, nearly midway, formerly belonging to the rich abbey of Melifont (whose beautiful gothic ruins are in the neighbourhood), consists of very fine corn land, and mostly belongs to
John

John Baker Holroyd, Esq; of Sheffield place, in the county of Suffex: a gentleman, who having favoured me before with excellent intelligence in that country, took pleasure in repeating it on occasion of my Irish tour.

Towards Mattock bridge, the soil is a light rich loam, but the North Western part is a strong fertile clay. The whole estate had been let out to two or three considerable people for 61 years, and they under-let in the usual style of the country. The leases expired in 1762, when Mr. H. visited the estate, and found it as ill used as it possibly could be. However, great rents were offered. He declined the proposals of several considerable men, to take the whole to under-let at rack rents as before, knowing that the same wretched husbandry and poverty must continue, if he did, although it would secure his rents most effectually. He was very well satisfied with the rents offered by persons who would reside on the estate, (dividing with them the profits of the middle man), and voluntarily engaged to pay for the masonry and principal timber of farm-houses, barns, stables, &c. He made large ditches, planting them with quick, round each farm. He allowed half the expense of inner fences. He provided an excellent lime-stone quarry in the neighbourhood, besides lime kilns on different farms. He built about the centre of the estate a very large double kiln, calculated to burn 1000 barrels per week. He allows 30s. for every
acre

acre on which 100 barrels of unslacked lime shall be laid, within a certain number of years, and on condition that the land hath a winter and summer fallow at the same time: In some instances he allows 40s. per acre, which is nearly the whole expense of liming; and in some instances, when 100l. is laid out on an house, he allows 50 or 60l. but as yet, no great advantage is taken of his encouragement to build. He endeavoured to prevent the scattered style of building; to have the barns, stables, &c. built round a farm yard, and that the house should have a story or floor above. Some objected, that a floor raised an house too high, and exposed it too much: the estate is rather low as to situation, and sheltered by hills on every side, but I understand some considerable houses are to be built next year. The common farmers, however, prefer living on the ground, surrounded by mud walls, have no idea of the cheerfulness of large windows, but let in barely light enough to do their business through apertures not much better than loop holes, neither has the encouragement to lime been taken advantage of in the degree it might be expected. Mr. H. is an hearty well-wisher to Ireland, and ready to embrace any scheme of improvement for its advantage. He wished to make some return to the country for spending the income of the estate out of it. He was ready to allow almost the whole of every expense that could be laid on the lands, knowing the
poverty

poverty of the common Irish residing tenantry, and their characters to be such, that they could not improve them as they should be; yet I understand they are not much better satisfied than other tenants: and the rent seems high. The farms were mostly let at a time when the spirit of taking land was greater than at present, but it is far from an high rent for land so circumstanced and situated, built and improved at the expense of the landlord. There is much in the neighbourhood, especially towards Drogheda, let at two guineas, and three pounds and upwards, per acre. He is a great friend to agriculture, has considered the subject much, and was very anxious to introduce something like the best English husbandry on his Irish estate, but that is still at a great distance. He endeavoured to break through the barbarous custom of having the whole farm laid waste at the end of a lease, and every inch ploughed up, but could not carry his point further, than by giving great present advantages to the tenants, to induce them to agree, that the third part of the farms should not be ploughed the last four or five years of the lease. The soil is so good, that if used ever so ill in that time, it will recover, and there will be a very good sward. According to the common method of leasing lands in many parts of Ireland, the country is nearly waste and unprofitable, to the great prejudice of the public, during seven or eight years in

every 31 years, the usual lease. For the tenant, not restrained by proper clauses, nor obliged to any particular management, or to manure, ploughs up every thing, and for some time before the expiration of his term, pursues the most ruinous system for the land, disposed even to lose some advantage himself, rather than his successor should have any benefit; consequently, the three or four last years the crops hardly pay expenses, and three or four years more are lost before it can be brought into any condition. Good and straight roads are made through and across the estate, and bridges built where necessary. Such a disposition in the landlord to improve, must do much for the country.

Notwithstanding the attention that has been paid to the estate, the young white thorn hedges, (of which a great quantity had been planted, and which grew most luxuriantly) serve as spring food for sheep and other cattle. The estate is now divided into farms, from 70 to 150 acres, and let in general for 31 years, at 40s. and 35s. per acre, some part at 30s. and a small part at 26s. The lands are tythe-free, and there are no taxes of any kind paid by the tenants, except assessments for making and repairing the roads of the barony, which some years amounted to 10d. per acre, and is laid on by the grand jury at the assizes.

July 1st, left Slaine, taking the road towards Kells. Called at Gibbs town, where Mr. Gerard has one of the most considerable farms in the country. He very kindly shewed me it, and explained the management. His bullocks he buys in October at 10l. each, and sells them in summer with 4l. profit: the cows in May, at 5l. 10s. and sells them before winter from 30s. to 40s. profit. He mows 100 acres of hay for the sheep and bullocks, and keeps good after-grass besides. The bullocks in winter have nothing but hay and grass, and are always in the fields, there being no such thing in this country as foddering yards for winter feeding. Two bullocks require three acres. The fields being generally large, a proportion of stock is thrown to each, which are left to fat; but if any do not seem to thrive well, they are drawn from them and put into better food.

The sheep Mr. Gerard buys in October, three year old wethers, at 25s. he begins to sell in April, and by August they are generally gone at about 35s. on an average. Fattening, in this manner, he thinks more advantageous than ewes and lambs. The winter sheep have hay in bad weather.

The best cattle come from Galway, Mayo, and Roscommon. Mr. Gerard thinks the cross of the English breeds in Ireland has done good, except in the hides, which are much

thinner from them. A good hide is worth 3*l.* or 4*l.* but in common from 30*s.* to 40*s.*

The soil of this neighbourhood is, much of it, a dry stoney loam, which wants no draining; and whenever red clover is sown and left, the white comes in perfect sheets, but the bottoms are strong land, wet and bad. All the dry lands would do perfectly well for turnips; Mr. Gerard tried them, and got fine crops: but the poor stole them in car loads, which made him leave off the practice.

Under the boggy bottoms there is a very fine white marl, of a sort I have not seen in England; it is under four feet of black bog, and lies in a stratum, 14 feet thick, on blue gravel; it is always found under the black, not the red bog; it cuts with turf spades, quite like white butter, but in the air falls into a sandy powder to appearance: it is uncommonly light in the hand, and has a very great effervescence with acids, as I tried. Mr. G. has marled 109 acres, and found the benefit immense. Lays 2 or 300 barrels an acre, and always on tillage.

He has made many covered drains with stones, the effect of which is great; and he has his fields fenced in the most perfect manner by deep ditches, high banks, and well planted hedges.

One third of the county of Meath, he thinks, is let to sub-tenants; a farm of 1100 acres near him is so, and does not produce a tythe of what it ought to do. For stocking, &c. a grazing farm of 1000 acres, 2000l. does; 3000l. would do it well.

Corn-acres are common here, which is to let the land for 3l. 15s. to 4l. an acre to the poor for three or four crops; who generally sow oats, but sometimes wheat.

Reached Lord Beſtve's in the evening, through a very fine country, particularly that part of it from which is a prospect of his extensive woods. No person could with more readiness give me every sort of information than his lordship.

The improvements at Headfort must be astonishing to those who knew the place seventeen years ago; for then there were neither building, walling, nor plantations: at present almost every thing is created necessary to form a considerable residence. The house and offices are intirely new built; it is a large plain stone edifice. The body of the house 145 feet long, and the wings each 180. The hall is 31½ by 24, and 17 high. The saloon is of the same dimensions, on the left of which is a dining room, 48 by 24, and 24 high: on the right, a drawing room 24 square by 17 high, and, within that, Lady Beſtve's dressing-room,

23 by 18. There are also, on this floor, a breakfast-room, 23 by 18, and a room for Lord B. of the same size. The first floor consists of six apartments, one $31\frac{1}{2}$ by 24, two 24 square; a fourth 23 by $19\frac{1}{2}$; a fifth 20 by 18; a sixth 23 by 19, all 15 high, besides two dressing rooms. From the thickness of the walls, I suppose it is the custom to build very substantially here. The grounds fall agreeably in front of the house, to a winding narrow vale, which is filled with wood, where also is a river, which Lord Beſtve intends to enlarge; and, on the other side, the lawn spreads over a large extent, and is every where bounded by very fine plantations. To the right, the town of Kells is picturesquely situated, among groups of trees, with a fine waving country and distant mountains; to the left, a rich tract of cultivation. The plantations are very numerous, more thriving I have no where seen; the larch, spruce, and beech, in particular, running beyond the rest, but the bark of all is clear, and there cannot be a better sign of a tree's health and vigour.

His Lordship transplants oaks 20 feet high without any danger, and they appear to thrive perfectly well, but he takes a large ball of earth up with the roots. He confirmed what had been mentioned to me before, that the way to make our own firs equal to foreign, was to cut them in June, and directly to lay them in water for three or four months. This was

was done by his father 35 years ago, and the buildings raised of them are now fully equal to those built of Norway fir.

Besides these numerous plantations, considerable mansion, and an incredible quantity of walling, his lordship has walled in 26 acres for a garden and nursery, and built six or seven very large pineries, 90 feet long each. He has built also a farm-yard 280 feet square, totally surrounded with offices of various kinds.

His Lordship's idea is not that of farming, but improving the lands about the house for beauty; for if let, they would be destroyed and ploughed, and also for preserving the plantations. Other lands he keeps only to bring them into order for re-letting. He applies his grafs besides horses, to fattening cows, which he buys in in May, from 3l. 15s. to 4l. 10s. and in five or six months sells them, with 35s. to 40s. profit. His mules are 16 or 17 hands high, and he finds them of incomparable use: they are in their prime at 20 years old, and good even at 35; he has had them 16 years, and in that time, with the work they have done, would have worn out three sets of horses, besides being kept upon less food. Of hay he gets 17 or 18 load an acre of 4 cwt.

In the breed of his cattle, Lord Bective is very attentive: he sent into Craven for a
prime

prime bull, and got one, which cost him 36 guineas at a year old, and he is indeed a very fine beast. This is the breed, which from much experience he prefers, as well for milking as for fattening. The Holderness he has tried, having a very fine bull, but is determined to have nothing more to do with them: the flesh is black and coarse; and though they give more milk than the others, yet it will not make a quantity of butter proportioned. The common cow of the country is as good as any for mere milking,

All Lord Bective's gates are iron, which cost him 5l. 5s. and as wooden ones come to 3l. 3s. he finds them the greatest improvement, saving the expense very soon. In his tillage he pursues the practice of the country, which is, 1. Fallow. 2. Wheat. 3. Oats. 4. Oats, but does not take the last crop of oats. He limes 160 barrels an acre on his fallow, but the common quantity only 80, by means of which, and better husbandry, he has 10 barrels an acre of wheat, and 20 of oats; while the common crops are 7 of the one, and 12 of the other. Marle he has found an excellent manure for dry soils.

The general rent of the neighbourhood 20s. Of the whole county 18 s. 6 d. Land sells at 21 years purchase at rack rent.

The cottars plant great quantities of potatoes, giving for rent 4l. 10s. the crop from 70 to 100 barrels. This culture has increased 20 fold

fold within 20 years. All the hogs in the country are fattened on them half boiled.

In July, August, and September, they have great numbers of Connaught labourers; they are called *spalpeens*: *spal*, in Irish, is a scythe, and *peen* a penny; that is, a mower for a penny a day, but that is 80 years ago.

Lord Beftive's father was one of the greatest improvers I have heard of. He bought 10,000 acres of bog and rough land in the county of Cavan, much at the rent of only 20d. an acre: he drained and improved the bog, though a red one, divided it, and brought it to be such good land, that it is now 15s. an acre; part of it was dry rocky land, which he divided by walls.

July 3d, took my leave of Lord Beftive, and went to Drueftown, the feat of Barry Barry, Esq; but as I was not fortunate enough to find him at home, I could only observe in general, that he had a large lawn very well laid down to grafs, and had made a very pretty lake with a shrubbery on the banks of it. About this neighbourhood all the good land is applied to grazing, and lets from 25 to 35s. an acre, the rest 20s. But towards Fore I paffed by much that was greatly inferior, for when laid down, (that is left to itself) no white clover, or very little came, and it feemed quite uninclofed; yet this I found was at 14 or 15s. I observed here that the cottars were not fo well clothed as hitherto.

Reached

Reached Pakenham-hall, pleasantly situated, with much old wood about it, where Lord Longford received me with the most friendly attention, and gave me very valuable information. For the following particulars of the neighbouring husbandry I am obliged to him. Farms rise from 20 to 100l. a year, in general 60 or 80l. but few larger. The soil heavy, loam eight or nine inches deep upon from 12 to 18 inches of yellow *till*, under which, lime-stone gravel 10 feet deep on rock, also dry found gravel, lets from 15 to 20s. Average rent of the county of Westmeath, exclusive of waste, 9s. including it 7s. The courses of crops most common :

- | | |
|-------------|-------------|
| 1. Potatoes | 1. Potatoes |
| 2. Bere | 2. Flax |
| 3. Oats | 3. Oats |
| 4. Oats | 4. Oats |
| 5. Oats | 5. Oats |

and oats longer if the land will bear it, even till they do not get three barrels an acre, and then leave it to cover itself. Among the better farmers;

1. Fallow manured with lime-stone gravel.
2. Wheat or bere.
3. Oats.
4. Oats.

They sow one barrel of wheat, and get seven per acre; sow one and a half of bere, and get 15 or 16; of oats one and a half, the crop 10 or 11 at first, and decreases every year

year till nothing but weeds. The cotters all sow flax on bits of land, and dress and spin it, and it is woven in the country for their own use, besides selling some yarn. The little farmers keep no sheep.

The chief improvements of wastes are the bottoms adjoining to the bogs, which they drain and cover with gravel or earth, that produce good potatoes.

No other way of laying land to grass, than sowing red clover, or oftener nothing, and leaving it.

Meadows for the year let from 3 to 4l. an acre, merely for the hay, upon which they get 10 load an acre. Grass is mostly applied to fattening cows which they buy in in May at 4l. and sell in November at 6l. one acre of good land will do for them, but if not good one and a half.

The cows give two to three gallons of milk a day, and yield 40s. produce per year by butter and calf. Feed them in winter with oat-straw, and hay. An ox hide, if it weighs 100lb. three pence per lb. if not two-pence halfpenny. A cow hide two-pence halfpenny if above 60lb. if less two-pence. Dearer than they were.

The tillage is all done with horses, use four in a plough, and do better than half an acre a day. The price with harrowing 10s. an acre.

acre. The depth six inches for winter corn; they lay the lands in round ridges four or five feet broad. Keeping a horse the summer at grafs 1l. 10s. No cutting chaff, but throw their own away in the winnowing. The hire of a car, and horse, and driver, ten-pence a day. In hiring and stocking farms, they will take one of 50 acres, without any thing but four horses and six cows, depending for food upon what they bring; for labour upon themselves and the cotters that come with them; and make none or scarce any profit.

Land sells at 21 years purchase rack rent, rents have fallen 25 per cent since 1770. In 1768, 1769, and 1770, they were much above their value. Tythes are compounded for, wheat, bere, and barley 7s. oats 5s. meadow 2s. sheep 3d. No tea drank.

Leases common are, 31 years to catholicks, and three lives to protestants. Great part of the country let to middle men, who re-let it to sub-tenants, generally with a profit greater than they pay the landlord. Carry their corn to the mill of Carrick five miles off. Rents of cabbins 20 to 25s. with a rood of ground, if land with it, which is generally the case, they pay 30s. an acre. For grazing a cow 25s. and for a horse 30s. No emigrations. Twenty to one of the lower people Roman Catholics.

Expense of building a cabin 40s. and for a farm of 50 acres 5l. They will hire farms and take all the buildings upon themselves.

Both

Both cotters and little farmers are in a worse situation that they were 20 years ago. All of them have turf for firing, and one week's labour in a year will supply a cabbin.

Cutting turf 3d. a kish or cubical yard

A ditch six feet wide, and five deep 20d.

In burning lime, a kish of turf burns 2 barrels of lime.

Sells at the kiln at 6d. a barrel.

Among Lord Longford's farms in this country are the following:

	£.	Let	£.
276 acres	75	rent 1736	worth now 250
410	112	ditto	410
242	} 70	ditto	240
150 bog			
600	} 118	ditto	600
400			
150	49	ditto	140
122	41	ditto	100
270	95	ditto	270
330	100	ditto	100
377	334	1773	334
60	16	1739	40
383	150	1749	300
655	} 225	ditto	700
1500 bog			
303	121	1750	300
325	236	ditto	320
457	186	1756	400
	<hr/>		<hr/>
	1928		4504

From which table may be seen the comparative value of lands in 40 years: it has more than doubled in 30.

Grass

Grafs land, gravelled, will let to the poor at 5*l.* for potatoes. Very good old grafs, without any manure, 4*l.* 4*s.* and as much more for the second year for flax: after that, would give 3*l.* for oats, and they will give 5*l.* for dunged stubble for potatoes.

The expenses per acre, of a crop :

		<i>£.</i>	<i>s.</i>	<i>d.</i>
Rent	-	5	0	0
4 Barrels of feed	-	1	0	0
Planting	-	3	0	0
Taking up	-	1	10	0
		<hr/>		
		10	10	0
		<hr/>		

The crop 80 barrels. Prime cost 2*s.* 6*d.*

Lord Longford has some black bottom land, as it is called here; that is, black red bog partially drained ten or twelve years ago, some of it tolerably dry: other parts so wet, that a beast can scarcely venture on it with safety. One part is a reddish bog, three feet deep, which 12 years ago, was burnt a foot deep; and at the same time open drains made 10 feet wide at top, and 7 deep, the bog being formed by the drains into beds 40 feet wide. The spontaneous rubbish, heath chiefly is now coming fast again, but it never has been cultivated; where the fires were made are spots of fine white clover. This land, at present, would let for nothing, but it is highly improveable.

His

His Lordship has had two acres and an half of turnips on just such, and the crop was exceedingly good: he has always remarked in burning, that wherever there were many ashes, there are sure to be good turnips. The two acres and an half kept seven bullocks, each 8 cwt. and sixty sheep, three months. On four acres of the same sort, he has now a crop of turnips sown: it was drained 10 years ago. This summer he dug it over, levelled it, and burnt the spit in great heaps: this digging cost 3l. 10s. an acre. The burning 1l. It was harrowed with bullocks, which, with seed, &c. he reckons 10s. in all 5l. an acre, which expense he knows by experience is repaid by the crop of turnips. In harrowing, if a bullock in a soft place sinks in, they slip the harness off him, and set the others to drag him out by the horns, fixing the rope round the horns as in hoisting an ox into a ship.

I remarked, upon this boggy bottom, a small plantation of Scotch firs, which did very well, and larch still better. Willows will not thrive. A gentleman inclosed and drained 4 acres, which he planted with them, and they shot away for four years, but then all died. They do, however, very well in the turf itself, if the upper surface of sponge is cleared away. In improving any bogs, Lord Longford thinks the tillage should be renewed alternately with grass every six or seven years, or it will cover again with heath (*erica*) burning it the best way.

His lordship has tried cabbages several times, and he finds that while they last they are better than turnips, but prefers the latter on account of the short duration of the former.

Limestone gravel he has tried on a large scale, lays 1000 loads an acre, at 11. 10s. expense, if it is in the field. The effect prodigious wherever it is laid. On a bare rocky spot in the front of the house, where the earth had been cleared away, and there was no vegetation but of weeds, some gravel was spread, and it brought up an exceeding thick coat of white and red clover. It is also infallible in destroying moss.

July 4th, Lord Longford carried me to a Mr. Marly's, an improver in the neighbourhood, who has done great things, and without the benefit of such leases as protestants in Ireland commonly have. He rents 1000 acres; at first it was at 20d. an acre, in the next term 5s. or 25ol. a year, and he now pays 85ol. a year for it. Almost the whole farm is mountain-land; the spontaneous growth heath, &c. he has improved 500 acres. His method has been to grub up the rubbish, and then to summer fallow it, and to manure it with limestone gravel 1400 load an acre, at the expense of 2l. 2s. Upon this he sows wheat or bere, gets 9 barrels an acre of wheat, and 19 of bere, then oats 12 to 15 barrels. After which he fallows again, and finishes the second or third

third course with red clover, sown with barley or oats after wheat. If this takes very well, he leaves it to turf itself. White clover comes as fast as the red wears out; for the first four or five years it supports only sheep, but as it improves, which it does very fast, he grazes it with black cattle.

Lime he has tried instead of gravel, 160 barrels an acre at 1s. but it did not better than gravel at one-fourth the expense. In graveling, the beginning of the pit he has found good for nothing; and the deeper it is dug, it is so much the better. It will not do twice, but will last 8 crops, with 2 fallows.

Just such an account would be given of marle in Norfolk, if they practised so bad a course of crops. Any manuring with so powerful an alcaly as marle leaves the ground, after an exhausting course of crops, in much worse order than it found it. Would but the Irish farmers pursue the Norfolk system, of never letting two crops of white corn come together, they would not then find their gravel exhausted in 8 crops: it would probably last 20, and in that management they might gravel again and again.

He has the white light marle under boggy bottoms, and has used much of it, but does not find it answer so well as gravel.

He applies his grafs to fattening cows, &c. in the fyftem I have mentioned more than once; fheep he both buys in to fat, and keeps his own breeding flock.

He is very attentive in fattening his wethers; he buys in October at 30s. or 32s. each, begins at Chriftnas to feed them with bran and oats, one quart of each per diem, and continues it for three months: has fold at 3l. 5s. but on an average at 40s. This he thinks better and cheaper than turnips, which he has tried, but finds too dear in the expenfe of drawing, and if fed in the field, thinks half of them loft; the oats at 5s. 6d. a barrel, the bran at 1s.

	£.	s.	d.
90 Days oats 11. fay 3 bufhels, at 5s. 6d. a barrel - - - -	0	4	1
90 Ditto bran - - - -	0	0	9
	<hr/>		
	0	4	10
	<hr/>		

It was with regret I heard that the rent of a man who had been fo fpirited an improver, fhould be raifed fo exceedingly. He merited for his life the returns of his induftry. But the cruel laws againft the Roman Catholics of this country, remain the marks of illiberal barbarifm. Why fhould not the induftrious man have a fpur to his induftry whatever be his religion; and what induftry is to be expected from them in a country where leafes for lives are univerfal, if they are fecluded from terms common to every one elfe? What mifchief could flow from letting them have leafes

leaves for life? None; but much good in animating their industry. It is impossible that the prosperity of a nation should have its natural progress, where four fifths of the people are cut off from those advantages which are heaped upon the domineering aristocracy of the small remainder.

In conversation with Lord Longford I made many enquiries concerning the state of the lower classes, and found that in some respects they were in good circumstances, in others indifferent; they have, generally speaking, such plenty of potatoes, as always to command a bellyful; they have flax enough for all their linen, most of them have a cow and some two, and spin wool enough for their cloaths; all a pig, and numbers of poultry, and in general the complete family of cows, calves, hogs, poultry, and children, pig together in the cabin; fuel they have in the utmost plenty; great numbers of families are also supported by the neighbouring lakes which abound prodigiously with fish; a child with a packthread and a crooked pin, will catch perch enough in an hour for the family to live on the whole day, and his Lordship has seen 500 children fishing at the same time, there being no tenaciousness in the proprietors of the lands about a right to the fish; besides perch, there is pike upwards of five feet long, bream, tench, trout of 10lb. and as red as a salmon, and fine eels; all these are favourable circumstances, and are very conspicuous in the numerous and healthy families among them.

Reverse the medal: they are ill cloathed, and make a wretched appearance, and what is worfe, are much oppreffed by many who make them pay too dear for keeping a cow, horfe, &c. They have a practice alfo of keeping accounts with the labourers, contriving by that means, to let the poor wretches have very little cafh for their year's work. This is a great oppreffion, farmers and gentlemen keeping accounts with the poor is a cruel abufe: fo many days work for a cabbin—fo many for a potatoe garden—fo many for keeping a horfe—and fo many for a cow, are clear accounts which a poor man can underftand well, but farther it ought never to go; and when he has worked out what he has of this fort, the reft of his work ought punctually to be paid him every Saturday night. Another circumftance mentioned was the exceffive practice they have in general of pilfering. They ftalevery thing they can lay their hands on—and I fhould remark, that this is an account which has been very generally given me: all forts of iron hinges, chains, locks, keys, &c.—gates will be cut in pieces, and conveyed away in many places as faft as built; trees as big as a man's body, and that would require ten men to move, gone in a night. Lord Longford has had the new wheels of a car ftolen as foon as made. Good ftones out of a wall will be taken for a fire-hearth, &c. though a breach is made to get at them. In fhort, every thing, and even fuch as are apparently of no ufe to them—nor is it eafy to catch them, for they never carry their
 ftolen

stolen goods home, but to some bog-hole. Turnips are stolen by car loads; and two acres of wheat pluckt off in a night. In short, their pilfering and stealing is a perfect nuisance! How far it is owing to the oppression of laws aimed solely at the religion of these people, how far to the conduct of the gentlemen and farmers, and how far to the mischievous disposition of the people themselves, it is impossible for a passing traveller to ascertain. I am apt to believe that a better system of law and management would have good effects. They are much worse treated than the poor in England, are talked to in more opprobrious terms, and otherwise very much oppressed.

Left Pakenham-hall.

Two or three miles from Lord Longford's, in the way to Mullingar, the road leads up a mountain, and commands an exceeding fine view of Loch Derrevaragh, a noble water eight miles long, and from two miles to half a mile over; a vast reach of it, like a magnificent river, opens as you rise the hill. Afterwards I passed under the principal mountain, which rises abruptly from the lake into the boldest outline imaginable; the water there is very beautiful, filling up the steep vale formed by this and the opposite hills.

Reached Mullingar.

It was one of the fair days. I saw many cows and beasts, and more horses, with some wool: the cattle were of the same breed that I had generally seen in coming through the country.

July

July 5th, left Mullingar, which is a dirty ugly town, and taking the road to Tullamore, stopped at Lord Belvidere's, with which place I was as much struck as with any I had ever seen. The house is perched on the crown of a very beautiful little hill, half surrounded with others, variegated and melting into one another. It is one of the most singular places that is any where to be seen, and spreading to the eye a beautiful lawn of undulating ground margined with wood. Single trees are scattered in some places, and clumps in others; the general effect so pleasing, that were there nothing further, the place would be beautiful, but the canvass is admirably filled. Lake Ennel, many miles in length, and two or three broad, flows beneath the windows. It is spotted with islets, a promontory of rock fringed with trees shoots into it, and the whole is bounded by distant hills. Greater and more magnificent scenes are often met with, but no where a more beautiful or a more singular one.

From Mullingar to Tullespace, I found rents in general at 20s. an acre, with much re-let at 30s. yet all the crops, except bere, were very bad, and full of weeds. About the latter named place, the farms are generally from 100 to 300 acres, and their course, 1. Fallow. 2. Bere. 3. Oats. 4. Oats. 5. Oats. Great quantities of potatoes all the way, crops from 40 to 80 barrels.

The road before it comes to Tullamore leads through a part of the bog of Allen, which seems here extensive, and would make a noble tract of meadow. The way the road was made over it was simply to cut a drain on each side, and then lay on gravel, which, as fast as it was laid and spread, bore the cars: along the edges is fine white clover.

Part of Tullamore is well built. I passed through it to Captain Johnston's at Charleville, to whom I am indebted for the following account of the husbandry of the neighbourhood.

Farms around Tullamore, are commonly 100 to 300 acres, but some smaller, and some of 5 or 600. The soil is generally a dry found gravelly loam, lets from 12s. to 18s. average 16s. five miles every way around. Average of land let in the whole county 15s. exclusive of bog. He thinks that one-seventh of the county is bog or mountain; but the latter pays from 1s. 6d. to 3s. The course of crops:

1. Oats on lay, sow one barrel and an half, get 10 to 15.

2. Fallow.

3. Wheat, sow three-fourths to 1 barrel, get 4 to 7 barrels.

4. Oats.

1. Oats.
2. Fallow.
3. Wheat.
4. Oats.
5. Pease.

1. Potatoes

1. Potatoes on grafs with dung, or burn-
bating.
2. Bere, fow three-fourths of a barrel, get
12 to 20 barrels.
3. Wheat.
4. Oats.
5. Fallow.

- Some
1. Pare, and burn for turnips.
 2. Potatoes at 6l. an acre rent.
 3. Bere.
 4. Wheat.
 5. Oats.
 6. Fallow.

They are exceedingly late in fowing, not finishing their wheat and bere till after Christmas. They fow rape on low grounds by the edge of bogs, upon paring and burning for seed; they get 12 to 15 barrels an acre, worth from 12s. to 20s. a barrel. They fow it on the ground without covering after ploughing, and the rougher the land the better. Sow rye after it, and then oats, getting good crops; and lay it down with grafs seeds from lofts, or ray grafs, or clover and trefoile. For turnips on fallow, plough sometimes thrice, oftener twice, lay on no manure for them, nor hoe them, get very bad crops. If pare and burn they plough twice; but a penalty is laid of 5l. an acre for doing it. They eat them with sheep both drawn and on the land. Very little clover sown. Flax is sown very generally, from patches up to three or four acres, they do the whole of it themselves, spinning
and

and weaving. About Good Friday is the time of sowing; but later sown is bad. The sly farmers, (and often the better sort) that is the petty ones, let potatoe ground for it, at 6l. an acre to cotters.

Great quantities of potatoes in the trenching way, and all the dung is used for them. A common way is, for the farmers to let them have land for nothing, upon condition of their dunging it, which all do that have not land of their own: if not, they pay from 4l. to 6l. dunged, or turnip land fed with sheep, which they prefer, the potatoes being drier and better. The apple potatoe is most esteemed, because they are great bearers, last through the summer, and have been kept two years. Not much lime used, having been tried, but has not answered; limestone gravel on lay to be broken up, has a very great effect. The expence 10s. or 15s. The grass is chiefly applied to heifers, or store bullocks; the first fold in small parcels at home, the latter at Ballynasloe or Bannagher. They buy them in at a year or two years old; the first 30s. to 50s. the latter from 55s. to 57s. Keep them a year and four or five months, or only a year: in a year they will make, by the first, 25s. to 30s. and from 30s. to 40s. by the others.

Wherever the land is good enough, a few cows bought in for fattening, in May, at 1l. 15s. to 5l. and sold with 4cs. a head profit. The poor people all rear calves.

Many

Many sheep bred; the best farmers breed and sell them fat at three years old, wethers at Michaelmas, from 18s. to 24s. if in spring, from 24s. to 44s. Clip from 5 to 7 lb. of wool.

The tillage is done by oxen, four in a plough, not half an acre a day, the skye farmers sometimes will put one horse and a cow in. Oxen are reckoned best. They cut no chaff, but winnow in the field.

Hire of a boy, horse and ear 1s. 1d.

The skye farmer will take 40 or 50 acres, with three or four cows and a horse or two, and 5l. 5s. in their pockets. Tythes are compounded, 5s. for winter corn, 3s. for spring corn, 25s. 1000 sheep. Mowing ground, 5s.

Land sells for 20 years purchase, rack rent has fallen two years purchase in seven years, and the rent has fallen from 5s. to 3s. in the same time. No tea. County cefs 6d. Very few middle men left. Cottages with half an acre, let for 20s. with two acres, which is common, 40s. No emigrations. Religion, lower classes all Roman. Not one cotter in six has a cow about towns; but in the country, about half of them have. Most of them have a pig, and much poultry. They are not more thieving than for a few turnips and cabbages for their own use, nor that to any excess. Many of the poor have reclaimed much bog,

bog, the premiums of the Dublin Society have induced them to do it: which are now 50s. an acre: by gradual draining, either from cutting turf, or making bounds, or from drainings purposely done, they get to peat, and burn it 4 to 6 inches deep, at 20s. an acre, and sow bere, rye, or potatoes; the bere does best, and next year another crop of corn; and then another burning, and two more crops, the potatoes are wet, but will do for feed, and they will escape the frost in a bog, when they are killed in the high lands. They pay nothing for the bog, having land adjoining.

They lay the bits down to grafs, sowing seeds, but the crop is generally very thin and poor, and after a year or two, burn it again; sometimes put out a little dung or gravel on the grafs, and plant it with potatoes. Some have put potatoes in upon a red bog, with no other preparation, than laying a poor, sharp, sandy gravel on it, and got tolerable crops.

Mr. Johnston has cultivated cabbages for several years. In 1772 he had one acre, in 1773 $2\frac{1}{2}$, and since that, between 1 and 2 acres every year. The great Scotch fort which he sows in February, and plants out in 4 feet rows, and 18 inches, from plant to plant, the beginning of June. If the plants are not in the ground then, the crop will not be good. Ploughs for them twice, and dungs richly in the furrows. Horse hoes twice or thrice, and hand weeds them; they come from 5 to 12 lb. but

but have always began to burst in September. Has used them for fattening sheep, that would not fatten on grafs; also for bullocks, which throve perfectly well, likewise the leaves (with great care in picking) to milch cows, but the butter tasted. Finds that the principal use of them is for bringing on cattle that will not finish at grafs, and to be used all before Christmas. Barley that has been sown upon cabbage land which succeeded potatoes, a vast crop, 24 barrels an acre. Turnips Mr. Johnston has had for these ten years, from 1 to 4 acres, and has always applied them to fattening sheep, for which purpose he finds them excellent; and best to feed in the field, because fast in the ground for the sheep to bite at, provided there is some grafs for them to lie on.

Has deviated from the common late sowing of wheat, putting his in the beginning of September, and finds his harvest so much earlier, than his is in the *haggard* (reek yard) when others are cutting.

His tillage he performs with only 2 horses. Mr. Johnston is a great friend to the Irish cars: He carries 10 to 12 cwt. of turf, 3 statute kishes of hard stone turf, each horse 10 turns a day, or 20 miles, and all done on grafs alone.

July 6th went to Rathan, where Lord Shelburne has placed a Norfolk bailiff, Mr. Vancouver,

cover, for the management of a farm he took into his own hands, who brought with him a ploughman, plough, harrow and tackle. The design does honour to the nobleman who formed it; and Mr. Vancouver is not likely to disappoint him; he is a sensible, intelligent active man, who went through all the manual part of farming in a seven years apprenticeship to a great farmer in Norfolk. I found him just what I could wish, disgusted neither with the country nor the people, pleased and animated with the prospect of improvement before him, and had no doubt of success. He was going on perfectly well; ploughing off the turf of a boggy bottom, adjoining to a great bog; burning it into small heaps, and intending immediately to plough and sow turnips, of which, he will have 12 acres this year, and purposes having many more the year after; he has cut some very long drains into the bog, designs attacking it, and expects to make it excellent land, though instead of ploughing it first for burning, he must dig it; I am clear he will not be disappointed: he has a fine field to work upon, for Lord Shelburne has 4000 acres of bog here. The high parts of the farm, are a rough lime stone land, but very dry and sound, he designs in winter, grubbing the rubbish, burning all the stone into lime, and ploughing it for turnips the following year. Let me observe, that this is the right conduct of rough land, which should always be brought into turnips first, and not fallowed for wheat, as all the Irish improvers do,

do, who follow their wheat with so many crops of spring corn, that their soil is presently exhausted. If turnips are had, dung is gained, and the land in order, which paves the way to every thing else. Too much cannot be said in praise of this undertaking of Lord Shelburne's. An opening is made by it, to a new field in husbandry, which I foresee may prove of infinite consequence to the kingdom in general. Mr. Vancouver being acquainted with several modes of improvement in England, and perfectly versed in the Norfolk husbandry, is placed with great judgment where he can exert both. Perhaps I was the better pleased with this improvement from being instrumental in procuring his lordship the person who is executing it. Near this place is a farm of 150 acres, and 1500 bog, to be let on a lease for ever, at 130l. a year.

Went from Rathen to the Glebe, a lodge belonging to Dean Coote, and from thence to Shaen castle, near Mount-mellick, his residence; passed near large tracts of mountain, waste and bog; and not far from a great range of the bog of Allen. Saw but little good corn; they were burning some boggy bottoms in order to fallow for bere; but it should be for turnips.

For the following particulars I am indebted to the obliging attention of the dean. About Shaen castle farms of 40 or 50 acres are very common, some few rise to 3 or 400. The soil
is

is either lime-stone, lime-stone gravel, or moor; lets at 13s. an acre on a medium.

THE COURSE.

1. Fallow. 2. Wheat, sow 1 barrel, produce $5\frac{1}{2}$. 3. Peas, sow $\frac{3}{4}$ barrel, and get 5 to 10!

1. Fallow. 2. Wheat. 3. Oats, sow 2 barrels, get 8 to 15.

Also, 1. They burn moors for turnips: no hoeing, draw them for sheep. 2. Barley or bere, sow 1 barrel of bere, get 8 to 18. Sow of barley 1 barrel, get as much barley as bere. 3. Oats. 4. Oats; after which they leave it to graze itself. Also on moory lands, rape or rye instead of, or after turnips.

Flax is sown by all poor people and little farmers for their own use.

Potatoes are so much planted that all the dung of the country is applied to them; some few plant them with the plough, but it does not well, unless the land is summer fallowed: the chief culture is in the gardens of the cabins, for they hire no land of the farmers for potatoes. No sheep folding. Lime-stone gravel is much used for tillage land, and the benefit found great for six or seven crops.

The grafs is applied to fattening, dairying, and sheep. Dairies from 30 to 40 cows are common here; they keep them in their own hands. An acre and a half of middling grafs for a cow. Some make butter, but none, if
the

the cheefe is good. $1\frac{1}{2}$ cwt. of cheefe is a good produce per cow, price from 25 to 30s. per cwt. with 1l. 1s. for the calf, at 5 or 6 weeks old: rear very few.

The fattening system is to buy in at 3l. to 6l. in April, May, and June, and sell out with 30s. or 42s. profit, quite to Christmas. Flocks of sheep rise to 5 or 600; the profit lamb at 5s. to 9s. and the ewe's wool 4lb. In the winter they are on the walks, unless in frost and snow, when they get some hay or turnips. Wool 15s. to 17s. a stone, but within 15 years was 10s. 6d. It is bought up by combers, who keep spinners in the country to spin it into yarn, which is sold to factors for foreign markets. They are much troubled with the rot upon the moors, and a wet season will rot them even on lime-stone land. Plough mostly with horses, using 4, often for the second time of fallowing 6: they do $\frac{2}{3}$ of an acre; 4 bullocks, which gentlemen and good farmers use, will do $\frac{1}{2}$, price 7s. an acre. For winter corn they throw the lands narrow, and arched up: no shovelling furrows, but strike them with the plough. Keeping a horse 3l. 3s. a year, and a working bullock 4s. Break their fallows from November to February. Hire of a horse, boy, and car from 1s. 1d. to 1s. 4d.

In hiring and stocking farms 3l. an acre they reckon necessary.

Land fells at 20 years purchase; has fallen in 5 or 6 years 2s. to 6s. an acre, in general 5s. Tythes are compounded for, wheat 7s. bere 6s. barley 5s. oats 3s. 6d. mowing ground 3s. pease 2s. 6d. No tea in the cabbins, nor yet a bellyfull of potatoes. They have an acre of land and a cottage for 1l. 1s. to 1l. 10s. and about $\frac{1}{4}$ of that in potatoes, they buy when they have not of their own, both oats, meal, or potatoes: a barrel of potatoes will last a man, his wife, and four children a week; one barrel of oats will yield 1 cwt. of oatmeal, which fells at 8s. 6d. to 10s. and will in *stir-about* last them a week, that is the same time as a barrel of potatoes. They in general keep a cow at 1l. 1s. to 1l. 10s. but they must buy 12s. to 14s. of hay for her. They also keep a pig on offal.

Stealing is very common, they take every thing they can lay their hands on, yet are not so poor here as in Clare and Tipperary. Corn all carried to Dublin for the premium, that on the malt and flour pays all the expenses, but not the wheat. Population evidently increases. No emigrations. Religion of the lower classes all catholick. A poor man's firing 14s. or 15s.

Expense of building a cabin 3l. 3s. of stone and slate 20l. all to a farm of 50 acres, of stone and slate 300l.

In conversation upon the subject of a union with Great Britain, I was informed that no-

thing was so unpopular in Ireland as such an idea; and that the great objection to it was increasing the number of absentees. When it was in agitation, 20 peers and 60 commoners were talked of to sit in the British parliament, which would be the resident of 80 of the best estates in Ireland. Going every year to England would, by degrees, make them residents; they would educate their children there, and in time become mere absentees: becoming so they would be unpopular, others would be elected, who, treading in the same steps, would yield the place still to others; and thus, by degrees, a vast portion of the kingdom now resident would be made absentees; which would, they think, be so great a drain to Ireland, that a free trade would not repay it.

I think the idea is erroneous, were it only for one circumstance, the kingdom would lose, according to this reasoning, an idle race of country gentlemen, and in exchange their ports would fill with ships and commerce, and all the consequences of commerce; an exchange that never yet proved disadvantageous to any country.

The Dean's improvements of bog ground are extensive; he drained very completely, and then ploughed or dug it for burning, upon which sowed messin, which succeeded very well, yielding 13 barrels an acre. Then oats ploughed for, and got 10 barrels; and sowed hay seeds, ray grass (*colium perenne*) and clover

clover (*trifolium pratense*;) before the improvement began, it was not worth 1s. 6d. an acre, but made it 14s.

Another part of the bog was leveled and burnt, the ashes spread, and turnip feed harrowed in, did very well, fed sheep with them; after which, rubbish, clay, and lime-stone gravel spread on it, 1000 load an acre, or 40s. an acre, and grass feeds sown, which made it worth 1l. 1s. an acre. Turnips, Dean Coote has had these 20 years, both in the drill and broad-cast, and found the drill method much the best, but owing, I apprehend, to the hoeing of the broad-cast not being well performed. Had them always for feeding sheep, and found the eating equal to a coat of dung.

He folded his sheep for two years, but could not bring his people to continue it without too much trouble.

Lime he has tried much on the lime-stone ground, but did not find it answer at all.

Would recommend in the improvement of bogs, to begin with one great drain round the intended improvement, 12 feet wide at top, cut to the gravel, and 4 feet wide at bottom; then to cut cross drains into that, which also ought to go down to the gravel: leave it for a year, if it is bad; then turn it up with the spade or plough, burn it, and sow turnips or rape, and do it again the same next year,

with a second burning, after which oats may be had, and laid down to grass, which will be good, but much better if gravelled. Dean Coote has received from the Dublin society several gold medals for the improvement of bog, culture of turnips, &c.

July 8th, left Shaen Castle, and took the road towards Athy; breakfasted with Dean Walsh, at General Walsh's, in that gentleman's absence.

The General is a considerable farmer, and a yet greater improver; he has built 12 new farm houses, also 30 cabins that have 90 cows, and each 2 to 4 acres, at 20s. an acre.

He has tried potatoes with the plough, instead of the trenching way, he manured 2 acres of stong land with 400 load of dung, which he ploughed in, and then dibbled the sets in, 15 inches square, he hand-hoed them twice, and got 176 barrels per acre. The common crops do not exceed 90 barrels.

He has generally 7 or 8 acres of turnips, and 2 or 3 of cabbages, with which he feeds both cattle and sheep, and with great success. He practices tillage principally to bring his land into order, and throws it into the following course.

1. Fallow. 2. Wheat. 3. Clover or trefoile, 2 years.

When

When he sows barley on potatoe land, he gets 20 barrels an acre. One article in the management of his estate cannot be too much praised: wherever he lets a farm that has only a common ordinary cabbins on it, he obliges the new tenant to build a good house of stone and slate, allowing him considerably towards the expence. The common course of crops here is,

1. Fallow. 2. Wheat, yielding from 7 to 9 barrels. 3. Barley, 15 barrels. 4. Oats, 15 to 20. 5. Left for Grafs.

The poor here have all of them potatoes, as far as their dung will go: when they hire grafs land to plant them on, the account of an acre is as follows:

	£.	s.	d.
10 barrels of feed, at 3s. 4d.	1	13	4
Planting, cutting, &c. - - -	1	10	0
Second trenching - - - -	0	15	0
Weeding - - - - -	0	2	6
Taking up, 40 men a day at 7d. -	1	3	4
Rent - - - - -	3	10	0
	<hr/>		
	£.	8	14
			2
	<hr/>		

The average crop 80 barrels, which is 2s. 2d. a barrel prime cost.

They have them the year round in plenty; they are cheaper than oatmeal, and they like them better. They sow very little flax, and
some

some none at all. Many of them are master of a car and horse, with which they work for hire; also one or two pigs, and much poultry by means of their potatoes.

Leaving General Walsh's, passed a fine wood on the right, within a wall. See much good wheat and bere to Athy. Going through that town the road leads on the banks of the river Barrow, which winds through the vale to the right; the verdure beautiful, and the country pleasant. Pass over much light dry sandy gravelly loam, as fine turnip land as I ever saw, but not one cultivated in the country. It is this soil all the way from Athy to Carlow; lets from 16s. to 20s. an acre. The courses are:

1. Fallow. 2. Wheat, yielding 5 or 6 barrels.

Also, 1. Fallow. 2. Wheat. 3. Oats, and grass feeds, or left to turf itself, they use lime with success: they have gravel, but that does best for strong lands, and this upon land formed for 20 barrels an acre of barley after turnips. These people by the Norfolk husbandry would make a crown where they now receive six-pence.

Called on Mr. Vicars at Ballynakill, a considerable grazier, who farms near 2000 acres in different counties. His husbandry consists chiefly of feeding sheep and bullocks: one sheep system is to keep ewes for breeding, the sale being 3 year old wethers, some of the

the oldest ewes and the wool. The wethers fell from 20 to 28s. each, and the quantity of wool $2\frac{1}{2}$ to a stone, (the stone of wool in Ireland 16lb.) Another system is to buy in ewes in autumn, and to sell the lambs fat, and then the ewes. Grazing, in this country, consists in buying bullocks in October, at 5l. or 6l. each; give them some hay in bad weather, and sell them fat, with 40s. or 50s. profit. Cows are bought in in May, and sold fat from harvest to autumn. Many dairies, not let to labourers, but kept for making butter; a cow will make 1 cwt. at 2l. 10s. and the calf 4s. The cabbins let here at 20s. each, and 30s. they pay for the pasturage of a cow, which they all keep. The account of potatoes is:

	£.	s.	d.
Rent - - -	5	0	0
8 Barrels of seed, 4s. 6d. -	1	16	0
Putting in - - -	2	10	0
Taking up - - -	1	10	0
	<hr/>		
	10	16	0

The average crop 60 barrels, prime cost therefore 3s. 6d. Average rent of the whole county of Carlow, 15s.

Passed on to Mr. Browne at Brownshill, who has built a very good and convenient house, in an open situation, commanding an extensive prospect; gained here several articles of information relative to the same neighbourhood as Mr. Vicar is in. They plough chiefly with oxen, four in a plough, but do
not

not half an acre a day, which is a quantity four horses will do easily.

Tillage is very much increased here, and almost intirely owing to the inland premiums; the people also increase much. Tythes are, Wheat 5s. Bere 4s. Barley 3s. Oats 2s 6d. Mowing ground 3s. and of sheep in kind.

Throughout the county of Carlow the hiring tenant is in general the occupier, except in small pieces.

In front of Mr. Browne's house is a mountain, which I remarked was cultivated very high up the sides; and upon enquiry found that it was done by cotters, who pay the high rent of 10s. an acre in order to improve: they pare it with a plough, and burn the furrow, lime and fallow it for wheat, of which they get six barrels per acre; after which they sow oats, and get ten barrels, laying down with grass feeds. Some they reclaim with potatoes. Much of the mountain is wet, so that they are forced to drain it with open cuts.

Mr. Browne keeps 800 sheep, which consist of 200 ewes; 100 ditto, 2 years old; 100 ditto, 3 years old, wethers; 200 ditto 1 year old, ditto *hoggets*; 200 lambs. And he sells every year

120 three year old wethers, at 25s.	£. 150	0	0
80 culled ewes, at 16s.	-	64	0
220 stone of wool, at 16s.	-	176	0
		<hr/>	
		390	0

In the winter they eat, of hay, 25 ton.

Heard

Heard of a very spirited farmer at Carlow, a Mr. Hamilton, on whom I should have called, but was told that he was absent. He has gone so much into the turnip husbandry as to have 100 acres in a year, and 8 or 10 acres of cabbages; sows them much on pared and burnt land; keeps by their means a vast stock of cattle; stall feeds many bullocks, buying straw for litter in order to make dung; besides which he buys all the dung he can, and burns much lime, taking in short every means to keep his lands clean and in good heart. Such an example ought to be powerful in creating imitators, but I could not find it had any such effect among the common farmers.

July 9th, left Brownhill, and taking the road to Laughlin-bridge, called on Mr. James Butler at Ballybar, a very active and intelligent farmer upon a considerable scale. He has generally 4 or 5 acres of cabbages, which he uses for his fat wethers of four years old; the produce of them he finds greater, and the sheep too like them better than turnips. He has sometimes 20 acres of turnips, and hoes them all. This year none.—It is a sign the cultivation is not well understood in a country, when a man has one year 20 acres, and another none. A principal part of the advantage of the consumption is lost, if the cattle system is not regularly arranged with an eye to the turnip crop.

Mr. Butler buys every year 40 year old beasts, at from 30s. to 40s. Keeps them till
three

90 LAUGHLIN-BRIDGE.

three years and an half old, and then fells them fat. Also 20 bullocks, at 5l. which he fells fat at 8l. His cows he buys in May, from 3l. to 3l. 10s. each. The profit 40s. a head. The best grafs he has will carry a bullock an acre. His sheep system is to buy three year old wethers in October, at 25s. each, which he begins to fell in the spring, and through the summer, at 34s. In the winter they have hay.

His improved course of crops is:

1. Turnips, or cabbages. 2. Barley, yielding 20 barrels an acre. 3. Clover, and upon that grasses afterwards to lay down.

The courses general are:

- | | |
|------------------------------|--------------------------------|
| 1. Fallow. | 1. Potatoes. |
| 2. Wheat 7½ barrels an acre. | 2. Wheat. |
| 3. Barley. | 3. Barley, 14 barrels an acre. |
| 4. Oats. | 4. Oats, 12 ditto. |
| | 5. Fallow, and then as above. |

Their lands let at 30s. an acre, being a very good stony loam. Most in this neighbourhood were grazing ones, carrying bullocks and sheep; but since the premiums on land-carriage corn, they have been broken up, and are now as 1 to 20. The number of sheep particularly is so much lessened, that only four persons, Mr. Bunbury, the two Mr. Bernards', and Mr. Keef, had, 20 years ago, more sheep among them than there are now in the whole county.

Having taken a short walk with Mr. Butler, passed on to Captain Mercer's mill at Laughlin-bridge. I had been told that this was one of the most considerable mills in Ireland; and had

had a letter of recommendation to Mr. Mercer, which through carelessness I had lost. I did not care, however, to pass without seeing the mill, drove down to it, and was in the awkward situation of explaining myself to be a traveller—what I wanted—from whence I came—and so forth: but the good-nature and politeness of Mr. Mercer presently dissipated the disagreeableness of those first explanatory moments. He shewed me the mill, and explained every thing with the utmost civility. It is a very large and convenient one; grinds 15,000 barrels a year, and if there was a brisker demand could do yet more.

I found the same necessity of kiln drying here as at Slaine mill, and made the same observation that the wheat was none of it of a fine bright colour, like what is common in England.

The farmers also dress their corn in so slovenly a manner, that there is the same necessity of dressing it over again, for which very powerful machines are contrived. The whole is very well calculated for saving labour in every operation, and only eight hands are employed. After the mill was built, Mr. Mercer made many alterations of his own, to render it more simple and effective, which have fully answered his expectations. The barrel of bran here is 4 stone, and sells for 8d. Mr. Mercer has tried feeding cattle with it, but could never make more than 6d. by it: has

has also fattened hogs with it, but in no use will it pay more than 6d.

Nothing interesting from hence to Kilfaine. I saw some very good crops of wheat, but the country is bleak, and wants wood much. Reached Gervas Parker Bushe's, Esq; at that place in the evening, who received me with a politeness equalled only by the value of his intelligence.

July 10th, accompanied Mr. Bushe, in a ride through the neighbourhood, to view the country, which is a great corn one. Called at several farms, and made enquiries into the culture, &c.

Viewed Mount Juliet, Lord Carrick's seat, which is beautifully situated on a fine declivity on the banks of the Nore, commanding some extensive plantations that spread over the hills, which rise in a various manner on the other side the river: a knole of lawn rises among them, with artificial ruins upon it, but the situation is not in unison with the idea of a ruin, very rarely placed to effect, unless in retired and melancholy spots.

The river is a very fine one, and has a good accompaniment of well grown wood. From the cottage a more varied scene is viewed, chearful and pleasing; and from the tent, in the farther plantation, a yet gayer one, which looks down on several bends of the river.

It

It was impossible for any one to take more pains, that I should be well informed of every particular concerning husbandry, than Mr. Bushe; the following particulars I owe to his most ample intelligence.

About Kilfaine, farms rise generally from 100 to 200 acres, among many very small ones, but scarcely any so high as 400; the soil a dry found gravelly loam, with many stones, much inclinable to sand. As fine turnip-land as any in the world; as to rent, there are three-fifths of it good land, at 20s. an acre; one-fifth worse, and fit for pasture 15s. and another mountain and land of little value: the first nothing; the other 5s. average 3s. and general average 16s.

The courses of crops are,

1. Fallow. 2. Wheat, sow 1 barrel, and get on an average 6. 3. Barley, the crop 10 barrels. 4. Oats, the crop 8 ditto, or

1. Fallow. 1. Fallow.

2. Wheat. 2. Wheat, which surprized me

3. Oats. much, for it is very contrary to the spirit of successive crops.

1. Potatoes.

1. Potatoes.

2. Wheat.

2. Bere crop, 10 barrels.

3. Barley.

3. Barley.

4. Oats.

4. Oats.

They plough three or four times for wheat, sow from the end of September to the middle of November. The first ploughing is not till
 May

May or June, and sometimes, as I have seen, not till July. They never sow Barley till April, and often May. Pease they only sow on land which they think is not in heart for oats, and the crops miserable, as may be supposed. They sometimes burn low rushy bottoms, and sow rape on them, but not often.

No such thing as turnips among the common farmers, though they have an excellent turnip-soil. Mr. Bushe has some every year, with which he feeds his sheep.

No clover. Mr. Bushe has had it for some time, and found the greatest advantage from it. A little flax for their own use. Potatoes very generally cultivated, and take all the dung of the farm; and the poor, who raise what dung they can, have land of the farmers gratis, if they manure it well, in order to plant potatoes, which here is the most general culture of that root. The account,

Dunging 240 load	-	-	£. 1 0 0
12 barrels of seed, at 3s.	-	-	1 16 0
Planting with a plough	-	-	0 16 0
Weeding	-	-	0 4 0
Taking up	-	-	1 8 0
			<hr/>
			5 4 0
			<hr/>

Plough them in, and then trench the furrows. Crop 40 barrels. The best sort are the yellow potatoe, also the *wife* for produce. The *Turk*, which is the English *Howard*, they plant on poor land, and never bestow any dung on it, yet

yet get great crops; but it is a very bad sort. They are beginning to cultivate the mountains; the inclosures creep up the sides gradually; they pay 2s. to 4s. an acre, but improve to be worth 8 or 10s. They do it with lime-stone gravel, or begin with potatoes, and dung; the gravel they carry 2 miles to 3. Lime is a common manure; they lay 80 barrels an acre; it does best on light land, and gravel on stony. They burn it themselves. One barrel of culm, at 2s. burns 5 barrels of lime; 16 miles from the coal-pits. Quarrying and burning 3d. a barrel. Drawing stone to the kiln 1d. or 1½d. ditto. Lime-stone gravel is a very general manure, and the benefit prodigious. They have some they call lime-stone sand, which is a sort of sand-stone that breaks very easily. They lay 200 to 300 loads, 6 or 7 cwt. each, an acre. Four horses will draw 120 load a day, each load 1½ barrel, and the distance 40 perch: this is 180 barrels, or 720 bushels, which is 24 loads, at 30 bushels each; which, I believe, is more than four horses usually perform in England, and is a proof, that giving every horse his own work expedites it. Raising and screening the sand from large stones, 1½d. a car load. It will last in strong heart several years, and be perceived 15. As to laying land to grass, they in general do it only by leaving the soil to cover itself with the rubbish that happens to come.

Grass land for meadow is very valuable. About the town of Kilkenny, 3l. to 5l. an acre;

acre; and at a distance there is a custom of the little tillage-farmers hiring the crop of hay of a gentleman or farmer, and giving him, merely for the hay, 3l. to 5l. an acre, they taking all the expenses upon themselves, and not having the after-grass. Dairies common on the hills on coarse grass, at 10s. or 12s. an acre. A good cow will give three gallons and an half of milk a day. As they sell all the butter-milk, they have little notion of keeping hogs, on account of dairies. In winter, the cows that give milk have hay; the others straw: all run abroad. Few grazing farms, but in the barony of Cranagh there are some. Value of a cow's hide 15s. to 18s. per cwt. Sheep are kept in small parcels; they sell store wethers two and three years old, at 16s. to 20s. in June or July. Wool about 3 to a stone. The price of wool 16s. but 20 years ago, 12s. No such thing as folding. They plough generally with 4 horses, and do above $\frac{1}{2}$ an acre a day, laying their lands on 6 foot ridges. They give their horses oats. No cutting straw into chaff, and lose all that of the crops. Hire of a car, a horse, and a driver, 1s. 4d. In hiring and stocking a farm, they reckon a year's rent necessary; if they have less, they never know whether they are to sink or swim.

Land sells at 21 years purchase; not quite so well as it did 5 or 6 years ago, the rents fallen since March 1775, a seventh. County cess not a shilling an acre. Tythes compounded generally, wheat 8s. bere 7s. barley 7s. oats 4s. mowing ground 4s. pease 4s. No manufactory

tory of consequence, but blankets are made at Kilkenny. The leases are all for 21 or 31 years, as the whole country is Roman Catholic. Much land is in the occupation of under tenants, who hire of middle men, but generally under old leases; when land was at its height, many hired also on speculation, but the fall of lands has put a great stop to it. A cabin and an acre lets at 3l. 3s. and if more land 40s. or 42s. an acre, the cotters have many of them a cow, and some two, and a pig and some poultry. In respect to their condition, they have their belly full of potatoes, and their children eat them all day long; all cattle lay with them in the cabins. Scarcity of fuel is the worst circumstance. All the lower classes are Roman Catholics. No emigrations. The general state of the poor will appear from the following account of Mr. Bushe's hay-makers; he was obliging enough to make them all appear in array, and answer to the questions I put to them. The following are the particulars they gave me.

No.	No. of fowls in each cab- bin.	Acres of land.	Rent.	Cows.	orcs.	Hogs.
1.	4	$\frac{1}{2}$	1 18 0	0	0	1
2.	7	0	1 10 0	1	0	1
3.	5	2	1 10 0	0	0	1
4.	5	12	5 0 0	3	0	1
5.	6	0	1 10 0	1	0	1
6.	6	0	0 0 0	0	0	0
7.	8	8	8 0 0	1	0	0
8.	8	8	8 0 0	1	1	2
9.	10	16	16 0 0	2	2	3
10.	8	8	8 0 0	1	1	2
11.	5	6	10 10 0	2	1	0
12.	8	1	1 15 0	1	0	2
13.	2	4	6 0 0	1	1	2
14.	6	6	10 10 0	1	1	3
15.	4	5	6 0 0	2	1	2
16.	6	2	1 8 0	0	0	9
17.	5	0	1 10 0	0	0	2
18.	12	12	17 8 0	2	2	2
19.	7	12	12 0 0	2	1	1
20.	6	0	0 0 0	0	0	0
21.	10	4	6 0 0	1	1	0
22.	6	8	8 0 0	1	1	2
<hr/>		<hr/>		<hr/>	<hr/>	<hr/>
	144	114		23	13	37
<hr/>		<hr/>		<hr/>	<hr/>	<hr/>
Average	$6\frac{1}{2}$	$5\frac{2}{3}$		1	$\frac{1}{2}$	$1\frac{2}{3}$

$6\frac{1}{2}$ fowls

6½ souls per cabin, are a population one would not imagine could be resident in such mean habitations, but they swarm with children to the eye of the most inattentive observer. They have a practice here which much deserves attention: three, four, five, seven, &c. little farmers will take a large farm in partnership. They must be equal in horses, cows, and sheep, and tolerably so in other circumstances; they divide every field among themselves equally, and do all the labour of it upon their separate accounts; assisting each other mutually: they never throw the whole into one stock and divide the profit, from suspicions, I suppose, they have of one another.

I M P L E M E N T S.

A car 1l. 10s. a boarded one 2l. 2s. A plough 1l. 5s. A pair of harrows 15s. Building a labourer's cabin in the common manner 5l. Ditto, of stone and slate, 30l. For a farm complete of 50 acres, of stone and slate 100l. to add 50 acres more 30l. more. Pools firing 1l. 10s. but hedges much broken.

Mr. Bushe is very attentive in the culture of his domain; he puts his potatoes in with the plough, and finds they answer much better than the common manner, making them and turnips the preparation for barley, with which he sows clover, and upon that wheat: this is the Norfolk husbandry, and there cannot be better. It should be extended over all the arable land wherever it is practiced. He

has this year a very fine crop of wheat sown upon one earth on an old lay, and no damage from the red-worm. In the spring he confines his cattle to the farm yard for making dung, and mixes it in composts with sand and lime. He has an œconomical practice which deserves attention. It is the stew hole in his kitchen being a perpetual lime-kiln. It is a fire kept night and day at less than no expense, for the lime more than pays the culm. It is not at all unwholesome, and the fire for culinary purposes is excellent.

July 11, left Kilfaine: Mr. Bushe accompanied me to Woodstock, the seat of Sir W. Fownes. From Thomastown hither is the finest ride I have yet had in Ireland. The road leaving Thomastown leads on the east side of the river, through some beautiful copse woods, which before they were cut must have had a most noble effect, with the river Nore, winding at the bottom, the country then opens somewhat, and you pass most of the way for 6 or 7 miles to Innisfeague, on a declivity shelving down to the river, which takes a varied winding course, sometimes lively, breaking over a rocky bottom, at others still and deep under the gloom of some fine woods, which hang down the sides of steep hills. Narrow slips of meadow of a beautiful verdure in some places form the shore, and unite with cultivated fields that spread over the adjoining hills, reaching almost the mountain tops: these are large and bold, and give in
general

general to the scenes features of great magnificence. Passed Sir John Hafler's, on the opposite side of the river, finely situated, and Mr. Nicholson's farm on this side, who has very extensive copses, which line the river. Coming in sight of Sir W. Fownes's, the scenery is striking, the road mounts the side of the hill, and commands the river at the bottom of the declivity, with groups of trees prettily scattered about, and the little borough of Innisteague in a most picturesque situation, the whole bounded by mountains. Cross the bridge, and going through the town, take a path that leads to a small building in the woods, called Mount Sandford; it is at the top of a rocky declivity almost perpendicular, but with brush wood growing from the rocks. At the bottom is the river, which comes from the right from behind a very bold hanging wood, that seems to unite with the hill on the opposite shore: at this pass the river fills the vale, but it widens by degrees, and presents various reaches, intermixed with little tufts of trees, the bridge we passed over is half hid. Innisteague is mixed with them, and its buildings backed by a larger wood, give variety to the scene. Opposite to the point of view there are some pretty inclosures, fringed with wood, and a line of cultivated mountain sides, with their bare tops limit the whole.

Taking my leave of Mr. Bushe, I followed the road to Ross. Passed Woodstock, of which

which there is a very fine view from the top of one of the hills, the house in the centre of a sloping wood of 500 English acres, and hanging in one noble shade to the river, which flows at the bottom of a winding glen. From the same hill in front it is seen in a winding course for many miles through a great extent of inclosures, bounded by mountains. As I advanced, the views of the river Nore were very fine, till I came to Ross, where from the hill, before you go down to the ferry, is a noble scene of the Barrow, a vast river flowing thro' bold shores, in some places trees on the bank half obscure it, in others it opens in large reaches, the effect equally grand and beautiful. Ships sailing up to the town, which is built on the side of a hill to the water's edge, enliven the scene not a little. The water is very deep and the navigation secure, so that ships of 700 tons may come up to the town; but these noble harbours, on the coast of Ireland, are only melancholy capabilities of commerce: it is languid and trifling. There are only four or five brigs and sloops that belong to the place.

Having now passed through a considerable extent of county, in which the white boys were very common, and committed many outrages, I shall here review the intelligence I received concerning them throughout the county of Kilkenny. I made many enquiries into the origin of those disturbances, and found that no such thing as a leveller, or white boy, was

was heard of till 1760, which was long after the landing of Thurot, or the intended expedition of M. Conflans. That no foreign coin was ever seen among them, though reports to the contrary were circulated; and in all the evidence that was taken during ten or twelve years, in which time there appeared a variety of informers, none was ever taken, whose testimony could be relied on, that ever proved any foreign interposition. Those very few, who attempted to favour it, were of the most infamous and perjured characters. All the rest, whose interest it was to make the discovery, if they had known it, and who concealed nothing else, pretended to no such knowledge. No foreign money appeared; no arms of foreign construction; no presumptive proof whatever of such a connection. They began in Tipperary, and were owing to some inclosures of commons, which they threw down, levelling the ditches; and were first known by the name of levellers. After that, they begun with the tythe-proctors, (who are men that hire tythes of the rectors) and these proctors either screwed the cotters up to the utmost shilling, or re-let the tythes to such as did it. It was a common practice with them to go in parties about the country, swearing many to be true to them, and forcing them to join, by menaces, which they very often carried into execution. At last they set up to be general redressers of grievances — punished all obnoxious persons who advanced the value of lands, or hired farms over their

their heads, and having taken the administration of justice into their own hands, were not very exact in the distribution of it. Forced masters to release their apprentices, carried off the daughters of rich farmers, ravished them into marriages, of which four instances happened in a fortnight. They levied sums of money on the middling and lower farmers, in order to support their cause, by paying attorneys, &c. in defending prosecutions against them; and many of them subsisted for some years without work, supported by these contributions. Sometimes they committed several considerable robberies, breaking into houses and taking the money, under pretence of redressing grievances. In the course of these outrages, they burnt several houses, and destroyed the whole substance of men obnoxious to them. The barbarities they committed were shocking. One of their usual punishments (and by no means the most severe) was taking people out of their beds, carrying them naked in winter, on horse-back, for some distance, and burying them up to their chin in a hole filled with briars, not forgetting to cut off one of their ears. In this manner the evil existed for eight or ten years, during which time the gentlemen of the country took some measures to quell them. Many of the magistrates were active in apprehending them; but the want of evidence prevented punishments for many of those who even suffered by them, had not spirit to prosecute. The gentlemen of the country had frequent expeditions

expeditions to discover them in arms; but their intelligence was so uncommonly good by their influence over the common people, that not one party that ever went in quest of them was successful. Government offered large rewards for informations, which brought a few every year to the gallows, without any radical cure for the evil. The reason why it was not more effective was, the necessity of any person that gave evidence against them, quitting their houses and country, or remaining exposed to their resentment. At last their violence arose to a height which brought on their suppression. The popish inhabitants of Ballyragget, six miles from Kilkenny, were the first of the lower people who dared openly to associate against them; they threatened destruction to the town, gave notice that they would attack it, were as good as their word, came 200 strong, drew up before a house in which were 15 armed men, and fired in at the windows: the 15 men handled their arms so well, that in a few rounds they killed 40 or 50. They fled immediately, and ever after left Ballyragget in peace—indeed they have never been resisted at all, without shewing a great want of both spirit and discipline. It should, however, be observed, that they had but very few arms, those in bad order, and no cartridges. Soon after this they attacked the house of Mr. Power, in Tipperary, the history of which is well known. His murder spirited up the gentlemen to exert themselves in suppressing the evil, especially in raising
 subscriptions

subscriptions to give private rewards to whoever would give evidence or information concerning them. The private distribution had much more effect than larger sums which required a public declaration; and government giving rewards to those who resisted them, without having previously promised it, had likewise some effect. Laws were passed for punishing all who assembled, and (what may have a great effect) for recompensing, at the expense of the county or barony, all persons who suffered by their outrages. In consequence of this general exertion, above twenty were capitally convicted, and most of them executed; and the gaols of this and the three neighbouring counties, Carlow, Tipperary, and Queen's-county, have many in them, whose trials are put off till next assizes, and against whom sufficient evidence for conviction, it is supposed, will appear. Since this all has been quiet, and no outrages have been committed: but before I quit the subject, it is proper to remark that what coincided very much to abate the evil, was the fall in the price of lands, which has taken place lately. This is considerable, and has much lessened the evil of hiring farms over the heads of one another; perhaps also the tythe-proctors have not been quite so severe in their extortions: but this observation is by no means general; for in many places tythes yet continue to be levied, with all those circumstances which originally raised the evil.

From

From Rofs took the road towards Wexford, and found upon enquiry that I was got into quite a different country from what I had left, the soil not near so high let, for several miles it is from 5s. to 15s. and is in general dry found land. This soil, so excellent in the turnip-culture, never lets at its real value in unimproved countries: it is the introduction of turnips alone that ascertains that value. In 8 or 9 miles I found some rising to 20s. The course: 1. Fallow. 2. Wheat. 3. Oats. 4. Barley. 5. Oats. 6. Barley. 7. Oats. With such management, no wonder the soil is low rented. There is a great quantity of rough land overrun with furze (*ulex europæus.*) They burn them here, and I remarked uncommon quantities of bog-wood at the doors of the cabbins: yet their turf-grounds are rather boggy bottoms than bogs.

Laid at Taghmon, at as good an inn as the appearance of the place could allow of, though I was told it was very good. There was a bed on which I rested in my cloaths, but the stable had neither rack nor manger. I should have gone on to Wexford, but found that Mr. Neville, member for that town, to whom I had a letter of recommendation in order to procure intelligence concerning the baronies of Bargie and Forth, was in England; I therefore determined to turn off here, and make a circuit through them to get to Wexford. The landlord seemed to know something of the country. I asked him what gentlemen were
in

in it that took any pleasure in husbandry: he named several, and from his accounts I determined a call on Mr. Nun, at St. Margaret's.

July 12th, fallied from my inn, which would have made a very passable castle of enchantment in the eyes of Don Quixote, in search of adventures in these noted baronies, of which I had heard so much. They were completely peopled by Strongbow; and from having retained a sort of Saxon language peculiar to themselves, without any of them understanding the Irish, in all probability the country was at that time uninhabited or desolated. I had been told that they were infinitely more industrious and better farmers than in any other part of Ireland, and this account was confirmed to me by several common Irish farmers I met with upon the road.—It was not long before I was in the barony of Bargie, and I was much surpris'd to see no great appearance of any thing better than common. In one respect, I remarked the vilest husbandry, which was exhausting the land by successive corn crops, and then leaving it to cover itself with weeds, and grass by degrees: for it is to be observed, that I have not seen, in Wexford, any of that fine land I have mentioned so often, which, if thrown by in this manner, is almost immediately covered with white clover. Land, I found, let five or six miles from Taghmon, from 10s. to 20s. an acre; they have no fallow, but sow oats and barley, and beans and pease, (which they call black corn) in suc-
cession

cession for many years, and without any such practice as hoeing. And though the land is light, dry and sound, not a turnip is sown; so that, in 21 miles, I saw not a single fallow for them. Sowing beans and pease is, however, common, and they have farther a notion that doing so refreshes the land. I saw no beans in Ireland till I came here. They told me their crops were: Barley and oats 6 to 12 barrels. Beans 8 to 10 barrels. They use both marle and lime; of the former they lay 400 car loads per acre, and it lasts 12 crops. Much of their wheat is sown on lays, marled and dunged, and the crops were very good. Potatoes not the food of the people the year through, as in other parts of Ireland; they live on them only in the winter, and have oatmeal the rest of the year. Barley is the crop that succeeds them.

Advancing farther I had fresh accounts.—Wheat they sow on lays, with only one ploughing, and get from 7 to 10 barrels an acre; and of oats and barley on good land sometimes so high as 15 to 17 barrels. They lime much, and usually take but four or five crops of corn running, upon which they seemed to pride themselves much, as being good farmers. Farms in Bargie generally from 40 to 100 acres. Here I understood there was a part of the barony of Shelmal inhabited by quakers, rich men and good farmers. A farmer I talked to said of them:—*the quakers be very cunning, and the devil a bad acre of land will they hire.*

From

110 BARGIE AND FORTH.

From this account I wished for a recommendation to one of these sagacious friends. I observed all the way I went, that the cabbins were generally much better than any I had seen in Ireland: large ones, with two or three rooms, in good order and repair, all with windows and chimnies and little sties, for their pigs and cattle. As well built as common in England.

Entering Forth I did not perceive any difference, but the soil is a reddish good loam without stones. I went to St. Margaret's, and introduced myself to Colonel Nun, who gave me the following particulars, with the assistance of a neighbouring farmer. Barony of Forth and Bargie farms generally 20 to 80 acres; but many of them hired in partnership, and when the children marry are subdivided into smaller portions. Rent of the two baronies on an average a guinea. The courses :

- | | | |
|---------------------|--|--|
| 1. Potatoes. | $\left\{ \begin{array}{l} 1. \text{ Summer fallow.} \\ 2. \text{ Barley.} \\ 3. \text{ Beans.} \\ 4. \text{ Oats.} \\ 5. \text{ Grasses.} \end{array} \right.$ | 1. Beans on lay. |
| 2. Flax or barley. | | 2. Barley. |
| 3. Leave it for a | | 3. Oats. |
| fod, but most sow | | 4. Barley. |
| clover and grasses. | | 5. Clover or trefoile, for 2, 3, or 4 years. |

1. Fallow and marle. 2. Wheat. 3. Barley. 4. Oats. 5. Barley. 6. Clover, &c.

For wheat they plough but once on the lay, harrow in the seed and shovel the furrows; sow in October one-half to three-fourths of a barrel: some use spring wheat sown in March. The crop generally is 10 to 20 barrels. For
barley,

barley, which is their principal crop, they plough twice; sow one barrel and an half, get 10 to 15 barrels an acre. For oats they plough but once, sow one barrel and an half, and get 10 or 12 barrels an acre. For pease or beans they plough but once, sow many beans on a lay on one ploughing, one barrel and an half per acre; chopping and dressing the clods fine, get 5 to 20 barrels an acre, and sow barley after it. No turnips among the common farmers, though much of their land is fine dry and sound, but some is very wet.

Flax enough for their own use. Potatoes they have of late began to put in with the plough, but in common they are in the trenching way. Their crops are very good. Marle is very much used: it is a blue fort. They lay large quantities on the sod, let it lie a year or two before they plough it up, which they find better than ploughing it directly. They marle the same land often: they drain only with open cuts, no hollow ones done.

Cattle very little attended to: only a cow or two for the use of their families, and a few sheep; but they keep a great many pigs. All that live near the sea, turn their pigs to the shore for fish, sea-weed, &c. Manure with sea-weed, which they lay on for barley; some fresh from the sea, others lay it in heaps to rot, and many reckon it best fresh. Ploughing all with horses, four in a plough; lay their lands round to shoot off the water. In
ploughing

ploughing grafs for corn, they leave one-third of every ridge unploughed in the middle, but covered up with the furrows, in order for tilling the year following, and think they get the best crops there. Execrable!

Land sells from 22 to 25 years purchase; nor have rents fallen at all, rather the contrary. County cefs 8d. an acre. Tythes either gathered or appraised every year. Leafes generally three lives, or 31 years. Carry their corn to Wexford. The people increafe prodigiously. Rent of a cabbin and an acre 3l. generally have a cow and pigs, and plenty of poultry. Religion generally Catholic. Many lads go to Newfoundland in May, and come home in October, and bring from 15l. to 24l. pay 3l. passage out, and 1l. 10s. home. Poors' firing fod, furze, and fern, coals very scarce. Building a cottage 5l. to 7l. to a farm of 50 acres 150l.

The people are uncommonly industrious, and a most quiet race—in 15 or 20 years there is no such thing as a robbery. The little farmers live very comfortably and happily, and many of them worth several hundred pounds. They are exceedingly attentive in getting mould out of the ditches and banks, to mix a little dung with it, and spread it on their land.

PARTICULARS of a farm :

70 acres. 16 cows, 4 to each partner. 20 horses, each 5. 30 sheep. 60 swine. Stock worth 300l. 4 families.

And this farm by old accounts has had 90 crops of corn without a fallow or grass, in succession, but they manure with sea-weed and sea-sand every year. They are always on the watch for sea-weed; and when the tide comes in, if it is in the middle of the night, they go out with their cars, and get all they can. Some of the fields are so covered with great stone rocks, that one would think it impossible to plough them, but they manage it by attention.

They all speak a broken Saxon language, and not one in an hundred knows any thing of Irish. They are evidently a distinct people; and I could not but remark, their features and cast of countenance varied very much from the common native Irish. The girls and women are handsomer, having much better features and complexions. Indeed the women, among the lower classes in general in Ireland, are as ugly as the women of fashion are handsome. Their industry, as I have mentioned in several particulars, is superior to their neighbours; and their better living and habitations are also distinctions not to be forgotten. The poor have all barley-bread and pork, herrings, &c. and potatoes. On the coast a considerable fishery of herrings:

every creek has four or five boats—none barreled by the people, but the merchants of Wexford barrel them for the West Indies.

From St. Margaret's, I took the road to Wexford, the whole way through the barony of Forth. I saw nothing but straw hats for men as well as women, and found afterwards that they were worn through the whole county, and they give a comic appearance to every group one meets. Laid at the King's Arms at Wexford, a very clean and good inn. There are 14 or 15 small ships belonging to this port, but a bar at the mouth of the harbour prevents large ones coming in.

July 13th, Crossed the harbour in a ferry-boat, in order to take the lower road to Gowry. Passed over much sandy land by the sea side, covered with fern; large tracts of it, and divided into inclosures, as if it had been cultivated. Near the town I observed some heaps of sea-weed rotting for manure. At the 60th mile stone large sandy tracts, covered with furze and fern. As profitable land for improvement as any I have seen; lets for 6s. or 7s. an acre, but there is much other land at 15s.

Their course here is: 1. Oats, 7 or 8 barrels. 2. Barley, 6 ditto. 3. Oats. 4. Barley. 5. Clover and rye-grass 3 to 6 years. Towards Wells, and from thence to Gowry, land is higher, much of it at 20s. and some higher still.

Got

Got to Lord Courtown's, who with an attention highly flattering, took every means to have me well informed. His seat at Courtown is a very agreeable place, and in some respects a very singular one; for the house is within 600 yards of the sea, and yet it is almost buried in fine woods, which from their growth and foliage, shew no aversion to their neighbour, who is so often pernicious to all their brethren. His views of the sea are fine, every where broken by wood, or hilly varied ground. All his environs consist of undulating lands, which give a pleasing variety to the scene: a river enters his garden, and pursuing for some distance a sequestered course, shaded on one side by a rocky bank well wooded, and on the other by lofty trees, with a very agreeable walk under them, pours itself into the sea at a small distance from the house.

Lord Courtown is a very good farmer. The first field of turnips I *saw* in Ireland was here, and he was thinning and weeding them with boys, in order to hoe them with the more effect, the land in order, well dunged, and the plants forward and flourishing. He generally has 7 or 8 acres, feeds his cattle with them in a farm-yard, well littered with fern and straw, and sows barley after, getting very fine crops. His sandy lands by the coast he marles richly, and with such effect that his crops are very great. The finest wheat I have seen yet in Ireland was on this sand. Some of his Lordship's fields are wet from a stratum of clay;

these he throws into lands gently arched, lays them down so, and finds them found enough for winter feeding without poaching, whereas when flat, they are quite kneaded if any cattle go into them. On this clay soil he finds the best manure is sea-sand and shingle from the beach.

July 14, Sunday—to church, and was surprised to find a large congregation: this is not often the case in Ireland out of a mass house.—Gallop on the strand; it is a fine firm beautiful sand for miles. The paddies were swimming their horses in the sea to cure the mange, or keep them in health.

The following particulars of the husbandry of the neighbourhood his Lordship's brother gave me.

At Courtown, and around Gowry, farms in general small: but from 40 or 50 to 2 or 3000 acres, yet 200 acres are a large one, but very many small of 30 to 50. The soil is a skirting of sand against the sea, the rest is gravel and gravelly loam: also a thin stratum of loam on a yellow very miserable clay, 12 inches thick, and under it universally a fine blue marle of great depth. Rents rise from 10s. to 30s. average 15s. to 20s. and of the whole county 15s. A good deal of mountain, which in its wild state does not let for more than 3s. The little farmers improve it much by fallow and lime, which they bring from Carlow, 25 miles. When improved, it is worth 16s. an acre,

acre, and they pay that for it at the expiration of the lease.

Their courses are: 1. Potatoes. 2. Barley, yielding 10 or 12 barrels. 3. Oats, the produce 10 or 12: and then more crops of oats, or barley and oats, till the soil is exhausted, when they leave it to turf itself, which it will not do under 10 or 15 years. Also, 1. Summer fallow. 2. Wheat, 7 barrels; and then spring-corn crops, till the land is exhausted. No pease or beans sown. Not a turnip in the country among common farmers, though the finest lands and grounds imaginable for them: nor clover. A little flax is sown, generally after potatoes, and the culture of it increases gradually.

Potatoes in general put in in the common manner; but I heard of one or two farmers, who on dry ground plant them with the plough: always dung or pare and burn, no hiring of land for them, only in their own gardens and little fields; they do not often raise more than enough for half a year, buying for the other half. It is not a sheep country, and no such thing as folding known.

Lime is not used, except in the mountains, from Carlow: but marle is very general, a good blue sort, which they spread amply on the sod, and plough it for wheat. The good farmers take three crops upon it, but the little ones will take 8 or 10 as long as the land will yield any thing. The deeper they dig the
marle,

marle, the better it is. They dairy much here, some having 20 cows for butter chiefly. It has been a common idea, that one good cow will make 1 cwt. of butter at 42s. and 1 cwt. of cheese 25s. and rear her calf. They all keep many pigs, and the more upon account of their dairies. Some calves are fattened for Dublin market, one will suck two cows, and be worth 4l at 3 months old. No large flocks of sheep, but most of the farmers have a few; generally wethers bought in and fold out every year. Give them hay in bad weather. 3 fleeces to a stone of wool, the present price 16s. Between 30 and 40 years ago 3s. a stone; and 20 years ago 10s. to 11s. Tillage is performed all with horses, 4 in a plough, and do half an acre a day. All their chaff is lost in winnowing their corn in the fields. Hire of a car 1s. In hiring and stocking farms, they will take them with scarce any thing but a few cows and horses, yet they pay their rents very well, and few of them fail. Land at rack rent, sells at 20 years purchase, but within these 10 years 22 or 23. Rents have been rising for 15 years: they have not fallen of late years as in other parts of Ireland, though in some places are beginning.

Tythes are valued every year, and the 10th taken as a composition, wheat at 18s. a barrel. Barley 8s. Oats 6s. The 10th lamb 2s. 6d. No tea in the labourers cabbins, but in those of little farmers they have it, and it increases much. Leases generally 3 lives to Protestants, and 31 years to Catholics. The system

system of middle men going out—none in new let lands.

Barley carried to Wexford for exportation, and wheat to Dublin by means of bounty on inland carriage. The people increase considerably. Rent of a cabin with an acre 40s. if more added 20s. an acre. All keep cows, and generally a horse and a pig or two, with plenty of poultry reared on potatoes.—They live on oat-cakes when potatoes are not in season; the little farmers that have 40 or 50 acres, eat a good deal of meat; fish is a great article with the poor, particularly herrings and cod. In general much improving, and more industrious than formerly. In about four years, 40 or 50 persons emigrated to America. They are beginning to improve mountain and bog, which from being worth nothing before, now let at above 20s. an acre. No farms hired in partnership.

The white boys were violent for about three months in 1775, chiefly from Kilkenny and Carlow, but suppressed immediately by the spirited associations of the gentlemen. They were heard of in the south under other names before Thurot or Conflans. Poors' firing, turf seven miles off; 20 kish at 1s. 6d. a good stock; in common it may be reckoned 1l. 1s. Building a cabin 6l. to 7l. 7s. Of stone and slate 20l. Ditto for a farm of 50 acres, stone and slate, 25l. Crammed fowls with potatoes and oatmeal and milk 2s. to 2s. 6d. each. Since these particulars were taken at Courtown his
 Lordship,

Lordship, by letter, has favoured me with the following, from an intelligent farmer.

COURSE OF CROPS.

I. WHEAT.

Number of ploughings, four before fowing. First in November. Second in April, by cross cutting. In June harrow it down well, then put on your manure. Third ploughing in July; harrow it down again. Fourth ditto in August, which will leave it prepared for fowing. Seed to the acre, fourteen stone. Crop, at a medium, eight barrels.

2. BARLEY.

Two ploughings. First in November. Second at the time you sow, having first cross harrowed. Seed to the acre, fifteen stone. Crop, nine barrels.

3. OATS.

Most farmers plough but once. Seed, 22 stone. Crop, 9 barrels.

FOR POTATOES.

Let your ground lie ploughed all winter; to every acre put 500 load of dung. Seed, eight barrels. Crop, 80 ditto. Price, per barrel, 5s. Use of lime very profitable on dry ground; quantity, per acre, from 40 to 50 barrels.

COWS' PRODUCE.

One cow will give ten quarts of milk a day; will produce one hundred of butter. Profit, three pound.

SHEEP.

SHEEP.

	£.	s.	d.
Two acres will support one collop, or eight ewes.			
Each sheep a lamb, at 5s. each	2	0	0
Wool from the eight sheep, one stone, at	0	17	0
	2 17 0		
Two acres, at 20s. per acre - - -	2	0	0
	0 17 0		
Profit on eight sheep, at an average,	0	17	0
Proportion of the rise of labour is not more than 2d. per day.			

PARTICULARS of a FARM.

Arable 20 acres, 10 of barley, 4 of wheat, 6 of oats. Pasture 67 acres. Meadow 13 ditto, —Total 100 acres.—Stock, 24 Cows, 8 horses. 7 two-year old heifers, 4 year old ditto, and four calves.—Rent 100l. Three Labourers.

MARLE.

Quantity, per acre, on stiff clay ground, from 5 to 600 load, of about 600 weight; on dry gravelly ground, from 800 to 1000 ditto, according to the soil, will last 40 years with management.

July 15th, leaving Courtown, took the Arklow road; passed a finely wooded park of Mr. Rams, and a various country with some good corn in it. Flat lands by the coast let very high, and mountain at 6s. or 7s. an acre, and some at 8s. or 10s. Passed to Wicklow, prettily situated on the sea, and from Newrybridge walked to see Mr. Tye's, which is a neat farm well wooded, with a river running through the fields.

Reached

Reached in the evening Mount Kennedy, the seat of Gen. Cunninghame, who fortunately proved to me an instructor as assiduous as he is able. He is in the midst of a country almost all his own, for he has 10,000 Irish acres here. His domain, and the grounds about it, are very beautiful, not a level can be seen; every spot is tossed about in a variety of hill and dale. In the middle of the lawn is one of the greatest natural curiosities in the kingdom; an immense arbutus tree unfortunately blown down, but yet vegetating, one branch, which parts from the body near the ground, and afterwards divides into many large branches, is 6 feet 2 inches in circumference. The general buried part of the stem as it laid, and it is from several branches throwing out fine young shoots: it is a most venerable remnant. Killarney, the region of the Arbutus, boasts of no such tree as this.

July 16th, rode in the morning to Drum; a large extent of mountains, and wood, on the general's estate. It is a very noble scenery; a vast rocky glen; one side bare rocks to an immense height, hanging in a thousand whimsical, yet frightful, forms, with vast fragments tumbled from them, and lying in romantic confusion; the other a fine mountain side covered with shrubby wood. This wild pass leads to the bottom of an amphitheatre of mountain, which exhibits a very noble scenery. To the right is an immense sweep of mountain completely wooded, taken as a single object it is a most magnificent one, but

but its forms are picturesque in the highest degree; great projections of hill, with glens behind all wooded, have a noble effect. Every feature of the whole view is great, and unites to form a scene of natural magnificence. From hence a riding is cut through the hanging wood, which rises to a central spot, where the general has cleared away the rubbish from under the wood, and made a beautiful waving lawn with many oaks and hollies scattered about it; here he has built a cottage, a pretty whimsical oval room, from the windows of which are three views, one of distant rich lands opening to the sea, one upon a great mountain, and a third upon a part of the lawn. It is well placed and forms upon the whole a most agreeable retreat. The following particulars of agriculture I had from General Cunninghame, who took every means of having me well informed.

About Mount Kennedy the country is inclosed within various mountains and high lands; farms are generally very small, from 20 acres to 100, except in mountainous tracts, where they are larger, some from 300 to 600 acres. The soil is in general a dry sound gravel, hanging to the south east, and protected by mountains from the north west. The rent, on an average, from 30s. to 50s. not mountain, which is usually 8s. or 10s. The skirt of the whole county, from the mountain down to the sea, is from 30s. to 50s. an acre, being a sixth of it. One third of it, uncultivated and uninhabited, lets for not more than 6d.
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an acre. Another third lets for 20s. The remaining sixth at 9s.—Average of the whole 15s. an acre.

The courses of crops are: 1. Potatoes; all the dung of the country used for them. 2. Wheat; sow one barrel, and get on an average 8 barrels.—All the furrows shovelled. 3. Oats; sow near 2, and get 10 barrels. 4. Oats. 5. Barley; sow $\frac{1}{2}$ and get 10, and then leave it for lay for 5 years, never sowing any grafs feeds. It produces nothing at all for three years, but after that white clover comes slowly.

Barley has been more cultivated upon account of the quantity of ale and beer which is brewed here, being the common beverage through the county, and more famous for it than any other. The barrel, 2-thirds of a hoghead, sells at 40s. Malt malted here 14s. a barrel; the barley 10s. 6d.

Another course: 1. Marle, or lime-stone gravel, on the lay, 1600 loads an acre, and sow barley. 2. Wheat. 3. Oats or barley. 4. Oats or ditto, till left to lay again. Gravelling they generally consider as a right to six or eight crops. Their wheat after potatoes they sow so late as Christmas.

Very few pease, and no beans, nor any rape; and not a turnip, though saw great tracts perfectly adopted to that crop. They sow also very little of flax, having no such manufacture.

manufacture. Their potatoes they universal-ly plant on an old lay; they spread their dung in beds for the trenching way, none under the plough. Plant 8 to 10 barrels on an acre, laid at 6 inches from one another. When the plants are about an inch or two high, they cover them a second time from the trenches. They hand weed them. No hiring land of farmers for it, but all on their own account.

There are many copses on the sides of mountains of birch, oak, ash, and holly, which are cut generally at 25 years growth for poles for building cabbins; the bark for tan, and the smaller branches for charcoal. They are worth from 12l. to 25l. an acre. Many of them on very steep sides of mountains, and to a great height; but no great oak woods, since the Shillaly woods were cut down about 12 years ago.

There are considerable tracts of mountain land improved; if dry heath land, they plough, cross plough, burn, and then sow rye, getting 8 barrels, after which they have oats, and crop it as long as it will produce. Unimproved mountain, consisting of rock, furze, (*ulex europæus*) fern, (*pteris aquilina*) &c. but dry, lets at 8s. an acre, at which rent they have it for 31 years. The improvement is reckoned very profitable. No folding sheep: there is not such a thing as a hurdle known. They pare and burn the mountain as the only way

way to improve, though contrary to an absurd act of parliament against it.

Lime they use in very small quantities, and no wonder, for it is the Sutton stone they bring from the hill of Howth to Wicklow, where it is burnt, and the common farmers bring it from thence at the expense of 2s. 6d. the statute barrel of 32 gallons. They lay from 20 to 60 on an acre, chiefly on mountain ground. Grey marle, with lime-stone gravel in strata, abound all over the country, with other strata of sand, all which have an effervescence with acids, and in digging they mix together, and prove of infinite benefit to their fields.

Very few dairies, so that they make scarce any butter. Their cows are subservient to their lamb suckling, and leave them free only in summer, when they fat calves for Dublin market. Four or five quarts of milk at a meal is the common quantity. In the winter they have hay, but only in hard weather. No grazing of oxen. As to sheep their system is particular; it is all suckling lambs for Dublin market.

General Cunningham carried me to a farmer who is reckoned the most able in that business of any in the country, and the following is the account he gave me of his management. He breeds his own lambs, from a stock partly bought in every year. The rams he puts to the ewes the middle of May, in
order

order to have them lamb at Michaelmas, or a little after. They are left in the field for a week, and then taken into the house. The ewes are brought to suckle them twice a day in general; but three or four times, while young; they have cows milk given them by women from their mouths, squirted down the lambs throats, to the quantity of a *noggin* a day at first, and rises to $1\frac{1}{2}$ and 2. A *noggin* is one-eighth of a quart. They keep them till three weeks before Christmas, and then begin to sell them. Their ewes are kept on grafs only, unless in bad weather, when they have hay. He sells 75 lambs annually, from a stock of 80 rams and ewes, at 33s. on an average, some up to 40s. for these lambs he has 8 cows, 5 of them in full milk, and if he has not cows enough, buys in for the purpose. The ewes are bought in at 9s. each in July, and some old ones are sold every year at 6s. 14 acres of grafs will keep 80 sheep until the stubbles are ready for them.

In this system much depends on having them take the ram in proper time for the Dublin market. In order to accomplish this seemingly difficult business, they treat the ladies with a cup of generous Wicklow ale, and drive them about the field, in order to create the proper ferment between their blood and the ale, and then at the critical moment let in the gentlemen. Some managers more attentive than common, treat them with claret instead of ale: perhaps the swarms of children
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in the cabbins are owing to the prolific quality of this excellent ale of Wicklow.

The wool of the country is all wrought up by the inhabitants, spun, combed, and wove into flannel and frizes, and to such an extent, that the mountain farmers pay half their rents by this manufacture. They also buy much, not having enough of their own: it is all done by the smallest farmers going through the whole manufacture employing cotters in it. By spinning, a woman can earn 3d. a day. Wool now 14s. to 17s. the stone of 16lb. 20 years ago 11s. no rot among the sheep. On the mountains many goats are kept for the milk, which is drank very much by people from Dublin, who take lodgings for drinking goats whey. Kids flesh reckoned very fine.

They plough with both horses and bullocks: two horses and two bullocks, and one bullock and three horses, and do from one-half to three-fourths of an acre a day. Stir 5 inches deep. Very few or no oats given to horses. Chaff all thrown away. They work their draught oxen in winter on straw. Hire of a car, a horse, and a driver, 1s. 6d. a day. With 4 cows, 2 horses, a yearling, and 20 sheep, General Cunninghame has had tenants professedly take 50 acres of land.

Land sells at rack rent for 18 to 21 years purchase; 5 or 6 years ago it was at 22. Rents are fallen in the same time 4s. in the pound. Tythes are paid by composition; the crops
are

are viewed, and they agree for one year. An acre of wheat 10s. Barley 4s. Oats 4s. No tea in the cabbins on the mountains, but in the towns they have it. Leases are three lives, or 31 years; a vast proportion re-let 3 or 4 deep. The people increase much. Rent of a cabin in a village, with a very small garden, 2l. 2s. to 3l. if not in a village it is less. On a mountain 50s. to 3l. for a cabin and 5 acres, but generally have a common pasture for their cows, &c. Farms much taken in the mountains by partnership; 3 or 4 will take 100 acres, and divide among themselves as in Kilkenny. Lower people all Roman Catholics. No emigrations. No white boys.

They have plenty of potatoes; all keep a cow, some more; all a pig or more, and poultry of every kind. Their fuel is turf from the mountains, they are universal pilferers of every thing they can lay their hands on: great lyars, but full of quickness and sagacity, and grateful to excess.

Kish of turf 10d. delivered. Oak *ribberies* (spars) for cabbins 4s. 6d. a dozen. Building a cabin 25 feet long, 14 feet wide, with a door and two windows, 5l. 10s. Ditto stone and slate 20l. Ditto farm house and offices for 50 acres, of stone and slate 200l.

Expenses and produce of General Cunningham's farm.

Rent	- - - -	£. 375	0	0
Labour	- - - -	150	0	0
Wear and tear	- - - -	30	0	0
		<hr/>		
		£. 555	0	0

130 MOUNT KENNEDY.

48 acres mown, at 10 loads an acre, at 10s.	£.	240	0	0
5 acres of wheat 10 barrels, at 11. 1s.		52	10	0
10 — barley 14 ditto, at 10s. 6d.	-	73	10	0
17 — oats 13 ditto, at 10s.	-	110	10	0
2 — pease 9 ditto, at 10s.	-	9	0	0
10 — sundries, at 5l.	-	50	0	0
70 sheep at 15s	-	52	10	0
Swine	-	5	0	0
10 young cattle 40s.	-	20	0	0
16 horses, 36 weeks, at 2s. 6d.	-	72	0	0
3 oxen, ditto 2s. 6d.	-	22	10	0
		<hr/>		
	£.	707	10	0

In two acres of land summer-fallowed for wheat, the general was persuaded not to sow it, as the red-worm would infallibly destroy the crop, he therefore kept it for barley, but manured it with lime, 90 barrels an acre at 21d $\frac{1}{2}$ each, from the hill of Howth in August; the barley was eaten notwithstanding the lime; it was a very poor crop, and in some places none at all. Sowed the stubble with pease, which I saw, and were very fine. The general tried a very extraordinary experiment upon breaking up an old mossy grass lay in an orchard, and laying it down again without having any corn: it was manured with plenty of sand, then ploughed it up in August; directly cross-ploughed it; harrowed it thoroughly, and threw about 20 barrels of lime an acre; burnt the roots, weeds, and tufts of grass, spread the ashes, harrowed it, and upon that, about the beginning of September, sowed hay seeds. This was done to escape the trouble of
a course

a course of tillage among trees. The success was as great as possible; I saw the crop of hay mown, and it is not less than 16 loads an acre. This is a system which in many cases would be of the greatest use in reviving old hide-bound pastures without the trouble of a course of tillage. It should, however, be observed, that the climate of Ireland is peculiarly favourable to laying land to grass at that season, for it grows luxuriantly quite till Christmas.

Another instance of this natural tendency of the soil to grass, is a trial the general accidentally made. He had a small field under turnips, which he heed well, and were a fine crop; upon being drawn to feed the plough bullocks with, he found much grass upon the land, so much, that it induced him to let it stand, and the rather as it was laid very flat and smooth with the turnips, he rolled in some grass seeds, and it turned out a very fine meadow. He was the first who sowed red clover here, and is not yet followed by the farmers. He encouraged his tenants to lime, and lends them money for it. Much land is laid to grass at Mount Kennedy, and all of it done in a perfect manner, the surface laid completely smooth, without the least sign of a furrow, and the grasses luxuriant; all manured richly with gravel and marle.

I saw two large compost dunghills turning over and mixing, a sight not common in Ireland. It pleased me more than the sight of a palace would have done. The general's crops

132 GLEN OF THE DOWNS.

I found all exceedingly fine, one field of oats the best I had seen in Ireland.

July 17th.—Took my leave of General Cunningham, and went through the Glen of the downs in my way to Powerscourt. The Glen is a pass between two vast ridges of mountains covered with wood, which have a very noble effect, the vale is no wider than to admit the road, a small gurgling river almost by its side, and narrow slips of rocky and shrubby ground which parts them: in the front all escape seems denied by an immense conical mountain which rises out of the Glen, and seems to fill it up. The scenery is of a most magnificent character. On the top of the ridge to the right Mr. La Touche has a banqueting room. Passing from this sublime scene, the road leads through cheerful grounds all under corn, rising and falling to the eye, and then to a vale of charming verdure broken into inclosures, and bounded by two rocky mountains, distant darker mountains filling up the scene in front: this whole ride is interesting, for within a mile and an half of Tinnyhinch (the inn to which I was directed) you come to a delicious view on the right, a small vale opening to the sea, bounded by mountains, whose dark shade forms a perfect contrast to the extreme beauty and lively verdure of the lower scene, consisting of gently swelling lawns rising from each other, with groups of trees between, and the whole so prettily scattered with white farms, as to add every idea of cheerfulness. Kept on towards Powerscourt, which presently came

in view from the edge of a declivity. You look full upon the house, which appears to be in the most beautiful situation in the world, on the side of a mountain, half way between its bare top, and an irriguous vale at its foot. In front, and spreading among woods on either side, is a lawn whose surface is beautifully varied in gentle declivities, hanging to a winding river.

Lowering the hill the scenery is yet more agreeable, the near inclosures are margined with trees, through whose open branches are seen whole fields of the most lively verdure. The trees gather into groups, and the lawn swells into gentle inequalities, while the river winding beneath renders the whole truly pleasing.

Breakfasted at the inn at Tinnyhinch, and then drove to the park to see the water-fall. The park itself is fine; you enter it between two vast masses of mountain, covered with wood, forming a vale scattered with trees, through which flows a river on a broken rocky channel: you follow this vale till it is lost in a most uncommon manner, the ridges of mountain closing, form one great amphitheatre of wood, from the top of which, at the height of many hundred feet, bursts the water from a rock, and tumbling down the side of a very large one, forms a scene singularly beautiful. At the bottom is a spot of velvet turf, from which rises a clump of oaks, and through their stems, branches, and leaves, the falling water
is

is seen as a back ground with an effect more picturesque than can be well imagined; these few trees, and this little lawn, give the finishing to the scene. The water falls behind some large fragments of rock, and turns to the left, down a stony channel, under the shade of a wood,

Returning to Tinnyhinch, I went to Inniskerry, and gained by this detour in my return to go to the Dargle, a beautiful view which I should otherwise have lost; the road runs on the edge of a declivity, from whence there is a most pleasing prospect of the river's course through the vale, and the wood of Powerscourt, which here appear in large masses of dark shade, the whole bounded by mountains. Turn to the left into the private road that leads to the Dargle, and presently gives a specimen of what is to be expected by a romantic glen of wood, where the high lands almost lock into each other, and leave scarce a passage for the river at bottom, which rages, as if with difficulty forcing its way. It is topped by a high mountain, and in front you catch a beautiful plat of inclosures bounded by the sea. Enter the Dargle, which is the name of a Glen near a mile long. Come presently to one of the finest ranges of wood I have any where seen: it is a narrow glen or vale formed by the sides of two opposite mountains; the whole thickly spread with oak wood, at the bottom (and the depth is immense), it is narrowed to the mere channel of the river, which rather tumbles from rock to rock than
runs.

runs. The extent of wood that hangs to the eye in every direction is great, the depth of the precipice on which you stand immense, which with the roar of the water at bottom forms a scene truly interesting. In less than a quarter of a mile, the road passing through the wood leads to another point of view to the right. It is the crown of a vast projecting rock, from which you look down a precipice absolutely perpendicular, and many hundred feet deep upon the torrent at the bottom, which finds its noisy way over large fragments of rock. The point of view is a great projection of the mountain on this side, answered by a concave of the opposite, so that you command the Glen both to the right and left: it exhibits on both, immense sheets of forest, which have a most magnificent appearance. Beyond the wood, to the right, are some inclosures hanging on the side of a hill, crowned by a mountain. I know not how to leave so interesting a spot, the impressions raised by it are strong. The solemnity of such an extent of wood unbroken by any intervening objects, and the whole hanging over declivities is alone great; but to this the addition of a constant roar of falling water, either quite hid, or so far below as to be seen but obscurely united to make those impressions stronger. No contradictory emotions are raised — no ill-judged temples appear to *enliven* a scene that is gloomy, rather than gay. Falling or moving water is a lively object; but this being obscure, the noise operates differently. Following the road a little further, there is another

bold

bold rocky projection from which also, there is a double view to the right and left. In front so immense a sweep of hanging wood, that a nobler scene can hardly be imagined: the river, as before, at the bottom of the precipice, which is so steep and the depth so great, as to be quite fearful to look down. This horrid precipice, the pointed bleak mountains in view, with the roar of the water, all conspire to raise one great emotion of the sublime. You advance scarcely 20 yards before a pretty scene opens to the left, a distant landscape of inclosures, with a river winding between the hills to the sea. Passing to the right, fresh scenes of wood appear; half way to the bottom, one different from the preceding is seen; you are almost inclosed in wood, and look to the right through some low oaks on the opposite bank of wood, with an edging of trees through which the sky is seen, which added to an uncommon elegance in the outline of the hill, has a most pleasing effect. Winding down to a thatched bench on a rocky point, you look upon an uncommon scene, Immediately beneath is a vast chasm in the rock, which seems torn asunder, to let the torrent through that comes tumbling over a rocky bed far sunk in a channel embosomed in wood. Above is a range of gloomy obscure woods, which half overshadow it, and rising to a vast height, exclude every object. To the left the water rolls away over broken rocks: a scene truly romantic. Followed the path: it led me to the water's edge, at the bottom of the Glen, where is a new scene, in which not a
single

single circumstance hurts the principal character. In a hollow formed of rock and wood (every object excluded but those and water) the torrent breaks forth from fragments of rock, and tumbles through the chasm, rocks bulging over it, as if ready to fall into the channel, and stop the impetuous water. The shade is so thick as to exclude the heavens, all is retired and gloomy, a brown horror breathing over the whole. It is a spot for melancholy to muse in.

Return to the carriage, and quit the Dargle, which upon the whole is a very singular place, different from all I have seen in England, and, I think, preferable to most. Cross a murmuring stream clear as chrystal, and rising a hill, look back on a pleasing landscape of inclosures, which waving over hills, end in mountains of a very noble character. Reach Dublin.

July 18th, once more to Lord Harcourt's at St. Woolstan's, where I was so fortunate as to meet Colonel Burton: he gave me a fresh packet of recommendations into the north of Ireland, and taking my leave of his excellency, passed Manooth to Kilrue. From Cellbridge to Manooth is a line of very fine corn. Passed Dunboyne, from thence to Kilrue; the soil is clay, flat and strong, and I observed much hollow draining going on, with very fine crops of wheat and oats. The land about Mr. Jones is very fine rich strong loam, called here clay.

Mr. Lowther, to whom I had a letter, not being at home, I was forced to take refuge in a cabin, called an inn, at Ratoath. Preserve me, fates! from such another.

In their strong lands about Kilrue their courses are:—1. Fallow. 2. Wheat, yielding 8 to 15 barrels an acre. 3. Oats, 9 to 20 barrels.

- | | |
|-------------------------|--------------------|
| 1. Potatoes 80 barrels. | 1. Potatoes. |
| 2. Beans 7 to 15. | 2. Barley 9 to 14. |
| 3. Oats. | 3. Oats. |

Limestone gravel they use in great quantities; lay it on a fallow, and it lasts 7 years, the expense from 4l. to 8l. Lime they also have, but find that it will not last like gravel. Hollow, called *French* drains, are very general, even among the common farmers: some done with stones, but much with fods, laid an edge in the ground, they dig them 2½ or 3 feet deep, at two feet and an half, the expense is 5d. a perch. At 3 feet it is 8d. Clover they sow pretty much, let it lie two years, and then break it up for oats on one ploughing. They sow it on both winter and spring corn. The poor give 5l. 5s. an acre for lay to plant potatoes on, and the same for stubbled ground dunged. A cabin and half an acre of land 30s. rent, and 30s. more for a cow's feed. Farms rise to 300 acres, and rents from 18s. to 25s. an acre.

July 19th, left Ratoath, passing Robert's-town, found much of the land a strong loam without

without stones, with all the appearance of being a very fine soil. Got to Baron Hamilton's at Hampton, near Balbriggan, by breakfast. His house is new built, and stands agreeably by a fine shore, with a full view of the mountains of Mourn, at 16 leagues distance, and the isles of Skerry near him, much improving his view. He favoured me with the following account.

About Hampton, the soil clay or strong loam, and many stones in it; lets from 20s. to 30s. Farms rise from 40 acres to 100 and 150. No taking in partnership. Courses:

1. Fallow. 2. Wheat, 7 barrrels. 3. Barley, 10 to 12. 4. Oats, 10.

1. Fallow. 2. Wheat. 3. Barley. 4. White pease.

1. Fallow. 2. Wheat. 3. Barley. 4. Oats. 5. Clover for 2 years. 6. Wheat or fallow.

The manures lime, sea-sand, marle, and lime-stone gravel got three feet deep. Lime 6d. to 8d at the k'ln; they lay from 100 to 150 barrels, which last 8 or 9 years; on the dry soils best. On clay well drained, they spread of lime-stone gravel. that has a strong fermentation, 300 to 400 loads, generally out of drains, ditches, &c. draining their lands at the same time; lasts long, and is best on strong land. Sea sand on poor clay excellent; lay 300 barrels an acre, which is a good dressing; lasts many years, and changes it from scutch (*triticum repens*) to white clover; it has an effervescence with acids. The marle white
under

under black bottoms; 300 loads an acre. On new lays the Baron has found a very fine effect from it. Flax chiefly after potatoes, and then barley. Sow enough for their own use, not enough for manufactures for sale. For potatoes 4l. an acre for dunged land, or lay on dung and have it for nothing. Much French draining, 4 feet deep, and 5 inches at bottom; fill with stones, and the improvement found very great; the common farmers do much of it. Tillage mostly with horses. In hiring farms they will take 100 acres with 200l. Tythes are generally compounded. The Baron has 800l. a year in tythes, and they pay upon an average 2s. an acre. If distinguished, wheat is 8s. or 9s. Barley 8s. Oats 5s. Pease 4s. Meadow 4s. 6d. Many lands are hired to be relet. Population encreases very fast, and the country in every respect improves amazingly. A cottage and half an acre 40s. to 3l. for a cow 30s. generally have 2 cows. A belly full of potatoes and oatmeal for *stir-about*; keep 2 or 3 pigs, and a great deal of poultry. They are universally much better off in every respect than 20 years ago. More industrious, owing perhaps very much to the high rents; insomuch that they have been the parent of all improvements. All the manures have been found out within 20 years. Lime has not been used more than 10 years. When Baron Hamilton built the pier at Balbriggan, in the year 1763, there was only one sloop of culm for burning lime in a season, but now from 60 to 100.

Cattle

Cattle of all forts a very inferior object here. This place is in Fingal, which is a territory from near Dublin, extending along the coast, inhabited by a people they call Fingalians; an English colony planted here many years ago, speaking nearly the same language as the barony of Forth, but more intermixed with Irish in language, &c. from vicinity to the capital.

A horse and car and driver 1s. two cars to a driver. The rise of labour great, 20 years, from 4d. to 6d. An extraordinary circumstance is, that Ireland has been very prosperous on comparison with former times, and yet interest of money now 6 per cent. and 20 years ago $4\frac{1}{2}$ and 5. Land sells at under 20 years purchase, fallen from 24 in 4 or 5 years, owing partly to the rents being run up too high.

Baron Hamilton has been a considerable improver; he took in near Hampton 150 acres mountain land, covered with scutch grafs (*triticum repens*) furz, (*ulex europæus*) and a little heath (*erica vulgaris*); stubbed it up, ploughed it 4 times, limed it 140 to 150 barrels each acre. Sowed rye, fold it on the land 7l. 10s. an acre. For two successive years let it at 4l. 10s. an acre for two crops of oats, which yielded from 16 to 20 barrels an acre; then two years more at 3l. 15s. and 3l. 10s. the crop 14 barrels. Fallowed it to destroy scutch grafs for massin, and then a crop of spring corn with grafs seed. This is the course in which the rough ground has been generally improved.

improved. This soil clay without much stone. In its rough state worth only 5s. an acre to remain so, but the Baron paid 16s. 6d. The first year's expenſe was, crop included, 10l. an acre, now worth 20s. to 28s. an acre.

The Baron carried me to Balbriggan, a little ſea port of his, which owes its being to his care and attention. It ſubſiſts by its fiſhing boats, which he builds; has 23 of them, each carrying 7 men, who are not paid wages, but divide the produce of their fiſhery. The veſſel takes one ſhare, and the hands one each, which amounts on an average to 16s. a week. A boat coſts from 130l. to 200l. fitted out ready for the fiſhery: they make their own nets. The port owes its exiſtence to a very fine pier which Baron Hamilton built, within which ſhips of 200 tons can lay their broad ſides, and unload in the quay. Such veſſels bring coals and culm from Wales, &c. The baſe of the pier is 18 feet thick, and on the outside is a conſiderable rampart of great fragments of rock, funk to defend the pier againſt the waves. In moving theſe huge ſtones, ſome of which weigh 8 or 10 ton, the Baron made uſe of a contrivance which deſerves to be generally known. They are ſpread along the ſhore, between high and low water mark, but to get them to the place where wanted was a very difficult buſineſs. He laſhed puncheons to them at low water, which floated them when the tide came in, and conveyed them over the ſpot where wanted; but in diſengaging the caſks from the ſtone to ſink the latter, he often had

had them broken, and found many difficulties. To remedy this, he had a contrivance very simple and ingenious, which answered the purpose completely. The puncheons were hooped strongly with iron near each end, and between these irons was a chain, from the centre of which went an iron tongue. The stones, at low water, were lashed round with a chain with open irons that corresponded with those tongues in the cask chains, the one went into the other, and when closed had a female screw through all three; through the two jaws of the one, and the tongue of the other, a male screw at the end of a bar was then screwed in when the stone was ready to move. One of 8 tons required 10 puncheons upon being floated over the spot where wanted; these bars were unscrewed, and the stone and casks disengaged at once without trouble, the one sinking, and the casks floating away with the chain that was lashed round the stone.

Left Balbrigen and went to Bally-garth, the seat of —— Pepper, Esq; a place very agreeably wooded on a rising ground above a river.

Mr. Pepper keeps a considerable domain in his hands, and has practiced several parts of husbandry with much attention; he has laid down large tracts to grass, which he has made so good that he could let it readily for 5s. to 3l. an acre. His course of crops has been sometimes, 1. Turnips. 2. Barley. 3. Clover. 4. Wheat; and has cultivated turnips in considerable

siderable quantities. In several particulars, which I saw myself, Mr. Pepper appears an excellent farmer. His quick fences were in perfect order; his wet lands hollow drained, and the mouths of the drains well faced with stone. The old ditch earth on the borders of his fields was carting away to form composts; he did it by contract, the men digging and leading it from 20 to 30 perches, driving and finding horses and cars at 5d. a score loads, each a barrel. This is much *against* the Irish cars, for 4 horses carry but 16 bushels of earth, whereas 3 in an English cart would carry double that. Mr. Pepper is much a friend to them for some things, but in others thinks that two horse carts are preferable; with 2 horses in a well made cart, he sends 10 barrels to Dublin, whereas 2 horses in 2 cars carry but 5 or 6 barrels, which is a great inferiority; but he likes the little one horse cart better still, which brings him 3 barrels of coals, lime, &c. A circumstance in the fattening of cattle, in which he is peculiar, is, not letting his bulls go among his fattening cows; he never does this, and finds that they fat as well without as with it. In breeding sheep he is attentive, finding it a profitable branch of farming. He keeps his lambs till they are 2-year-old wethers, and sells them in spring at 35s. each on an average; but could not do it without the assistance of turnips. His ewes clip 8lb. of wool, and his lambs 7lb. 20 acres of grass will carry 100 through the year, except the turnip season. Sea sand Mr. Pepper spreads on his clay meadows, and finds the benefit of it very great.

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In conversation on the common people, Mr. Pepper assured me he never found them more dishonest than in other countries. They would steal slightly till they found him resolute in punishing all he discovered; even his turnips have suffered very little depredation.

July 20th, to Drogheda, a well built town, active in trade, the Boyne bringing ships to it. It was market day, and I found the quantity of corn, &c. and the number of people assembled very great; few country markets in England more thronged. The Rev. Mr. Nesbit, to whom recommended, absent, which was a great loss to me, as I had several enquiries which remained unsatisfied.

To the field of battle on the Boyne.—The view of the scene from a rising ground which looks down upon it is exceedingly beautiful, being one of the completest landscapes I have seen. It is a vale, losing itself in front between bold declivities, above which are some thick woods, and distant country. Through the vale the river winds and forms an island, the point of which is tufted with trees in the prettiest manner imaginable; on the other side a rich scenery of wood, among which is Doctor Norris's house. To the right on a rising ground on the banks of the river is the obelisk, backed by a very bold declivity; pursued the road till near it, quitted my chaise, and walked to the foot of it. It is founded on a rock which rises boldly from the river. It is a noble

ble pillar, and admirably placed. I seated myself on the opposite rock, and indulged the emotions which with a melancholy not unpleasing filled my bosom, while I reflected on the consequences that had sprung from the victory here obtained. Liberty was then triumphant. May the virtues of our posterity secure that prize which the bravery of their ancestors won! Peace to the memory of the Prince to whom, whatever might be his failings, we owed that day memorable in the annals of Europe!

Returned part of the way, and took the road to Cullen, where the Lord Chief Baron Forster received me in the most obliging manner, and gave me a variety of information uncommonly valuable. He has made the greatest improvements I have any where met with. The whole country 22 years ago was a waste sheep walk, covered chiefly with heath, with some dwarf furz and fern. The cabbins and people as miserable as can be conceived; not a protestant in the country, nor a road passable for a carriage. In a word, perfectly resembling other mountainous tracts, and the whole yielding a rent of not more than from 3s. to 4s. an acre. Mr. Forster could not bear so barren a property, and determined to attempt the improvement of an estate of 5000 acres till then deemed irreclaimable. He encouraged the tenants by every species of persuasion and expense, but they had so ill an opinion of the land that he was forced to be-
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gin with 2 or 3000 acres in his own hands; he did not, however, turn out the people, but kept them in to see the effect of his operations.

These were of a magnitude I have never heard before: he had for several years 27 limekilns burning stone, which was brought four miles with culm from Milford Haven. He had 450 cars employed by these kilns, and paid 700l. a year for culm: the stone was quarried by from 60 to 80 men regularly at that work; this was doing the business with incomparable spirit—yet had he no peculiar advantages, but many circumstances against him, among which his constant attendance on the courts, which enabled him to see Cullen but by starts, was not the least. The works were necessarily left to others at a time that he could have wished constantly to have attended them.

While this vast business of liming was going forwards, roads were also making, and the whole tract inclosed in fields of about 10 acres each, with ditches 7 feet wide, and 6 deep, at 1s. a perch, the banks planted with quick and forest trees. Of these fences 70,000 perches were done.

In order to create a new race of tenants, he fixed upon the most active and industrious labourers, bought them cows, &c. and advanced money to begin with little farms, leaving them to pay it as they could. These men he

nursed up in proportion to their industry, and some of them are now good farmers, with 4 or 500l. each in their pockets. He dictated to them what they should do with their lands, promising to pay the loss, if any should happen, while all the advantage would be their own. They obeyed him implicitly, and he never had a demand for a shilling loss.

He fixed a colony of French and English Protestants on the land, which have flourished greatly. In Cullen are 50 families of tradesmen, among whom sobriety and industry are perfectly established.

Many of these lands being very wet, draining was a considerable operation: this he did very effectually, burying in the drains several millions of loads of stones.

The mode in which the chief baron carried on the improvement, was by fallowing. He stubbed the furze, &c. and ploughed it, upon which he spread from 140 to 170 barrels of lime per acre, proportioning the quantity to the mould or clay which the plough turned up. For experiment he tried as far as 300 barrels, and always found that the greater the quantity, the greater the improvement. The lime cost him 9d. a barrel on the land: his usual quantity 160, at the expense of 6l. an acre, and the total of that expense alone thirty thousand pounds! After the liming, fallowed the land for rye, and after the rye took two
crops

crops of oats. Throughout the improvement; the lime has been so exceedingly beneficial that he attributes his success principally to the use of it. Without it, all other circumstances equal, he has got 3 or 4 barrels an acre of oats, but with it 20 and 22 of barley. Has compared lime and white marle on an improved mountain-soil for flax, that on the lime produced 1000 lb. well scutched, the other 300 lb.

His great object was to shew the tenantry as soon as he could, what these improvements would do in corn, in order to set them to work themselves. He sold them the corn crops on the ground at 40s. an acre: the three crops paid him therefore the expense of the liming, at the same time they were profitable bargains to the tenants. With the third corn-crop the land was laid down to grass. Upon this operation, after the manuring, ditching and draining, the old tenants very readily hired them. Some seeing the benefit of the works, executed them upon their own lands; but their landlord advanced all the money, and trusted to their success and honesty for the payment. This change of their sentiments induced him to build new farm-houses, of which he has erected above 30, all of lime and stone, at the expense of above 40l. a house; the farms are in general about 80 acres each.

After six or seven years, the chief baron limed much of it a second time on the sod, and the benefit of it very great. It is all let now

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on an average at 20s. an acre. Upon the whole, his Lordship is clearly of opinion that the improvement has been exceedingly profitable to him, besides the pleasure that has attended so uncommon a creation. He would recommend a similar undertaking to others who possess wastes, and if he had such another estate he would undertake it himself.

He also allotted a considerable tract of many acres for plantations, which are well placed and flourishing. Ridings are cut in them, and they form a very agreeable scenery. Mr. Forster, his son, takes much pleasure in adding to them, and has introduced 1700 sorts of European and American plants. The country is now a sheet of corn: a greater improvement I have not heard of, or one which did more genuine honour to the person that undertook it.

THIS GREAT IMPROVER, a title more deserving estimation than that of a great general or a great minister, lives now to overlook a country flourishing only from his exertions. He has made a barren wilderness smile with cultivation, planted it with people, and made those people happy. Such are the men to whom monarchs should decree their honours, and nations erect their statues.

Some other circumstances I learnt from his Lordship were: more than half the county of Louth, which is one of the best in Ireland for tillage,

tillage, is every year under corn, 25 years ago, it was all at 10s. an acre, now 21s. *Corn-acre* rents, 40 years ago, were 25s.—25 years ago 30s.—now 3l. 12s. Conjectures one family to every 10 acres in the county, exclusive of towns: found this by observing generally four families to every farm of 40 acres.

The general course of crops in Louth is: 1. Fallow. 2. Wheat, the produce 6 barrels. 3. Oats, ditto 15 barrels. 4. Barley, ditto 15 barrels. 5. Oats. 6. Grass seeds sown, or left waste to turf itself.

In his Lordship's circuits through the north of Ireland he was, upon all occasions, attentive to procure information relative to the linen manufacture.

It has been his general observation, that where the linen manufacture spreads the tillage is very bad. Thirty years ago the export of linen and yarn about 500,000l. a year; now 1,200,000l. to 1,500,000l. The chief baron has taken some pains to compare the linen and woollen manufactory for Ireland, and found from the closest inspection that the people employed in the linen earned one-third more than those in the woollen. One stone of wool is the produce of an acre of grass, which feeds two and an half, or three sheep. Raw, it is equal to one-third of the manufactured value, and at 10s. is only 1l. 10s. gross produce. An acre of flax at 8 cwt. and he has had 12 cwt. wrought

wrought into the worst linens, will amount to ten times the value of the acre under wool.

Respecting the thieving disposition of the common people, which I had heard so much of, the Chief Baron was of an entire different opinion—from his own experience he judged them to be remarkably honest. In working his improvements, he has lived in his house without shutters, bolts or bars, and with it half full of *spalpeens*, yet never lost the least trifle—nor has he met with any depredations among his fences or plantations.

Raising rents he considers as one of the greatest causes of the improvement of Ireland; he has found that upon his own estates it has universally quickened their industry, set them to searching for manures, and made them in every respect better farmers. But this holds only to a certain point; if carried too far, it deadens, instead of animating industry. He has always preferred his old tenants, and never let a farm by advertisement to receive proposals. That the system of letting farms to be re-let to lower tenants, was going out very much: it is principally upon the estates of absentees, whose agents think only of the most rent from the most solvent tenant.

In conversation upon the popery laws, I expressed my surprise at their severity: he said they were severe in the letter, but were never executed. It is rarely or never (he knew no instance)

instance) that a protestant discoverer gets a lease by proving the lands let under two-thirds of their value to a papist. There are severe penalties on carrying arms or reading mafs; but the first is never executed, for poaching (which I have heard), and as to the other, mafs-houfes are to be seen every where: there is one in his own town. His Lordship did justice to the merits of the Roman Catholics, by observing that they were in general a very sober, honest, and industrious people. This account of the laws against them brought to my mind an admirable expression of Mr. Burke's in the English house of commons, **CONNIVANCE IS THE RELAXATION OF SLAVERY, NOT THE DEFINITION OF LIBERTY.**

The kingdom more improved in the last 20 years than in a century before. The great spirit began in 1749 and 1750.

He was assured that the emigrations, which made so much noise in the north of Ireland, were principally idle people, who, far from being missed, left the country the better by their absence. They were generally dissenters, very few churchmen or catholics.

It is found in that manufacture, that it never flourishes when oatmeal is cheap—the greatest exports of linen are when it is dearest.

July 21st, took my leave of this prince of improvers, who gave me a letter to Mr. Forster

ster of Rossy Park; bent my course thither, but being from home, went on to Atherdee; and one of the finest sheets of corn I ever beheld is from the hill which looks down on that town. It is a glorious prospect, all waving hills of wheat as far as the eye can see, with the town of Atherdee in a wood in the vale.

To Dundalk, the view down on this town also very beautiful, swelling hills of a fine verdure, with many rich inclosures backed by a bold outline of mountain that is remarkable. Laid at the Clanbrassil Arms, and found it a very good inn. The place, like most of the Irish towns I have been in, full of new buildings, with every mark of increasing wealth and prosperity. A cambrick manufacture was established here by parliament, but failed; it was, however, the origin of that more to the north.

July 22d, left Dundalk—Took the road through Ravensdale to Mr. Fortescue, to whom I had a letter, but unfortunately he was in the south of Ireland. Here I saw many good stone and slate houses, and some bleach greens; and I was much pleased to see the inclosures creeping high up the sides of the mountains stoney as they are. Mr. Fortescue's situation is very romantic on the side of a mountain, with fine woods hanging on every side, with the lawn beautifully scattered with trees spreading into them, and a
pretty

pretty river winding through the vale, beautiful in itself, but trebly so on information, that before he fixed there, it was all a wild waste. Rents in Ravensdale 10s. mountain land 2s. 6d. to 5s. Also large tracts rented by villages, the cotters dividing it among themselves, and making the mountain common for their cattle.

Breakfasted at Newry, the Globe, another good inn.—This town appears exceedingly flourishing, and is very well built; yet 40 years ago, I was told there were nothing but mud cabbins in it: this great rise has been much owing to the canal to Loch-Neagh. I crossed it twice—it is indeed a noble work. I was amazed to see ships of 150 tons and more lying in it, like barges in an English canal. Here is a considerable trade.

Take the road to Market-hill: the town parks about Newry let up to 2l. and 3l. an acre, which is here English measure. They sow oats chiefly as I advanced, with a little barley—no fallows, and but little clover. Within 4 miles of Market-hill, the course:

1. Oats. 2. Oats. 3. Oats. 4. Oats. 5. Oats, and then leave it to the rubbish, which comes for 3 or 4 years: some potatoes, and after it flax. I am now got into the linen country, and the worst husbandry I have met with; my Lord Chief Baron is right. Rents 10s. to 13s. the English acre; all the farms
are

are very small, let to weavers, &c. They measure by the boll of 10 bushels, a good crop of oats three to four and a half.

This road is abominably bad, continually over hills, rough, stony, and cut up. It is a turnpike, which in Ireland is a synonymous term for a vile road, which is the more extraordinary, as the bye ones are the finest in the world. It is the effect of jobs and imposition which disgrace the kingdom; the presentment roads shew what may be done, and render these villainous turnpikes the more disgusting.

Called at Lord Gosfort's, to whom I had been introduced by Lord Harcourt, but he was not yet come from Dublin; his steward, however, gave me the few following particulars. About Market-Hill they measure by the English acre, and let from 8s. mountain to 12s. and 14s. The courses are:

1. Oats. 2. Oats. 3. Oats. 4. Oats. 5. Oats. 6. Oats, then leave it to itself to graze 3 or 4 years, this on good strong land; on worse 3 or 4 of oats, and 3 or 4 of grafs, that is weeds, they reckon the best management to lime it on the sod, then 3 crops of oats, and 3 years left, and that one lining will last many years.

Measure by bolls, each 10 bushels; sow 6 bushels of oats to an acre; a good crop is 60 bushels,

bushels, but that is extraordinary, 4 or 5 bolls common; and the crops will hold good through the whole course, the first will be the worst, Another course:

1. Potatoes. 2. Flax, or oats. Also after several crops of oats, plough thrice and sow flax seed, 2 bushels to an acre, and yield 12 to 18 stone to every bushel of seed. Never sow flax twice running. Plant 16 to 18 bushels of potatoes on an acre; they do not live entirely on them, but have oatmeal, oaten bread, and sometimes flesh meat, once or twice a week. In spinning a woman will do 5 or 6 hanks a week, and gets 30s. for it by hire, as wages for half a year; a girl of 12 years old three halfpence, or two-pence a day. A man will earn, by weaving coarse linen 1s. 2d. and 1s. 6d. by fine linen. The manufacturers live better than the labourers; they earn 3s. 6d. a week in winter, and 4s. in summer. Manufacturers have all from 6 to 15 acres from 6s. to 20s. an acre, and the house into the bargain; generally 2 or 3 cows, and a bit of flax enough for half a bushel or a barrel of feed, at 3 bushels to an acre. The country labourers have also from 6 to 10 acres. A cabin without land 11. 1s. a year. Cloth and yarn never so dear as at present, and people all employed—none idle. A cottage-building 5l. ditto stone and slate 8ol. A great rise of both labour and provisions; 20 years ago beef 1d. and 1¼d. per lb. and labour 3d. and 4d. a day.

Religion mostly Roman, but some Presbyterians and church of England.—Manufacturers generally Protestants.

The manufacturers wives drink tea for breakfast. No cattle but for convenience among the small farmers. No farms above 100 acres, and those stock ones, for fattening cows and bullocks. Very few sheep in the country. Manures are lime, of which 20 to 60 barrels per acre, at 1s. 6d. will last for ever: best for light land—marle grey and white, best on healthy ground. Some soapers waste at Armagh and Newry, but not much.

Reached Armagh in the evening ; waited on the primate.

July 23d, his Grace rode out with me to Armagh, and shewed me some of the noble and spirited works by which he has perfectly changed the face of the neighbourhood. The buildings he has erected in 7 years, one would suppose without previous information, to be the work of an active life. A list of them will justify this observation.

He has erected a very elegant palace, 90 feet by 60, and 40 high, in which an unadorned simplicity reigns. It is light and pleasing, without the addition of wings or lesser parts, which too frequently wanting a sufficient uniformity with the body of the edifice, are unconnected with it in effect, and divide the attention.

tention. Large and ample offices are conveniently placed behind a plantation at a small distance: around the palace is a large lawn, which spreads on every side over the hills, and skirted by young plantations, in one of which is a terrace, which commands a most beautiful view of cultivated hill and dale. The view from the palace is much improved by the barracks, the school, and a new church at a distance, all which are so placed as to be exceedingly ornamental to the whole country.

The barracks were erected under his Grace's directions, and form a large and handsome edifice. The school is a building of considerable extent, and admirably adapted for the purpose: a more convenient or a better contrived one, is no where to be seen. There are apartments for a master, a school-room 56 feet by 28, a large dining-room and spacious airy dormitories, with every other necessary, and a spacious play-ground walled in; the whole forming a handsome front: and attention being paid to the residence of the master (the salary is 400l. a year), the school flourishes, and must prove one of the greatest advantages to the country of any thing that could have been established. This edifice entirely at the primate's expense. The church is erected of white stone, and having a tall spire makes a very agreeable object, in a country where churches and spires do not abound—at least such as are worth looking at. Three other churches

churches the primate has also built, and done considerable reparations to the cathedral.

He has been the means also of erecting a public infirmary, which was built by subscription, contributing amply to it himself.

A public library he has erected at his own expense, given a large collection of books, and endowed it. The room is excellently adapted, 45 by 25, and 20 high, with a gallery, and apartments for a librarian.

He has further ornamented the city with a market-house and shambles, and been the direct means, by giving leases upon that condition, of almost new building the whole place. He found it a nest of mud cabins, and he will leave it a well built city of stone and slate. I heard it asserted in common conversation, that his Grace, in these noble undertakings, had not expended less than 30,000*l.* besides what he had been the means of doing, though not directly at his own expense.

When it is considered that all this has been done in the short term of 7 or 8 years, I should not be accused of exaggeration, if I said they were noble and spirited works undertaken upon a man's paternal estate, how much more then are they worthy of praise when executed not for his own posterity but for the public good? Amidst such great works of a different nature, it is not to be expected that his Grace
should

should have given much attention to agriculture; yet has he not neglected it. In order to improve the breed of cattle in the country, he brought from England a bull and several cows of the true Teeswater breed, of a vast size, with short Holderneffe horns; they give a great quantity of milk, and he has preserved the breed pure and to their size, by feeding the calves with much attention: they have a considerable quantity of milk given them while at grass.

In the husbandry of the neighbourhood no other corn is raised than oats, and they have a notion that wheat will not do here: to convince them of the contrary, the primate has fallowed a large field, manured it differently for a comparison, and sowed wheat. The crop I viewed, and found it a very fine and a very clean one.

In order that I might be well informed about the linen manufacture, his Grace was so obliging as to send for one of the most considerable merchants in the city, Mr. Macgeough, who very intelligently gave me all the particulars I wanted.

The following circumstances I owe to his information. About Armagh the farms are very small; the principal people occupy from 40 to 60 acres, these sow some flax as well as raise corn, but in general they are from 5 to 20 acres; the only object the linen manufacture.

ture. This is the case all the way to Newry; also to Monaghan, but in that county the farms are somewhat larger. Towards Lurgan, Dungannon, and Stewart's-town, much the same. Rents around Armagh are from 7s. to 15s. Much mountain let in gros by townlands not measured; average 10s. The whole county much lower. To Newry 10s. To Dungannon 11s. To Lurgan 10s. The manufacturers, under-tenants on the churchlands, have leases of 14 years; on other lands 3 lives, which make a visible difference in culture. A manufacturer who has 10 acres will keep 2 cows and a horse, a pig, but not much poultry; he will sow $1\frac{1}{2}$ or 2 bolls of oats on 3 acres—a bushel, or $1\frac{1}{4}$ of flax-seed on a rood or a rood and a half, and half an acre of potatoes, or as much as he can dung. His course is:

1. Potatoes. 2. Flax. 3. Oats, and let it then lay for pasture, not sowing in general any grasses—some of them a little clover; the benefit of which is very great. When his son grows up and marries, he universally divides his farm with him, building a new mud cabbín: thus farms are constantly growing less and less. This is found very hurtful, by reducing them so low that they will not supply the people with necessaries. Scarce any of them have potatoes and oats to feed their families; great importations from Louth, Meath, Monaghan, Cavan, and Tyrone, besides what comes occasionally from England and Scotland. Their

Their food principally potatoes and oatmeal, very little meat; the better fort, however, buy some beef for winter, but it is not common. Many of them live very poorly, sometimes having for 3 months only potatoes and salt and water. There are few labouring poor unconnected with the manufacture, but when it is not in a very flourishing state, they live better than those employed by linen. No flax farmers; scarce any but what is raised in patches by the cotters. Upon light or mountain lands they prefer the American flax-feed. Upon heavy or clay lands they sow Riga Dutch, or Flanders feed; the quantity they get is more and better in quality than from the American, and will last 20 years. For fine linens they never save seed, pulling it green: but for coarse linens they save as much as they can.

I was informed that the produce of the flax depended on the oiliness of it, and that the goodness of the linen on not being too much bleached, which is only an exhalation of the oil. If so, it should appear that perfecting the seed must injure both linen and flax: but still the contrary is the opinion here. The quantity of seed from $2\frac{1}{2}$ to 3 bushels per acre: or 4 bushels of their own, from the idea that it is not so well saved.

They plough their potatoe-land or barley-stubble once the end of March or April, and sow it. But it is found by several that the

best flax, and the greatest quantity, is by sowing their poorest lands that have been run out by oats, upon 3 ploughings, and the reason they do it not more is for want of ability to give the 3 ploughings. They weed it very carefully. They generally pull it the latter end of July and the beginning of August, and immediately ripple it to get the feeds off, and then lay it into water from 6 or 7 to 12 days, according to the softness of the water, trying it before they take it out: the softer the water the shorter the time, generally bogs or pools, the bog the best. They lay it so thick as to fill the pool. When they take it out, they spread it on meadow ground from 10 to 15 days, according to weather; if that is very bad, much of it is lost. Upon taking it up, they dry by laying it in heaps on a hurdle fixed upon posts, and making a fire of turf under it. As fast as it dries, they beat it on stones with a beetle, then they scutch it to separate the heart or the *shoves* from the rest. Mills are invented for this, which if they use, they pay 1s. 1d. a stone for it, which is cheaper than what their own labour amounts to. They next send it to a flax-hackler, which is a sort of combing it, and separates into two or three sorts; here generally two, tow and flax. In this state it is saleable. The crop is from 18 to 48 stones per acre of flax rough after scutching. The medium is 30 stone, and it sells from 6s. 8d. to 9s. Much Dutch flax is imported, also from Riga, Koningsberg and Petersburg, which generally regulates the price

price of their own: the 12 head Petersburg is much the best of the common sort, 12 head Narva not so good, but Marienburg better than Narva. The 9 heads to a bunch coarse. Dutch blay and Dutch white, good and wirey; but the best of all is the silver blay from Bristol, which comes down the Severn: it is fuller of oil, softer and better than any other sort. The average price of their own 2l. 8s. to 2l. 12s. per cwt. or 7s. to 7s. 6d. a stone. It is liked better than the imported.

Expense of an acre of land under flax.

	£.	s.	d.
Rent [N. B. Their 10s. an acre, abovementioned, includes ditch, &c.]	-	0	14 0
Seed bought from 10s. to 13s. a bushel. Average 12s. 3 bushels	-	1	16 0
One ploughing	-	0	7 0
Carrying off the clods and stones by their wives and children, 6 women, an acre a day	-	0	2 2
Weeding 10 women an acre in a day, 4d.	-	0	3 4
Pulling by women and children, 12 at 4d.	-	0	4 0
Rippling by men and women, say 4 men at 10d.	-	0	3 4
Laying it in the water according to distance, say	-	0	5 0
Taking it out and spreading	-	0	5 0
Taking up, drying and beetling, 42 women a day at 4d.	-	0	14 0
Scutching 30 stone at 1s. 1d.	-	1	12 6
Total	6	6	4
30 stone at 4s. 2d.	£.	6	5 0

If let to a man who should farm flax, the labour would be much higher, as it is here reckoned only at the earning, which they could make by the manufacture, and not the rate at which they work for others. Hackling is 1s. 1d. a stone.

We next come to the manufacture. The stone-rough after hackling will produce 8lb. flax for coarse linen, and $3\frac{1}{2}$ lb. of tow. The 8lb. will spin into 20 dozen of yarn, or 20 hanks or 5 spangles fit for a ten hundred cloth, which is the common sort here; and the earnings in spinning will be from 5s. to 6s. 8d. the 5 spangles, and it is very good work to do that in 20 days by one woman; in common 25 days, consequently they earn something better than 3d. a day. Seven and a half spangles will weave into a piece of linen (ten hundred sort) of 25 yards long, and yard wide. Thus one stone and a half of flax at 7s. a stone, market-price, will make that piece. But the tow remains $4\frac{1}{4}$ lb. which is 2s. 2d. of which they make a coarser linen. 30 stone, the produce of an acre, make therefore 20 such pieces. The price of this cloth is from ten-pence halfpenny to eleven-pence halfpenny a yard brown, the state in which they sell it. Average eleven-pence. The fixed price for weaving it is two-pence halfpenny a yard. But this is when the poor are not able to raise it, and work for hire for those who advance them the yarn. A great deal is done in this manner, as well as by those who raise the flax,
and

and go through the whole of the operation. When the weaver has made his piece of cloth, he goes into the market of Armagh, which is every Tuesday, and sells it to the draper as he would any other commodity, always receiving the money on the spot, as there is no credit. The draper names the price, and the man takes or refuses it. There are many drapers, so that the man tries whom he pleases: there is no combination against the feller, but rather a competition. The draper generally has the bleach greens; and the expense to him of bleaching is 4l. 10s. to 5l. a pack of 30 pieces, or 3s. to 3s. 2d. a piece. Then he either sends it to factors in London or Dublin, or sells it at the linen-hall in Dublin. Some go over to Chester fair themselves, and dispose of it there. In London he gives 7 months credit: in Dublin 2 or 3: but if he goes himself to the hall, he gets part ready money. The London factor has 6 per cent. for selling and advancing the money as soon as sold, and half per cent. for warehouse room and insurance from fire. This is the principal part of the trade about Armagh.

In general the manufacture was at the height in 1770 and 1771. In 1772 and 1773 there was a great decline both in price and quantity. In 1774 very low, till May; when a sudden rise from a speculation of sending to America, and for the demand of the Spanish flota, which was detained a year for want of coarse linens, not being able to be supplied from

from Germany as usual: and since May 1774, it has continued very flourishing, but is not yet equal to what it was. The decline in 1772 and 1773, owing to the destruction of credit, and to the want of a market, but let me observe that a convulsion in credit necessarily contracts the market. Another circumstance was the price of bread in England, which they think, was so high, that the English could not afford to buy much of these coarse linens, of which they are the great consumers. Germany they consider as the great rival, and not Scotland. It is thought that their flax is well cultivated, and admits of no great improvement. The emigrations were chiefly in 1772 and 1773. Many weavers and spinners, with all their families, went. Some farmers, who sold their leases, went off with sums from 100l. to 300l. and carried many with them. They stopped going when the war broke out. In 1772 and 1773 many turned farming labourers, which is not the case when the trade is high.

The religion generally Roman, some Presbyterians: Protestants emigrated most. The oak boys and steel boys had their rise in the increase of rents, and in oppressive county cesses.

July 24th, took my leave of his Grace, and breakfasted with Maxwell Close, Esq; at —, who was so kind as to mention a few circumstances

stances in addition, and some in contradiction, to what I had learnt at Armagh.

The manufacture at its greatest height at present; the price greater, and the quantity also. The emigrations nothing about Armagh; but Antrim, and Down and Derry, many, chiefly idle fellows, who have not been the least missed: some went with money, but the sums not considerable. It was said that Lord Donnegal's high rents were the cause, but when they went they sold their leases, and got 20l. 30l. or 40l. for many, and it was this money chiefly carried them. A weaver will earn from 1s. to 1s. 4d. a farming labourer 8d.

COURSE OF CROPS.

1. Potatoes. All their dung for them, the produce 40 or 50 barrels; the best sorts are the London lady, French white, black Spanish. 2. Bere. 3. Flax, the produce 48 stone, scutched, at 8s. 4. Oats.

Lime used much, the price 10d. to 1s. 6d. a barrel. Marle under the bogs, white and light, but little used. Tythes, oats 2s. 6d. to 3s. 6d. Barley 5s. Year's purchase of land fell much in 1772 and 1773. There are many middle men.

The oak boys began at Blewstone upon the county cess; but in a moment rose to rents, tythes, bogs, and every thing else: idle rascals all that went to America,

Mr.

Mr. Clofe has had very fine turnips, with which he fed fat wethers from autumn for the fpring markets, and gained thereby 1½d. a lb. difference in price.

Took a ride to fee the neighbouring country by Killilean-hill, Fellows-hall, Woodpark-lodge, Lifloony, Tinan, and Glaslough, which indeed is a round that fhews the country to advantage; it is a continued picture: ftop where you please, you are in the midft of a beautiful landscape. The hills are waving in every variety of outline that can be imagined; there is a great plenty of wood, every tree of which is feen to advantage from the inequality of furface. It is a chearful, beautiful country, and well worth a traveller's time to take this ride, in order to fee it. Ireland, notwithstanding her general nakednefs, contains fome fcenes of beauty in which wood bears a confiderable fhare.

Called in our ride at Mr. Lefly's at Gaf-laugh, viewed fome of his great improvements: he was abfent, but Mrs. Lefly was fo obliging as to walk through the woods with us. The lake is a large one, containing 120 acres, and the wood of 100 acres fpreads over a fine bold hill, and hangs down to the water in one deep fhade, the effect remarkably beautiful: additional plantations are made, and walks cut through the whole. In the evening Mr. Lefly came to Mr. Clofe's, and I then had pleafure of learning that much of his domain,
from

from being a poor waste tract of little value, was converted to what I had seen, that is, to very fine grass land. The soil is stiff cold clay, the spontaneous growth rushes, &c. ploughed most of it first, and then manured it with either lime or marle: of lime from 100 to 120 barrels per acre, at 7d. a barrel on the ground from stone and turf of his own. Then took a crop of wheat, which proved very fine; after the wheat, laid it down with oats and hay-feed, the oats very good. Sowed the seeds of a hay-loft with clover: has used much compost made of ditch scowerings, lime, marle, &c. and spread it in the same manner as the lime; some, after the land was laid to grass, but did it best on the fallow. Much of the land so wet, that hollow drains were necessary, and made so as to lay the lands dry, the cuts very numerous, and proved effective. His fences are excellent, 2 rows of quick, and a ditch 6 by 7, a dry hedge at top, and the back dressed and planted with forest trees paled in. Mr. Lesly has found the business of improvement profitable, so that if a tenant had the money necessary, he would find it to be the best work he could engage in with a view to profit alone.

July 25th, returned through Armagh. Passed Sir Capel Molyneux's domain, which seems an extensive and very fine one. Near it I observed that the soil was one of the finest red sandy loams I have any where seen, and several pieces of potatoes were planted in drills, which

which is a practice I had not yet remarked. Dined with Mr. Workman, at Mahon; about that place the size of their farms are from 10 to 20 acres, at about 12s. to 15s. an acre; and some of them hiring 20 acres, will let off 5 or 6 at 18s. to 20s. an acre. They are in general very well off as to living; their food is *stir-about*, potatoes, bread of maslin or wheat, and some meat once a fortnight. They are well clothed, and have plenty of fuel; a man with 20 acres will have 150 kishes of turf a year. A man of 15 acres will have between a rood and half an acre of flax; one acre of potatoes; 2 to 4 acres of oats, and will mow 2 acres; one horse, 2 or 3 cows, one young beast, and a pig, but not much poultry. Pigs depend on potatoes.

Their course: 1. Potatoes. 2. Flax. 3. Oats, or 4. Oats, and then leave it to grafs itself. Scarce any fallow, a few sow clover, which increafes, to mow for foiling their cows. The weavers univerfally earn much more than the few country labourers there are. The best flax feed for clay land the Dutch, and for light land the American. Scarce any of them fave their own feed, confequently no rippling; it muft ftand then till dead ripe, which they think leffens the quantity, and makes it coarfer. The richer the land the better. Sow generally on one ploughing. They weed it with much care. In watering, clay water reckoned much better than bogs, which they are leaving off. In general they
scutch

scutch it themselves, and it is cheaper than the mills. Mr. Workman has paid 1s. 6d. for it by hand, and 1s. 1d. to the mills, and found the former cheaper; more flax from hand, and much cleaner. Immediately after scutching it is saleable in the market. Price of flax 6s. to 13s. scutched.

Expenses per acre.

Rent	-	-	-	-	-	£. 0 13 0
Seed 2½ bushels, at 10s.	-	-	-	-	-	1 5 0
One ploughing and harrowing	-	-	-	-	-	0 5 0
Weeding	-	-	-	-	-	0 0 10
Pulling by women						
Laying in water	-	-	-	-	-	0 1 0
Taking it out and spreading	-	-	-	-	-	0 3 0
Taking it up, drying, and beetling	-	-	-	-	-	0 8 0
[Some beetle it with <i>breaks</i> , which is to the full as good as the beetles, and is done for a third of the money.]						
Scutching 25 stone, at 1s. 6d.	-	-	-	-	-	1 17 6
Then ready for market.						<hr/> £. 4 13 4 <hr/>
Hackling	-	-	-	-	-	1 5 0
Value before hackling, from 6s. to 13s. Average 8s.	-	-	-	-	-	<hr/> 10 0 0 <hr/>

The rough stone, after hackling, will produce 8lb. flax for coarse linen; and 4lb. of dressed tow, and some for *backens*. The spinners earn from 3d. to 4d. a day. The weavers earn 10d. to 1s. 4d. The coarse cloths and yarn never so high as at present. Weavers very often turn labourers, which is attributed to so many being, contrary to law, bound apprentices for 2 years, instead of 5, by which means they are bad hands, and can only do the very coarsest work. As to health, from the sedentary life, they rarely change their profession for that. They take exercise of a different sort, keeping packs of hounds, every man one, and joining, they hunt hares: a pack of hounds is never heard, but all the weavers leave their looms, and away they go after them by hundreds. This much amazed me, but assured it was very common. They are in general apt to be licentious and disorderly; but they are reckoned to be rather oppressed by the county cesses for roads, &c. which are not of general use. There is some wheat, and about Kilmore a good deal; a middling crop 5 barrels. Oats yield here 6 barrels on an average. Mr. Workman, 9 years ago, introduced the use of lime, and they are since coming fast into it: the effect is very great, though the soil is a wet loam on clay without any stones. No draining. They are in general very bad farmers, being but the second attention, and it has a bad effect on them, stiffening their fingers and hands, so that they
do

do not return to their work so well as they left it.

In the evening reached Mr. Brownlow's at Lurgan, to whom I am indebted for some valuable information. This gentleman has made very great improvements in his domain: he has a lake at the bottom of a slight vale, and around are three walks, at a distance from each other; the centre one is the principal, and extends 2 miles. It is well conducted for leading to the most agreeable parts of the grounds, and for commanding views of Loch Neagh, and the distant country; there are several buildings, a temple, green-house, &c. The most beautiful scene is from a bench on a gently swelling hill, which rises almost on every side from the water. The wood, the water, and the green slopes, here unite to form a very pleasing landscape. Let me observe one thing much to his honour; he advances his tenants money for all the lime they chuse, and takes payment in 8 years with rent.

Upon enquiring concerning the emigrations, I found that in 1772 and 1773, they were at the height; that some went from this neighbourhood with property, but not many. They were in general poor and unemployed. They find here, that when provisions are very cheap, the poor spend much of their time in whiskey-houses. All the drapers wish that oatmeal was never under 1d. a pound. Though farms are exceedingly divided, yet few of the people
raise

raise oatmeal enough to feed themselves; all go to market for some. The weavers earn by coarse linens 1s. a day, by fine 1s. 4d. and it is the same with the spinners, the finer the yarn the more they earn; but in common a woman earns about 3d. For coarse linens they do not reckon the flax hurt by standing for seed. Their own flax is much better than the imported.

This being market day at Lurgan, Mr. Brownlow walked to it with me, that I might see the way in which the linens were sold. The cambricks are sold early, and through the whole morning; but when the clock strikes eleven, the drapers jump upon stone standings, and the weavers instantly flock about them with their pieces: the bargains are not struck at a word, but there is a little altercation whether the price shall be one-halfpenny or a penny a yard, more or less, which appeared to me useless. The drapers clerk stands by him, and writes his master's name on the pieces he buys, with the price; and giving it back to the seller, he goes to the draper's quarters, and waits his coming. At twelve it ends; then there is an hour for measuring the pieces, and paying the money, for nothing but ready money is taken; and this is the way the business is carried on at all the markets. Three thousand pieces a week are sold here, at 35s. each on an average, or 5,250l. and per annum 273,000l. and this is all made in a circumference of not many miles.

The

The town parks about Lurgan let at 40s. an acre, but the country in general at 14s. The husbandry is exceedingly bad, the people minding nothing but flax and potatoes.

Leaving Lurgan I went to Warrenstown, and waiting upon Mr. Waring had some conversation with him upon the state of the country. He was of opinion, that the emigrations had not thinned the population, for at present they are crowded with people; but he thinks if the war ends in favour of the Americans, that they will go off in shoals. Very few Roman Catholics emigrated. The rising of the steel boys was owing, as they said, to the increase of rents, and complaints of general oppression; but Mr. Waring remarked, that the pardons which were granted to the oak boys, a few years before, were principally the cause of those new disturbances.

Cross the road to Mr. Clibborn's, who gave me much information of the greatest value concerning the linen manufacture. First, in respect to the flax: the following is the expense of an acre.

	£.	s.	d.
Rent	1	1	0
Four bushels of seed 10s.	2	0	0
Two days work, ploughing, &c.	0	10	10
Stoning, one woman, 4 days	0	2	0
	<hr/>		
Carried over,	£. 3	13	10

178 WARRENSTOWN.

	Brought over	£.	3	13	10
Flax sown on a lay no weeding (the other 12 days of a woman, at 6d.)	- - - -		0	6	0
Pulling, 12 ditto	- - - -		0	6	0
Four men carrying out to water, and 2 days of 1 horse	- - - -		6	16	0
Taking out and spreading, 16 women,	-		0	8	0
Taking up, lifting, 4 women a day	- -		0	2	0
Beetling, 4 men 2 days beetling, and 4 women to dry it	- - - -		1	0	0
Twelve kish of turf	- - - -		0	18	0
Scutching	- - - -		5	0	0
Some fold then, and some not till hackled, which for 40 stone the acre, 1s. 3d.	-		2	10	0
			<hr/>		
			14	19	10
			<hr/>		
Value after scutching, 7s. 6d. a stone,	-		15	0	0
Expenses	- -		13	3	10
			<hr/>		
Profit	- - -	£.	1	16	2
After hackling 2s. 6d.					

The stone of flax, rough after hackling, will produce $3\frac{1}{2}$ or $3\frac{3}{4}$ lb. of flax for 1800 linen, and the $3\frac{3}{4}$ will spin into 60 hanks fit for an 1800 linen. Spinners are generally hired at 10s. 6d. and 12s. the quarter, besides board and lodging; and for that they spin 4 hanks a week of 6 hank yarn for 1600 linen, and 3 a week of 8 and 9 hank yarn for 1700 linen. As soon as the yarn is spun it is boiled. The boiling changes it 1 hank in a pound;

pound; 6 hank yarn will become 7. If flax is given out to be spun, they will get 3d. a hank for 6 hank yarn for spinning it, and they do one a day. The linen made here is from 8 hundred to 24; of coarse linen 10 hundred, the common; and of fine, 13, 14, and 15. The pieces are 25 yards long, and yard wide.—53 Hanks for a web of 1600,—63 for 1800.—49 Hanks will make a piece (*a web*) of 1400, which sells at 20d. brown. The weaver is paid 10s. for weaving the 14 hundred web, and he will weave it in 9 days. For cambricks the yarn is not boiled, and therefore so much finer; they will earn more at it than at linen, but is not so saleable.

Much done by drapers advancing the yarn, and paying for the weaving at so much a yard. For 8 hundred, 2½d. a yard.—10 ditto, 3½d.—13 ditto, 3¾d.—16 ditto, 7d.—18 ditto, 10¾d.—24 ditto, 1s. 7½d.—The finer the linen the more they earn. In fine linen, going from it to the plough or spade, &c. hurts their hands so much, that they do not recover it for a week; but not common for them to do it.

1 Stone, 3¼lb.—60 hanks—15 weeks—1 woman. 2 Stone 30. 3 Stone 45. ½ Stone 7½. 3½ Stone 52.—Weaving 63 hanks into a web of 1800, he has 20s. for it, and does it in 12 days; but all preparations, dressing, &c. included, it will be three weeks, at which rate he can work for a year.

The prices of the cloth are :

	Market Low.	Market High.
8 hundred	8½d.	11½d.
10 ditto	1s.	1s. 2½d.
12 ditto	1s. 2d.	1s. 4½d.
15 ditto	1s. 7d.	1s. 9d.
17 ditto	2s. 4½d.	2s. 6d.
20 ditto	3s. 10d.	3s. 10d.
24 ditto	7s.	7s.

Bleach greens sometimes belonging to the drapers, sometimes not. In bleaching it is steeped in cold river water, or sometimes not at all; then to the wash-mills for washing; then boiled in barilla ashes, (or America or Ruffia pot-ash) imported from Alicant to Newry or Belfast; the quantity of the barilla uncertain, about half a bushel to 100 pieces. Boiling 6 hours. Washed thoroughly after this and spread on grafs for 4 days; lift it and boil it again as before; then to the grafs again, and repeated till nearly white for rubbing. Next put it into a scald of soap, and from thence into the rub boards; if coarse cloth one rub sufficient, but for fine three or four. After rubbing, washed, and put to sower in vitriol and water, 24 hours will do, but 10 days no injury; fine cloth 3 serves, one after every rub, but for coarse one rub is sufficient. This sowering merely for cleansing and purging. After sowering it has a scald of soap, from

from which well washed, wrung, and made ready for starch and blue; then dried and beetled, which is done by a mill, after which done up with a screwing machine for sale. The expense of bleaching 3s. a piece, for coarse 4s. middling 5s. fine 6s. These the particulars commonly known among bleachers; there are secrets in the trade which they of course do not communicate, but not so many I apprehend as generally supposed; for where there are few, or even none, but with an appearance of them, all is supposed by the vulgar to be mystery. Upon the above account I have only to remark, that the rubbing appears to me an operation for giving the cloth beauty at the expense of strength. It is a most severe operation, being drawn between boards full of teeth, which are made for the professed purpose of adding to the friction; and the effect is such, that large quantities of knap are constantly taken out of the machine. This is a very fine invention for wearing out a manufacture as soon as made.

Mr. Clibborn was ready enough to confess that this work is carried too far, but the London drapers, he says, demand thick cloths, and this operation contracting the breadth of the piece gives it a thick appearance, which they are fond of. The beetling does not appear to me to be near so severe an operation. It is a continued system of perpendicular strokes upon the cloth wound round a cylinder, for the purpose of smoothing it, and giving it
 a gloss.

a gloss. It is sold at Dublin; half the manufacture to London from Newry, Belfast, or Dublin. Cambrick all sold in Dublin: it increases much. In 1771 more goods made than at present. England the great consumption of Irish linens. Scotland nor Germany interfere with those above described. No rivals in the Irish 7-8ths and 3-4ths yard wide, but in the dowlas and diaper the Germans; and in sheeting the Russians. The dowlas and sheeting are made in King's and Queen's County, and Westmeath. Diapers here, in which the same yarn as above, the breadths various, and the weavers make more by it than by linen. The trade as brisk at present as the rest. Hands are plentiful for the demand, notwithstanding the emigrations; but the men do not work more than half what they might do, owing to the cheapness of provisions making them idle, as they think of nothing more than the present necessity. A general remark of all who know the trade, that when provisions are dear the more goods come to market; what they raise themselves not half feeding them. A child 7 years old earns 1d. a day spinning. There are as many employed in diaper as in cambricks. Manufacture not doubled in 15 years, about 1-third or 1-fourth increase in that time. The present high price of linens and yarn attributed to the increased demand at Manchester for yarn: it is now 9d. a hank. Also to the Spanish market for linen being almost a new trade. Likewise to foreign linens coming dearer to market than formerly,

merly. The weavers and spinners generally live upon oatmeal and potatoes, and milk, with meat once a week, and have their belly full.

A farm 6 acres:—1 $\frac{1}{2}$ Hay. 1. Rood flax.
 1. Acre potatoes. 1. Oats. 2. Cows. 1.
 Horse. 2. Sheep. Rent, 5l. 12s.

1. Potatoes usually 160 bushels to the acre.
 2. Flax. 3. Oats. 4. Left 2 years.

1. Plough 3 or 4 times for flax. 2. Wheat,
 or barley. 3. Oats. 4. Oats. 5. Left.

Very few save their feed; but this more than usual, owing to the import from America falling off. Much damaged by standing for feed from *firing*, and a great chance run of losing the crop; but if the weather good not the worse for coarse linen, but will not do at all for fine. Clay land does best for it. They use much lime, 140 barrels per acre, at 1s. 1d. at kiln, and 6d. more carriage: they lay it on for wheat and barley. It is reckoned to pay so well, that all use it who are able.

Rent of a cabin and garden	-	£. 1 10 0
Grass for a cow	-	1 10 0
Hay for ditto	-	1 10 0

4 10 0
 Many

Many weavers families have tea for breakfast. Rents rather lower than 4 or 5 years ago.

Leaving Warrenstown, reached Hillsborough that night; passed thro' Dromore, a miserable nest of dirty mud cabbins. Lord Hillsborough has marked the approach to his town by many small plantations on the tops of the hills, through which the road leads. The inn of his building is a noble one for Ireland.

July 27th, walked to the church built at the expense of Lord Hillsborough; there are few such in Ireland. It is a very handsome stone edifice, properly ornamented, and has a lofty spire, which is a fine object to the whole country. The form of the church is a cross, the body of it 160 feet long, and the cross-isle 120. The step to the communion table is of one stone out of his lordship's quarry, 21 feet long, and 2 broad. To the improvements—the lake, woods, and lawn are pretty; but a well built and flourishing town in the hands of an absentee, whose great aim is to improve and adorn it, does him more credit than twenty domains.

Reached Lisburn, and waited on the bishop of Downe, who was so obliging as to send for an intelligent linen-draper, to give me such particulars as I wanted of the manufacture in that neighbourhood. About this place
chiefly

chiefly fine cloth, from 14 to 21 hundred. The spinners are generally hired by the quarter, from 10s. to 12s. lodging and board, and engaged to spin 5 hanks of 8 hank yarn in a week.

To the 14 hund. linen 46 hanks—18
ditto 58 hanks—28 ditto 66 hanks.

In weaving it is common for one man to have several looms, at which journeymen weavers work, who are paid their lodging and board, and one-third of what they earn, which may come to 2s. a week on an average.

The drapers advance the yarn, and pay for the weaving by the yard, For a
15 hund. 4d.—18 ditto 9d.—
21 ditto 1s. 1½d.

For 18 hund. linen, a woman spins 6 hanks a week, which 6 hanks weigh about a pound, at the price of 8d. a hank. The manufacture carried on in the country very much by little farmers, who have from 5 to 10 acres, and universally it is found, that going to the plough or spade for a day or two spoils them for their weaving as many more. Think that flax that has stood till seed is ripe, will not do for more than a 1600 web. Rent for sowing flax on potatoe land 4d. a perch long of 21 feet and 10 broad. The crop at a medium 10 stone from a bushel of seed. The stone 16lb. A stone of good flax, rough, will produce 8lb. after

after hackling, and spin into it as many hanks per lb. as the fort is, that is, 6 hanks of 6 hank-yarn, 7 of 7. The weavers, spinners, &c. live in general on potatoes and milk, and oat-bread, and some of them meat once a week.—Will work only for support; meal and cloth never cheap together, for when meal is cheap, they will not work. Rent of land from 10s. to 22s.

Leaving Lisburn, took the road to Belfast, repeating my enquiries; in a few miles I found the average rent 16s. per Cunningham acre. Much flax sown, three bushels and a half of seed generally sown to an acre. Eight stone of flax, from half a bushel of seed, is reckoned a very good crop. If they have not land of their own for sowing, they pay 12s. rent for what half a bushel requires: this is 4l. 4s. per acre, but it includes ploughing, harrowing, and getting ready for the seed.

Rent, &c.	-	-	-	-	4	4	0
Weeding	-	-	-	-	0	5	0
Pulling 12 women, at 8d. a day	-	-	-	-	0	8	0
Watering, damming, and stones, 6 men a day							
at 9d	-	-	-	-	0	4	6
Taking and grassing, 6 women a day	-				0	4	0
Taking, lifting and drying, generally in the sun,							
6 women 1 day	-	-	-	-	0	4	0
None rippled.							
Scutching at mills, 1s. 4d. a stone, 56 stone					3	14	8

L. 9 4 2

PRODUCE.

P R O D U C E.

56 stone, at 9s. 4d.	-	-	-	-	-	-	26	2	8	
Expenses	-	-	-	-	-	-	9	4	2	
Profit	-	-	-	-	-	-	£.	16	18	6

Hackling is 1s. 2d. a stone, and half the weight is lost; the produce will be 4lb. flax and 4lb. tow, which the Scotch generally buy at 3d. a lb. To a stone hackled there are 96 hanks; and to the web of cloth there are 28 hanks for the weft, and 30 for the warp. A weaver is three weeks doing it, and is paid 17s. From Lisburn to Belfast, on the river Leggon, there are 12 or 13 bleach greens. The counties of Down and Antrim are computed to make to the amount of 800,000l. a year, and near one-third of it in this vale.

Passed Lord Dungannon's at Bever, whose plantations are got up to a fine shade by means of planting very thick; went to Castle-hill, Mr. Townley Blackwood's. Rents there are 15s. an acre, Cunningham-measure. Average of the county of Down 10s. Sowing clover with flax is practiced here, coming in much, and found to be very beneficial.

In the evening to Belfast. I had letters to Mr. Portis and Mr. Holmes; but upon calling at their houses, found the first in England and the other in the country: so considerable a place as Belfast demanded a better account than I could give without assistance. At dinner

ner at Mr. Blackwood's, a Doctor Haliday was mentioned as a gentleman of general knowledge, and at the same time of a liberal disposition: it was the only name I knew at Belfast after my two letters proved usefess. I determined to make known to this Doctor Haliday my wants, and beg his assistance in gratifying them, and accordingly wrote a note and sent it. He also in the country. Still I was unwilling to give up all thoughts of Belfast; and as I had planned going to Strangford, and from thence to Lisburn in my way north, I determined upon returning again to Belfast, in order for a farther chance of meeting with somebody that could answer me a few questions about the progress of the commerce of the place.

July 28th, took the road to Portaferry, by Newtown, where I breakfasted; it is an improving place, belonging to Mr. Stewart, who has built a very handsome market-house, and laid out a square around it, which he designs building. I was informed here that the linen manufacture is much less considerable than it was. Since the decline of 1772 and 1773, many weavers they told me had turned labourers, but the spinning business continues as much as ever.

Leaving the town, the road leads at once to the shore of Strangford Loch, where I observed heaps of white shells, and upon enquiry found that they dig them at low water in
the

NEWTOWN STEWART. 189

the Loch in any quantities: they lay them on their lands, but do not find that they last so long as lime. Farms rise to 40 acres; rents 15s. to 21s. Cunningham-measure. Wheat yields to 30 bushels; oats to 40.

As I advanced, making farther enquiries, still I was told that the weaving, at present, was not near so good as seven years ago. Flax, in some parishes, pays no tythe; in others, it is taken in kind. Two bushels of potatoes, on a ridge seven yards long and two wide, is a very good crop. Rents from 10s. to 21s. A common course.

1. Oats on lay. 2. Wheat. 3. Oats. 4. Barley. 5. Oats. 6. Barley. 7. Oats. 8. Left for lay, a few sowing clover or rye-grass for two years.

Pass Newtown Stewart, a row of neat stone and slate cabbins, in the neighbourhood of some new plantations which surround an improved lawn, where Mr. Stewart intends building. The soil is in general light, dry, sandy or gravelly. Sea-wrack is collected for burning into kelp all along the coast of the Loch. There are many lime-kilns all the way to Portaferry; I was told 35, and that 15 years ago there was only one, so much is the improvement of land increasing. The stone is brought by sea from Carlingford, and burnt with coals and turf. The expense reckoned 1s. 1d. a barrel. It lasts ten years. Shells are some
time

time before they work, but they last longer than lime, directly contrary to what I was told before, from whence one may suppose the point disputable. Rents 16s. to 20s. Remark'd several great rocks on the shore, which seem to have no connection with the coast, which is not rocky, nor at all in unison with such fragments.

Reached Portaferry, the town and seat of Patrick Savage, Esq; who took every means of procuring me information concerning that neighbourhood.

July 29th, collect'd some concerning the fisheries. It is a summer herring-fishery for the home consumption of the country; they are now taken chiefly off the peninsula of Ards. Formerly the great take was in the Loch, till within these 4 years. To the whole coast they reckon that there are 400 boats; they are of 4 or 5 ton burthen, and cost 15l. a boat, the nets cost 10l. and there are 4 to each boat. A boat will catch 6 mazes of herrings in a night, each 500; and they sell at 8s. 8d. a maze on an average: it is, however, a precarious fishery. In 1774 it was very good: in 1775 very bad; this year it has begun finely. It begins the 12th of July, and finishes the end of September. It is in general carried on by shares; the boat and nets have one half, and the 4 men the other half. They earn, upon an average, 1l. 1s. each a week by it: 110 boats belong to Portaferry. The men
are

are chiefly from the country; the whole barony of Ards are fishermen, sailors, and farmers, by turns. This little port has a tolerable share of trade: they have 12 ships, which go annually to Loch Swilly herring-fishery, which is a winter one on the bounty of 20s. a ton; they have 15 ships belonging to the place, from 30 to 150 tons, at 6 men each, and many others trade here. Coals are brought from Whitehaven; and from Gottenburgh and Norway timber and iron. Trade increases, and the place is much more flourishing than it was.

Rode in the evening to Millen Hill on the coast of Ards, to see the herring fleet go out. It is in the town-land of Tara, and is an excellent spot for a light-house, which is much wanted on this coast, for it is exceedingly rocky and dangerous from St. John's point to Donaghadee, so that no winter passes without shipwrecks, and in some there are a dozen. Under the hill appeared the north and south rock, with foul ground all around. A light-house might be built here for 60l. and the annual expense would not exceed 150l.

The barony of Ards is in general a wet, strong; or clay soil, with a good deal of bog; lets on an average at 10s. 6d. an acre, the whole county 10s. the size of the farms on a medium about 40 acres, a few up to 100, and many down to 5 in weavers hands. Course of crops.

1. Potatoes

1. Potatoes dunged for. 2. Wheat, yields from 28 to 40 bushels, but reckon it by cwts. 3. Barley. 4. Oats. 5. Clover for 3 years, or clover and hay-feeds in case designed to lay longer, 6, 7, and 8. Oats. Also,

1. Potatoes. 2. Flax. 3. Corn, &c.

A great deal of lime used from Carlingford; the stone is brought and burnt with Milford or Scotch culm, and costs them, when burnt, about 11d. a barrel. It has been found very beneficial, has been used about 10 or 12 years: it does best on middling land neither very dry nor wet. Sea-sand is much used for strong clay, and brings the finest crops that can be. White marle from under the bogs they prefer to lime; it improves land so much that it will never be as bad again. Wherever they can get shell sand, they do, and find the benefit very great: sea-weed they also use for their barley lands what they get in winter, but in summer they dry and burn it into kelp. Cattle very trifling, only small stocks for convenience. The principal religion is presbyterian.

If a weaver has, as most have, a crop of flax, the wife and daughter spin it and he weaves it: if he is not a weaver, but employed by his farm, they carry the yarn to market. The diet of the poor is oaten bread, potatoes, milk, herrings, &c. The little farmers generally have meat once a week in summer,

summer, and falted for winter. All keep cows, pay for summer grazing 1l. 7s. and buy hay for the winter to the value of 1l. 10s. They all keep pigs, not much poultry. Their fuel both turf and coals; coals 13s. a ton. Car, horse, and driver, a day, 1s. 4d. A new car 40s. to 3l. A plough 10s. 6d. A harrow 15s.

A weaver, who generally fows what they call half a peck of flax-feed, which is a common peck, gave me the following account of the expenfe.

	£.	s.	d.
Seed 3 bushels to $1\frac{1}{4}$ acre, Cunningham-measure	0	2	6
Ploughing - - - -	0	1	0
Weeding - - - -	0	0	9
Pulling $1\frac{1}{2}$ woman, at 8d. - - - -	0	1	0
Rippling 1 man, 2 days, at 10d. - - - -	0	1	8
Watering 1 man, half a day - - - -	0	0	5
Car and horse - - - -	0	0	8
Taking out $1\frac{1}{2}$ man, a day, and 1 woman ditto	0	0	9
Beetling 1 man, 2 days - - - -	0	1	8
Carrying to scutch mill - - - -	0	1	0
Scutching, 1s. 4d. a stone, 3 stone - - - -	0	4	0
Carrying back - - - -	0	0	6
Hackling 1s. 4d. ditto - - - -	0	4	0
Rent - - - -	0	2	0
No tythe of flax.			
	£.	1	2
		9	0

At $2\frac{1}{2}$ pecks to a rood this is, per Cunningham acre, about 9 0 0

Eight pound of flax, and three of tow, worth 6d. or stone, rough; make 30 hanks of yarn for a 1400 linen: one woman will spin it in 30 days, and earn 4d. a day. 42 hanks make a web of 25 yards, which is wove in 2 weeks, and he earns 5d. a yard or $4\frac{1}{2}$ d. and will sell green for $17\frac{1}{2}$ d. or 18d. a yard. Not a bleaching green in all Ards for want of water. All along the coast of Ards and in Strangford Loch, sea wrack is collected by the country people with great diligence, for burning into kelp; it yields at present from 40s. to 50s. a ton, the bleach greens have much of it, and the rest of it exported to England. Some gentlemen, who keep their shores in their own hands, pay the men 20s. a ton for collecting and burning: at other times they pay rent for the shore. In Loch Strangford the kelp is better than on the open shore: an instance of industry in this Loch deserves to be recorded. It is not uncommon for the men to draw stones from their fields, and spread them on the shores in order to make the wrack (*fucus*) grow; a good crop being only obtained from rocks and stones. Upon the coast of Ards, they have in winter much tangle wrack, which they collect very carefully, form into heaps, and when rotten spread it on their barley lands, and get very fine crops, but it is not lasting.

The plentifulness of the country about Portaferry, Strangford, &c. is very great: this will appear from the following circumstances,

as

as well as the register of butchers meat and common poultry elsewhere inserted.

Pigeons 2s. a dozen. Rabbits 4d. a couple. The fish are, Turbot 4s. Sole 10d. a pair; Bret and Haddock 1d. each; Lobsters 5s. a dozen; Oysters 10d. a hundred; John Dory, Gurnet; Whiting 4d. a dozen; Mackarel, Mullet, Partridges, and Quails in plenty. Wild Ducks 10d. to 1s. Widgeon 6d. a couple, Barnacle 10d. each; Teal 6d. a couple, Plover 3d.

This country is in general beautiful, but particularly so about the freights that lead into Strangford Loch. From Mr. Savage's door the view has great variety. To the left are tracts of hilly grounds, between which the sea appears, and the vast chain of mountains in the Isle of Man distinctly seen. In front the hills rise in a beautiful outline, and a round hill projects like a promontory into the freights, and under it the town amidst groups of trees; the scene is cheerful of itself, but rendered doubly so by the ships and herring-boats sailing in and out. To the right the view is crowned by the mountains of Mourne, which, whenever seen, are of a character peculiarly bold, and even terrific. The shores of the Loch behind Mr. Savage's are bold ground, abounding with numerous pleasing landscapes; the opposite coast, consisting of the woods and improvements of Castle-Ward, is a fine scenery.

July 30th, crossed the freights in Mr. Savage's boat, and breakfasted with Mr. Ainsworth, collector of the customs; he gave me the following particulars of the barony of Lecale, of the husbandry of which I had often heard as something better than common. The soil varies near the sea, stoney loam, dry sound good land, some without stone between the rocky hillocks, some very stoney; the land is light, as may be judged from two horses being usually in a plough, lets on an average from 12s. to 28s. average 20s. the whole county 10s. The measure the plantation acre. The south coast is the richest. Farms rise from 5 to 30 acres; the little ones are all manufacturers: there are some of 30, and perhaps 40, that are not weavers, but most of them employ looms. The division of farms among the sons, have brought them so low that they have been obliged to weave for subsistence. In the richer parts they summer fallow, and the course then is:

1. Fallow.
2. Wheat, average produce 18 cwt.
3. Barley ditto, a ton per acre.
4. Oats ditto, 4 hhds. each, 12 bushels.
5. Pease.
6. Barley.
7. Clover (of which they sow much) for 2 years.
8. Barley.
9. Oats.
10. Wheat.

11. Potatoes

1. Potatoes 400 bushels.
2. Barley, one ton and a half.
3. Barley.
4. Clover for 2 years, much of it foiled in the stable, a practice which increases.

Also,

1. Plough-lay for oats.
2. Wheat.
3. Barley.
4. Clover or pease.

1. Potatoes.
2. Flax.
3. Barley.
4. Barley.
5. Clover two years.

Have lately got into the way of eating down a 3 year old lay, and plough it in July, and once or twice more for wheat: but to sow such with pease or beans on one earth, and then take the wheat, would be much better. Pease esteemed a refreshment, and enables them to have one or two crops of white corn. Great quantities of barley sown, being their principal crop. No turnips. Their manures are marle, shells, sea-wrack. Marle has been used greatly for many years, it is said for above 60: it is white marle from the bottom of bogs, and some of it immediately under the surface; they carry it on horseback in bags, which hold each 4 bushels, and they lay about 450 to 500 bags per acre. When the farmer has

has not marle on his own ground, he purchases it from his neighbour, and pays from 1l. 1s. to 1l. 10s. for liberty to raise it, and if they carry it a mile, or a mile and an half, it costs them 6l. an acre. They are reckoned very much to have exhausted their land; for upon the credit of marling they will take 20 corn-crops running, and as a proof of this I was told, that the Deanery of Down, which consists of tythes in Lecale, was 2,200l. a year, 35 years ago, whereas it is now no more than 1600l. owing to the decline of the Lecale crops; and this from the abuse of marle. Second marlings do not succeed, they think, but it has not been tried. Lime they use only on dry lands, and not often. They have the stone from Carlingford, and they burn it with coals; it costs them 11d. a barrel, lay from 80 to 150: the lighter the land, the less they lay on it: it lasts 8 or 9 crops; does upon old marled lands better than a second marling. Sea shelly sand and gravel they have upon their own shore; lay them thick on stiff reddish clay soils, and find great effect from them; lay greater quantities much than of marle, about 800 one-horse loads, the best crops in the barony are gained by it. Parts by shelling advanced, from 5s. to 25s. an acre. Very little grass land, and scarce any cattle but cows to every farm for convenience. The farmers are generally not only in Lecale, but the whole county much better and wealthier than formerly.

Tythes generally compounded 2s. 2d. an acre for all under crops. The price of provisions has risen in general one-third in 20 years. And a cow which 40 years ago, was bought for 25s. is now 5l. 5s. and as good a horse, 25 years ago, for 4 to 5l. as now sold for 10l to 12l.

There are some cotters who have not farms, only a potatoe garden, a patch of flax, grafs for a cow, and a little straw for the winter, for all which they pay 2l. 2s. a year. Rise in the price of labour from 4d. and board to 5d. and 6½d. and ditto in 20 years. The fuel generally coals, which are 13s. to 18s. a ton, and they send their children to pick up dung to burn; yet this is the country that I have heard commended for husbandry. Building a mud farm-house 8l. Ditto stone and slate 30l.

The linen manufacture is carried on very generally through the barony. In Downpatrick there are 500 webs sold every week, at 1s. 1d. a yard, and 26s. each, being from 800 to 1400, in general 1200 linen; which 1200 web will take 38 hanks of 4 hank yarn, and a woman will on an average spin the 38 hanks in as many days, being paid 4d. a hank; a weaver will make it in a fortnight, and has 10s. for it.

Upon the marling coming in, there was a corn-coasting trade opened from Strangford, and it flourished considerably, but fell off pret-
ty

ty much, as has been mentioned with respect to the deanery of Down. The trade has, however, been upon the increase for about 4 years; from the 11th of September, 1775, to July the 1st, 1776, there were 100 cargoes of wheat and barley, about 50 tons each on an average, to Liverpool, Whitehaven, Lisbon, &c. and to Dublin. Two-thirds to Dublin, and one-third foreign, which export received the bounty. The export both foreign and coasting, in 1774, nearly the same as 1775. In 1773 about 75 cargoes: in 1772, 60 to 70. The trade in general of Strangford, export, import, ships and seamen, has been in general increasing for 10 years last past; but the year ending the 25th of last March higher than ever it was before, having every year been in a regular gradation. The decline of 1772 and 1773, in the linen manufacture, &c. not felt in the trade of this place.

To the port of Strangford, which includes Downpatrick, Dundrum, Killilea, Killoch, Portaferry, Comber, and Newtown, there belong 30 vessels, from 35 to 150 tons burthen, besides fishing vessels, of which 27 sail received the bounty in 1775: the same number in 1774, in 1772 twenty-three. The burthen of the vessels in 1775 from 28 to 75 tons, and the bounty about 700l. All up the channel, to Strangford and Killilea, and into the Loch, there is 30 feet water, and on the bar there is as much in the lowest springs. A ship of 100 guns might lie within 15 yards of the shore.

Called

Called at Lord Bangor's at Castle Ward, to deliver a letter of recommendation, but unfortunately he was on a sailing party to England; walked through the woods, &c. The house was built by the present Lord. It is a very handsome edifice with two principal fronts, but not of the same architecture, for the one is Gothic, and the other Grecian. From the temple is a fine wooded scene; you look down on a glen of wood, with a winding hill quite covered with it, and which breaks the view of a large bay: over it, appears the peninsula of Strangford, which consists of inclosures and wood. To the right, the bay is bounded by a fine grove, which projects into it. A ship at anchor added much. The house well situated above several rising woods, the whole scene a fine one. I remarked in Lord Bangor's domains, a fine field of turnips, but *unbred*. There were some cabbages also.

I took the road to Downpatrick, through a various country; Down Bay is on the left, and exhibits an amazing variety of islands, creeks, and bays, which appear among cultivated hills in a most picturesque manner. Here I saw sheep grazing in a ditch, confined by a line fastened by two pins, and drove into the ground, and passing through rings which hung from a strap round their necks, so that they could move only from one end to the other.

To

To Redemon, the seat of Arthur Johnston, Esq; got there late in the evening, but being absent, I desired the servants to give me a bed, dreading being caught again at a village cabin.

July 31st, to Saintfield. Rents are 10s. 6d. an acre. Several bogs here; one in particular half cultivated, the rest unimproved; fine oats, potatoes, and barley, were on it. One piece of oats shoots directly into the uncultivated part, and shews plainly what might be done with all the bogs of this country.

Reached Belfast in the forenoon, and was then fortunate enough to meet with Mr. Holmes, also a letter from Doctor Haliday, who being absent himself recommended me to several other gentlemen. Gained upon the whole the information I wished; it consisted of the following particulars.

The imports of Belfast consist in rum, brandy, geneva, and wines. Till within these two years much grain, since that none, but have on the contrary exported some. Coals from Britain. Iron, timber, hemp, and ashes, from the Baltic. Barilla from Spain for the bleach greens. Tea, raw sugars, hops, and porter the principal articles from Great Britain. From North America, wheat, slaves, flour, and flaxseed, all which cut off at present. The exports are beef, butter, pork, to the West-Indies, and France. The great article linen cloth

cloth to London; formerly some to America. The balance much in favour of the place. Derry, Newry, and Belfast. the linen export towns; two thirds from Belfast, a little from Derry, the rest from Newry. There are three sugar houses here. The number of ships belonging to Belfast about 50 sail from 20 to 300 tons. A vessel of 200 tons, half loaded, may come to the Quay, there being 9 and a half to 10 feet water; larger vessels lay 2 miles and a half down. The trade of Belfast was at its height in 1770; 1771, 1772, and 1773, were the worst years; 1774, and 1775 it has been mending; but 1774, and 1775 not equal to 1770, and 1771, by one third. It is curious to see from hence how the trade of this place has vibrated with the linen manufacture, that being just the account I have received of the progress of that fabrick. Calculated that the trade of Belfast in general increased one third in fifteen years, ending in 1770, or 1771. The number of people supposed to amount to from 12 to 15,000. Belfast being the place from whence the emigrations were the greatest, I made many enquiries concerning them, and found that they have for many years had a regular emigration of about 2000 annually, but in 1772 the decline of the linen manufacture increased the number; and the same cause continuing in 1773 they were at the highest, when 4000 went. In 1774 there were but few; and in 1775 there were none, nor any since. Some that went had property, and so had some of those that always went. In general

neral they were the most idle and worthless, and not reckoned any loss to the country. In 1771 there were 300 looms in Belfast, but in 1774 there were only 180.

There is a considerable slaughter at this place. In 1775 cured 6000 barrels of beef, at 40s. a barrel, in the town; and 5,500 of pork at 50s. The principal part of the grazing land the lower part of Antrim from Ballymena towards Larne, and Ballymony; some from Meath and even from Sligo. The hogs from Armagh, Down, and Antrim, weigh on an average 2 cwt. fattened mostly on potatoes; 6 or 7 years ago they exported 500 barrels of pork. In 1775, 7000. In 1776, it will be 10,000. When oatmeal above 1d. or 1½d. a pound, the poor live entirely upon potatoes and milk; no meat; but herrings in the season. Price of provisions, &c. at Belfast are; potatoes 9d. a bushel, pigeons 6d. a couple, rabbits ditto, salmon 2d. a pound, lobsters 6d. plaice three farthings per lb. oysters 1s. to 4s. per hundred, fresh cod 1d. per lb. barnacle 1s. widgeon 1s. a pair, oatmeal three farthings per lb. lime 1s. per barrel, coals 13s. a ton. Labour the year round 1s. 1s. in the town, 8d. in the country. Seamen 30s. a month, and ship provisions. Spinners earn 3d. a day. Weavers 1s. 1d. they never go for labourers.

Gross custom including excise upon tobacco and foreign spirits.

1763	-	-	£. 32,900
1764	-	-	35,700
1765	-	-	49,600
1766	-	-	53,600
1767	-	-	50,800
1768	-	-	56,200
1769	-	-	51,500
1770	-	-	63,600
1771	-	-	62,100
1772	-	-	58,700
1773	-	-	59,900
1774	-	-	60,100
1775	-	-	64,800

In the year ending the 25th of March 1774, pieces of linen exported 147,218; yards 3,713,822.

	Pieces.
From 1st Nov. 1771, to 1st May, 1772	85,402
Next half year	91,712
	<hr/>
	177,114
	<hr/>
First half year	95,228
Second ditto	87,089
	<hr/>
Total	183,017
	<hr/>

Belfast is a very well built town of brick, they having no stone quarry in the neighbourhood. The streets are broad and strait, and

and the inhabitants, amounting to about 15,000, make it appear lively and busy. The public buildings are not numerous or very striking, but over the exchange Lord Donnegal is building an assembly room, 60 feet long, by 30 broad, and 24 high; a very elegant room. A card room adjoining, 30 by 22, and 22 high; and a tea room of the same size. His Lordship is also building a new church, which is one of the lightest and most pleasing I have any where seen: it is 74 by 54, and 30 high to the cornice; the isles separated by a double row of columns; nothing can be lighter or more pleasing. The town belongs entirely to his Lordship. Rent of it 2000l. a year. His estate extends from Drumbridge, near Lisburn, to Larne, 20 miles in a right line, and is 10 broad. His royalties are great, containing the whole of Loch Neagh, which is I suppose the greatest of any subject in Europe. His eel fishery at Tome, and Port-New, on the river Ban, lets for 500l. a year; and all the fisheries are his to the leap at Colraine. The estate is supposed to be 31,000l. a year, the greatest at present in Ireland. Innishoen, in Donnegal, is his, and is 11,000l. of it. In Antrim, Lord Antrim's is the most extensive property, being 4 baronies, and 173,000 acres. The rent 8000l. a year, but relet for 64,000l. a year, by tenants that have perpetuities, perhaps the cruelest instance in the world of carelessness for the interests of posterity. The present Lord's father granted those leases.

Mr.

Mr. Portis of Belfast, last year sowed 3 acres 2 roods of flax; let it stand till quite ripe, then stacked it like corn, and threshed it in March; produce of seed 8 hogheads, which sold at 4l. 4s. or 33l. 12s. He watered it then, and went through the whole operation as common. By being kept so long, he found it required less watering than in the common way. This is not the usual method of doing it.

DR.		CR.
3 A. 2 R. at 15s. per acre -	2 12 6	By 8 hogheads of clear seed sold at 4l. 4s. per hoghead
Ploughing with 2 horses, plowman and boy, at 4s. 2d. per day, 4 days -	0 16 8	33 12 0
Harrowing - and sowing, 5s. 4d. and cleaning the furrows, 4s.	0 9 8	By 896lb. clean flax sold at 6d. a lb. -
One hoghead of feed - -	4 0 0	22 8 0
Reaping -	1 6 0	Would have sold for 7d. if it had been judiciously ma- naged, by suffering it to lay a day or two longer in the water, which would have made the flax finer.
Stacking, thatch- ing and bringing home -	0 15 0	
Expenses of water- ing, drying, tak- ing to the mill, and cleaning, at 2d. per lb. 896lb. a large allow- ance -	7 9 4	
Net profit	£. 17 9 2 - 38 10 10	
	£. 56 0 0	£. 56 0 0

Note,

Note, The ground was rather inclined to clay, was ploughed from lay, but received no manure for two years; ploughed about Christmas, furrowed and sowed the latter end of March, but covered with a shovel from the furrows, from an inch to an inch and an half thick.

Some of the expenses of an acre of common flax near Belfast.

Rent	-	-	-	£. 1 0 0
Tythe by modus	-	-	-	0 1 0
Seed, hoghead, or 7 bushels, at 8s.	-			2 16 0
Sowing	-	-	-	0 0 6
Ploughing and harrowing	-	-	-	0 8 8
Stones and clods	-	-	-	0 2 2
Weeding, 8 women 1 day	-	-	-	0 4 4
Pulling 20 women	-	-	-	0 10 10
Watering	-	-	-	0 3 3
Taking out and grafs-carrying, drying and beetling	1	1	0	1 1 0
Scutching all at mills 1s. 4d. a stone.				<hr/>
Hackling, 1s. 4d. ditto.				6 7 9
				<hr/>

I was informed that Mr. Isaac, near Belfast, had 4 acres, Irish measure, of strong clay land not broken up for many years, which being amply manured with lime rubbish, and sea shells, and fallowed, was sown with wheat, and yielded 87l. 9s. at 9s. to 12s. per cwt. Also that

itself. In the progress of the heaps, spread bog earth on some of the layers, to make it burn quicker, but it will do without. The following paper contains the directions by which Mr. Lesly performed the work.

“ A C L A Y K I L N .

This kiln (*See the annexed plate*) is 20 feet by 12, but it may be made longer or shorter, according to the quantity you want; it may also be of any breadth that will allow men from each side to throw clay to the middle. A. A. are the air-pipes in the middle between the sod walls made, either by cutting a little trench in the ground six inches deep, and so many broad, covering them with flat stones, slates or bricks, or by stones laid on the ground at the same distance, and covered in the above manner; the use of these being to give air to the fire, and make it burn better. The end must be brought a foot on each side without the sod walls, and carefully kept from being choaked up with the ashes or rubbish. B. B. are the sod walls, about 10 or 12 inches thick; they must be 3 feet distance from each other; the use of them is to keep fuel and clay tight, and confine the heat. Raise all the sod walls two feet and an half high, except the sides next the wind, fill the spaces between the walls with turf, furze, wood, or any manner of firing, and thereon lay dry clay 6 or 8 inches thick, very close and even, set fire to it on the windward side, and then build up that

side also to the level of the other sod walls; when the clay begins to look red, throw on more by degrees; the greatest difficulty is to get the first clay well on fire, when that is accomplished after the first day, it wants no other attendance than to throw on some fresh clay morning and evening, and it will continue burning as long as you please, till you can throw the clay no higher. The clay may be used just as it is dug out of the pit. The sod walls on the ends and sides must from time to time be raised as high as the clay to keep in the heat; if the fire be too weak, it may be helped by giving it vent by a poker from the top, or if it goes out, it may be renewed by putting in some fresh fuel and clay. When you fail to supply it with fresh clay, the fire will go out; the clay will then appear like the rubbish of a brick-kiln. Lay the same quantity of it on your land that you would of dung; but as poor and light land requires more than strong ground, experience must determine the exact quantity. The frost and rain will dissolve all the large lumps. It will exceedingly enrich your land either for corn, flax, or grass; it kills all sprats, (*juncus*) and produces a fine sweet herbage, that lasts many years. Choose the place for your kiln, where the clay is thick and most convenient for carriage to your fields that want manure; it will be well worth your pains to burn any clay or earth in this manner (sand and gravel only excepted); it is a very cheap manure, and hardly inferior to
the

the marle, shells, lime, sand or sea weed, that have enriched all the farmers of this kingdom, who have had sense and industry enough to make use of them. The best kiln 16 feet wide.”

Mr. Lesly practised the drill husbandry several years, in consequence of the recommendations of Mr. Wynn Baker. He bought of him a complete set of tools for the purpose, a drill plough, horse-hoes, &c. and spared neither attention or expense to give it a fair trial, but found that it would not answer at all, and then gave it up. Lucerne by transplantation he also tried, following Mr. Baker's instructions exactly; but that did no better than the other, and he ploughed it up.

In cattle, Mr. Lesly has been equally attentive; he procured one of Mr. Bakewell's bulls two years ago, and has bred many calves by him, but they are not yet of an age to judge of the merit of the breed: the bull is a very fine one. In draining he has made considerable exertions, principally by hollow ones. Mr. Lesly's granary is one of the best contrived I have seen in Ireland; it is raised over the threshing floor of his barn, and the floor of it is a hair-cloth for the air to pass through the heap, which is a good contrivance. The whole building is well executed and very convenient, and contains two large bullock sheds.

The common husbandry around Lesly Hill is like that of the rest of the manufacturing part of Ireland. The country is in very small divisions, of from 5 to 30 acres, and the rent upon an average 12s. Rent of the whole county not 5s. Londonderry not so much.

1. Potatoes.
2. Flax.
3. Oats.
4. Oats.
5. Weeds for 2 years, called a lay.

1. Potatoes.
2. Barley.
3. Oats.
4. Oats.
5. Weeds for 2 years.

An acre of potatoes.

Rent	-	-	-	-	1	12	0
Three bolls feed, 30s.	-	-	-	-	1	10	0
Dung, 160 loads, at 3d.	-	-	-	-	2	0	0
Spreading, planting, and trenching	-	-	-	-	1	5	0
No weeding because lay ground.							
Taking up, &c.	-	-	-	-	2	0	0
					<hr/>		
					£.	7	7
						<hr/>	

PRODUCE.

P R O D U C E.

320 Bushels at 1s.	-	-	-	16	0	0
Expenses	-	-	-	7	7	0
				<hr/>		
Profit	-	-	-	£.	8	13 0
				<hr/>		

Prime cost 5½d. per bushel.

A man, his wife and 4 children, will eat 4 bushels a week. If they live upon oatmeal, they will eat 40lb. or 2 bushels of oats. Average price of oatmeal 2s. 2d. a score pounds. Of barley sow 3 bushels and get 70. Of oats they sow 7 bushels and get 40 the first crop, and 30 the second, and if they run a third crop, not more than 20. A little lime used.

Expense of an acre of flax.

Rent 3s. for 10 perches twice ploughed and harrowed	-	-	-	2	12	0
Tythe	-	-	-	0	8	0
4 Bushels of seed	-	-	-	2	0	0
Taking off stones and clods	-	-	-	0	2	8
Weeding	-	-	-	0	8	0
Pulling	-	-	-	0	4	0
Laying in water	-	-	-	0	2	8
Taking out and grafting	-	-	-	0	8	0
Lifting and drying with fire	-	-	-	0	16	4
Beetling and scutching, 16 stone, at 1s. 4d.				1	1	0
Hackling ditto	-	-	-	1	1	0
				<hr/>		
				£.	9	3 8
				<hr/>		

The

The stone of flax will, after hackling, be 5lb. and 3lb. of tow.

Flax per acre, 80lb. at 1s. 1d.	-	-	-	4 6 8
48 Pound of tow, 6d.	-	-	-	1 4 0
				5 10 8
Expenses	-	-	-	9 3 8
Produce	-	-	-	5 10 8
				3 13 0

This account surprized me so much, that I repeated the enquiry, and had it confirmed. The flax is, however, generally sown on their own land, and in that case only the common rent to be reckoned. The 5lb. of flax will spin into 9 hank yarn 45 hanks, and a woman will spin 4 a week, the price for spinning 6d. a hank. If they are hired, they are paid 3l. a year and board. Of these 9 hank yarn, the cloth made takes 50 hanks to a web of 25 yards, but they make double webs generally of twice that length: of 7 hank yarn a web of 48 yards, 32 inch wide, will take 88 hanks; a man weaves it in 15 days, is paid 25s. and sells it for 3s. a yard green. The tow is spun into 2 hank yarn, and wove into coarse cloth.

The food of the poor people is potatoes, oatmeal, and milk. They generally keep cows; some of them will have a quarter or a side of beef in winter, but not all. Upon the whole, they are in general much better off than they were 20 years ago, and dress remarkably well. The manufacture is at present very flourishing. When the price of cloth is low or bad, numbers of weavers turn labourers.

The emigrations were considerable in 1772 and 1773, and carried off a good deal of money, but it was chiefly of dissolute and idle people: they were not missed at all. There is some land yet in the rundale way, but 20 years ago much more; also change-dale, which is every man changing his land every year.

Rents have fallen, in 4 years, 3s. an acre, and are but just beginning to get up again. Land sells at 21 years purchase. Labour has risen, in 20 years, from 5d. to 9d. No rise in the price of provisions in 20 years, or very little. The religion ten to one Presbyterians.

August 4th, accompanied Mr. Lesly to his brother's at —————, within 3 miles of the Giant's Causeway, where I had the pleasure of learning several particulars concerning the country upon the coast. They measure by the Cunningham-acre, and rents are

are on an average 12s. Along the coast there is a tract of clay at from 14s. to 20s. The courses of crops;

1. Potatoes.

2. Barley.

3. Oats.

4. Oats.

1. Potatoes.

2. Barley.

3. Flax.

4. Oats.

5. Oats, and then lay out for 2 years.

Much of the country is in the rundale and likewise in the change-dale system. The little farmers are all weavers, who weave 10 or 1200 linen, and spin great quantities of yarn for the Derry market. Oatmeal and potatoes are the general food of the lower people, who reckon that one barrel of potatoes, to live on, is equal to 2 bushels of meal. One barrel will last a family of six eight days, and costs on an average 3s. 6d. or 4s. Oatmeal 1s. 2d. to 3s. 6d. the 20lb. but 1½d. per lb. on an average. One bushel of oats yields 18lb. of meal. The oats are dried at home with turf on kilns, which cost
from

from 3l. to 5l. they are then sent to a mill to be shelled, in which operation they lose half; after which they are ground; the landlord appoints the mill, and they pay 22d. for it.

The average crop of potatoes is 300 bushels on the Cunningham acre, which is 259 to the English. The account they state thus:

Rent	-	-	-	0	15	0
County cess	-	-	-	0	0	6
Seed, 30 bushels, at 1s.	-	-	-	1	10	0
300 Load of dung, at 2d.	-	-	-	2	10	0
Putting in 40 men a day, at 6d.	-	-	-	1	0	0
Weeding	-	-	-	0	10	0
Digging, &c. &c.	-	-	-	2	0	0
				<hr/>		
				£.	8	5
				<hr/>		
					6	

P R O D U C E.

300 Bushels, at 1s.	-	-	15	0	0
Expenses	-	-	8	5	6
			<hr/>		
Profit	-	-	£.	6	14
				6	

Prime cost, per bushel, 6¼d.

They

They are, however, sometimes so low that, instead of profit, the account is a losing one; last year they were 4d. a bushel, and in Coleraine 3d. Oats are now 1s. a bushel; several thousand bushels have been exported from Coleraine to London at that price.

There is a considerable salmon fishery on the coast; the fish are cured in puncheons with common salt, and then in tierces of 42 gallons each, 6 of which make a ton; and it sells at present at 17l. a ton, but never before more than 16l. average for 10 years 14l. This rise of price is attributed to the American supply of the Mediterranean with fish being cut off.

Rode from Mr. Lefly's to view the Giant's Causeway. It is certainly a very great curiosity, as an object for speculation, upon the manner of its formation; whether it owes its origin to fire, and is a species of lava, or to chrysalization, or to whatever cause, is a point that has employed the attention of men much more able to decide upon it than I am; and has been so often treated, that nothing I could say could be new. When two bits of these basaltes are rubbed together quick, they emit a considerable scent like burnt leather. The scenery of the Causeway, nor of the adjacent mountains, is very magnificent, though the cliffs are bold; but for a considerable distance there is a strong disposition
in

in the rocks to run into pentagonal cylinders, and even at Bridge, by Mr. Lesly's, is a rock in which the same disposition is plainly visible. I believe the Causeway would have struck me more if I had not seen the prints of Staffa.

Returned to Lesly Hill; and August 5th, departed for Coleraine. There the right hon. Mr. Jackson assisted me with the greatest politeness in procuring the intelligence I wished about the salmon fishery, which is the greatest in the kingdom, and viewed both fisheries above and below the town, very pleasantly situated on the river Ban. The salmon spawn in all the rivers that run into the Ban about the beginning of August, and as soon as they have done, swim to the sea, where they stay till January, when they begin to return to the fresh water, and continue doing it till August, in which voyage they are taken; the nets are set the middle of January, but by act of parliament no nets nor weirs can be kept down after the 12th of August. All the fisheries on the river Ban let at 6000l. a year. From the sea to the rock above Coleraine, where the weirs are built, belongs to the London companies; the greatest part of the rest to Lord Donnegal. The eel fisheries let at 1000l. a year, and the salmon fisheries at Coleraine, 1000l. The eels make periodical voyages, as the salmon, but instead of spawning in the fresh water, they go to the sea to spawn,

and

and the young fry return against the stream; to enable them to do which with greater ease at the leap, straw ropes are hung in the water for them; when they return to sea, they are taken: many of them weigh 9 or 10lb. The young salmon are called *grawls*, and grow at a rate which I should suppose scarce any fish commonly known equals; for within the year some of them will come to 16 and 18lb. but in general 10 or 12lb. such as escape the first year's fishery are *salmon*; and at 2 years old will generally weigh 20 to 25lb. This year's fishery has proved the greatest that ever was known, and they had the largest hawl, taking 1452 salmon at one drag of one net. In the year 1758, they had 882, which was the next greatest hawl. I had the pleasure of seeing 370 drawn in at once. They have this year taken 400 ton of fish; 200 fold fresh at 1d. and 1½d. a lb. and 200 salted, at 18l. and 20l. per ton, which are sent to London, Spain, and Italy. The fishery employs 80 men, and the expenses in general calculated to equal the rent.

The linen manufacture is very general about Coleraine, coarse ten hundred linen. It is carried to Dublin in cars 110 miles, at 5s. per cwt. in summer, and 7s. 6d. in winter.

Rents in Derry 10s. 6d. the Irish acre; and farms from 6 to 15 acres. The emigrations from this neighbourhood were in general of
idle,

idle, loose, disorderly people. It is at present, I was informed, too populous; and if the emigrations are not renewed, the ill effects will be severely felt. The whole county of Derry belongs to the London companies and the Bishop, except some trifling properties. There is a little trade at Coleraine in hides, butter, and fish, some meal is imported, which sounds strange after hearing that so many oats had been exported.

Mr. Jackson has made great improvements to his house, which is situated in a very pretty domain of 85 acres on the banks of the river, and all the timber he has used is out of his bog; he gets very large oak and fir trees: they are found 20 feet deep, and all lie exactly east and west.

August 6th, to Newtown-Limmavaddy; went by Magilligan, for the sake of seeing the new house building on the sea coast, by the bishop of Derry, which will be a large and convenient edifice, the shell not finished; it stands on a bold shore, but in a country where a tree is a rarity.

At Magilligan is a rabbit warren, which yield on an average 3000 dozen per ann. last year 4000 and 5000 have been known. The bodies are sold at 2d. a couple; but the skins are sent to Dublin at 5s. 7d. to 6s. a dozen, selling from 1500l. to 1800l. a year. The
warren

222* NEWTOWN-LIMMAVADDY.

warren is a sandy tract on the shore, and belongs to the bishop. I was informed, that at Hornhead in Donnegal, Mr. Stewart has a warren of sand 25 miles long. Mr. Smith of Newtown-Limmavaddy gave me the following particulars of that neighbourhood. Farms rise so high as 60 to 70 acres, and a few to 200, in general about 40 acres; many weavers patches at 3 or 4, but the farmers themselves have yarn spun in their houses, which they give to the weavers to make into cloth: the farmer himself attending to nothing but the management of his land. This appears to me a sign that I shall soon quit the linen country; for these are more of farmers than any set I have met with for some time. Rents for a few miles about the town, not including the town parks nor mountain, are at 5s. the parks 30s. the mountains are in great quantities, more than of cultivated land; and all they do is to raise some young cattle upon them and feed some sheep. The 5s. are old rents, but new are 10s. which is the general average, Cunningham measure: of the whole county on an average not more than 4s. including bog and mountain.

1. Potatoes, value on an average 10l.
2. Barley, 3 bolls, at 12 bushels.
3. Oats, worth 50s.

4. Oats.

NEWTOWN-LIMMAVADDY. *223

4. Oats.
5. Flax.
6. Lay 2 or 3 years, some sow grasses, clover, &c.
7. Oats.
8. Oats.

Manures are shells from the Loch shore and lime; lay 60 barrels of shells per acre, at 1s. a barrel on the land, will last from 5 to 7 years; the effect very great. Prefer it to lime for light land; but for deep clay ground lime best: of which 100 barrels, at 1s. More shells used than lime. Mountains beginning to be improved; they pay up to 1s. 6d. an acre; lime at 120 barrels an acre; sow oats in succession; as long as the land will bear them, get pretty good crops, but late: the soil is very wet, but they drain it with ditches.

The linen manufacture is from 10 hundred to 16. They raise their own flax; the crops 28 stone per acre; after scutching worth 5s. 4d. a stone.

Rent

224 NEW TOWN-LIMMAVADDY.

Rent of an acre twice ploughed and harrowed	2	12	0
Seed, 4 bushels, at 12s.	-	-	2 8 0
Clods and stones	-	-	0 2 0
Weeding	-	-	0 2 0
Pulling, 10 women, at 8d.	-	-	0 6 8
Carrying to water	-	-	0 5 0
Taking out and grassing	-	-	0 5 0
Lifting and carrying	-	-	0 4 0
Drying 10 kishes turf, 10s. labour 2s.	-	-	0 12 0
Beetling at home 16 women, at 8d.	-	-	0 10 8
Scutching 1s. 4d. a stone	-	-	1 15 4
Hackling 8d. ditto	-	-	0 17 8
			<hr/>
	£.	10	0 4
			<hr/>

The yarn from two to ten hanks a lb. generally four; spin a hank a day: are hired for it at 3l. 3s. a year; if done in the cabin, are paid from 4d. to 4½d. a hank. The poor live on potatoes, milk, and oatmeal, with many herrings and salmon; very little flesh. In ten or fifteen years, their circumstances are improved; they live and dress better, and have better cabins.

The

The emigrations were very great from hence of both idle and industrious, and carried large sums with them. Not too populous at present. They have a great spirit of dividing their farms, however small, from which many inconveniencies arise; the farmers will do the same with their farms. Rents have fallen, in 5 years, 3s. 6d. in the pound, and are still rather upon the decline. The manufacture flourishes most when oatmeal is not lower than 1d. a lb. A bushel of potatoes is reckoned equal to 20lb. of oatmeal.

From Limmavaddy to Derry there is very little uncultivated land. Within 4 miles of the latter, rents are from 12s. to 20s. mountains paid for but in the gross. Reached Derry at night, and waited two hours in the dark before the ferry-boat came over for me.

August 7th, in the morning went to the Bishop's palace to leave my letters of recommendation; for I was informed of my misfortune in his being out of the kingdom. He was upon a voyage to Staffa, and had sent home some of the stones of which it consists; they appeared perfectly to resemble in shape, colour, and smell, those of the Giant's Causeway. I felt at once the extent of my loss in the absence of his lordship, who I had been repeatedly told was one of the men in all Ireland the most able to give me a variety of useful information, with at the same time the most liberal spirit of communication.

Waited on Mr. Robert Alexander, one of the principal merchants of Derry, who very obligingly took every means of procuring me such information as I wanted; rode with me to Loch Swilly for viewing the scene of the herring fishery, and, assisted by the Rev. Mr. Barnard, gave me the following particulars concerning it.

In the barony of Innishoen, the courses are,
 1. Barley 8 barrels; 2. oats 10; 3. oats 6;
 4. lay for 3 years.

1. Oats; 2. oats; 3. oats; 4 lay 3 years.

1. Potatoes on lay; 2. barley; 3. oats 10 barrels; 4. oats 6; 5. oats 5; 6. lay 3 years.

1. Potatoes 10l. 2. barley; 3. oats; 4. oats;
 5. flax 4 Cwt.

Barley the principal crop, and generally worth 5l. to 6l. Rent of the whole peninsula to lord Donnegal 11,000l. and to the occupying tenant 22,000l. The measure is the plantation acre. The bottoms of Innishoen 20s. an acre: the whole county of Donnegal not 1s. The linen is getting in but very slowly, but spinning very general, and the best yarn in all the north: they spin all their own flax, and generally into 3 hank yarn; which all goes to Derry, and from thence to Manchester. The spinners spin a hank a day: a pound of flax worth 6d. spins into 3 hanks, which sell at
 present

present at 1s. 9d. which is 5d. a day earning, but in common only 4d. Flax yields per acre scutched $3\frac{1}{2}$ Cwt. at $6\frac{1}{2}$ d. per pound. sells on foot at 6l. to 8l. expenses per acre, scutching included, 5l. 14s.

The isle of Inch belongs to Lord Donnegal; 300l. rent, and 6000l. fine, and the occupying tenants pay 1,100l. a year, there are 2000 acres. The size of farms in Innishoen are from 10 to 20 acres, with a run on the mountains for cattle. They have lime stone in many parts of the country, shells in great plenty in the lochs, which sell at 3d. a barrel for burning into lime; other rotten shells in whole banks for manure, which they use much, laying 40 barrels per acre. The soil a flaty gravel mixed with clay, with springs: the effect of the shells not great, except upon mountain land drained, where they throw up white clover. There is a fall in the rent of lands in 4 or 5 years. Religion generally roman catholic. Sea weed much used for potatoes; and excellent for garden cabbages.

Rowed from Fawn to Inch Island across the loch, the scenery amazingly fine, the lands every where high and bold, with one of the noblest outlines any where to be seen. Inch is a prodigiously fine extensive island, all high lands, with cultivation spreading over it, little clusters of cabins with groups of wood: the water of a great depth: and a safe harbour for any number of ships: here is the great resort

of vessels for the herring fishery ; it begins the middle of October, and ends about Christmas ; it has been 5 years rising to what it is at present ; last year 500 boats were employed in it : the farmers and coast inhabitants build and send them out, and either fish on their own account, or let them ; but the latter most common. Five men take a boat, each man half a share, each net half and the boat a whole one. A boat costs 10*l.* on an average, each has 6 stand of nets at 2*l.* In a middling year each boat will take 6000 herrings a night, during the season, 6 times a week, the price on an average 4*s.* 2*d.* a 1000 from the water, home consumption takes the most, and the shipping which lies here for the purpose the rest.

The ships on the station for buying are from 20 to 100 tons, and have the bounty of 20*s.* a ton.

By the act they are to be built since the year 1776, each has one or two boats for fishing ; also for the first 20 tons they must have 8 men, and 2 to every 8 ton above 20. The merchants who have the ships, both buy of the country boats and fish themselves : they both cure for barrel and in bulk that is salted in the hold of a ship ; a ton of salt will cure 10,000 herrings, 500 herrings in a barrel of those of Loch-swilly, but 800 at Killybegs. They made their own barrels of American staves, but now of fir ; 1000 staves, Philadelphia, will

will make 8 ton or 64 barrels, and the price 6l. the 1000, making 11d. each barrel, 20 hoops to the barrel, at 6d.

500 boats, last year, at 5 men	£. 2,500
Men on shore salting - -	300
In gutting a little boy, 10 or 12 years old,	
at a halfpenny a 100, will earn 10d. a day.	
60 ships, at 10 men - - -	600

Twine of a 40s. stand of nets, 20s. therefore 20s. for labour; 27lb. of flax, spun into 16 or 18 lb. of twine, make a stand.

Mr. Alexander began the fishery in 1773, when he employed two floops only, each of 40 tons. In 1774, he employed the two floops and a brig of 100 tons, the latter of which he sent to Antigua with 650 barrels, besides what he sold at home, and loaded the floops in bulk for the coast trade. In 1775, he had the same brig and three floops, and loaded all four in bulk for the coast trade; one of which on her voyage was put ashore at Black Sod, in the county of Mayo; and though the floop was not the least injured, the country came down, obliged the crew to go on shore, threatening to murder them if they did not, and then not only robbed the vessel of her cargo, but of every portable material. The cargo was 40 ton, or 160,000 herrings. Besides what was sent coastwise this year, he exported on board his ship, the *Alexander*, 340 tons, not in the
herring

herring trade. 1750 barrels to the West-Indies. Here has been a vast encrease of the fishery in the hands of one person, which shews clearly what might be done if larger capitals were employed. Mr. Alexander was prevented last year from doing so much as he might have done, and what he did was at a very great expense for want of proper houses, which are not to be had on Loch Swilly; and in order to remedy this inconvenience, has this year, 1776. built on the point of Inch Island, called the Downing, a complete salting-house, consisting of a range of houses for all the operations, divided into four apartments, one of 20 feet by 18 a store-room for coarse salt, which will hold 150 to 200 tons; another of the same dimensions for fine salt; a third for receiving the herrings from the boats and gutting them, of the same size; and a fourth for a cooper's shop. These apartments all communicate with a second range, 80 by 18, which is filled with vessels for striking the herrings, that is, putting them for salt for 10 or 12 days; this communicates with a third house, 80 by 14, in which the herrings, being taken from the vessels above mentioned, are barrelled and finished off for the ships. Besides these there is a dwelling house for the clerks, &c. of 28 by 14. All these buildings are substantially erected of stone, and covered with slate. The finishing-house contains the boats when not in use, and above it is a light loft for the nets. Over the curing-house is a large loft for the empty barrels; and over the cooper's shop are
apartments

apartments for the workmen, and over the gutting-house is a hoop store. But the salt-houses are filled to the roof. All these buildings Mr. Alexander expects to finish completely for 500l. In 1775 there were about 1800 barrels exported besides Mr. Alexander's. There were that year fish enough in the Loch for all the boats of Europe. They swarmed so, that a boat which went out at 7 in the evening, returned at 11 full, and went out on a second trip. The fellows said it was difficult to row through them; and every winter the plenty has been great, only the weather not equally good for taking, which cannot go on in a stormy night. In the buildings above described Mr. Alexander will be able to save 100,000 herrings a day, which will take 10 tons of salt, 17 or 18 boats, and 90 men; 6 men to carry from boats to the gutting-house; 40 boys, women, and girls to gut; 4 to carry from gut-house to curing-house; 10 men first salting and packing; 8 men to draw from the vessels, and carry to the barreling-house; and 10 packing into barrels, which 10 packers will keep 5 coopers employed; 6 men more will be employed in ranging the barrels and pickling off; 8 men more carrying to the ship's boats. If 100,000 herrings come in regularly every day, this would be the course of the business. The buildings are in fact, a market to the country boats to resort to every day to sell their herrings, as far as the quantity above mentioned extends.

Calculation

*Calculation of the expenses of this business, sup-
posing 100,000 herrings cured every day.*

Buildings, 500l. interest of that sum, at 10
per cent. - - - - - 50 0 0

This high rate of interest is reckoned on
account of the precariousness of all herring-
fisheries, as they frequent and forsake seas
and bays; and if they were to quit Loch
Swilly, the buildings would be of little use
but to let for a trifle as cabbins.

18 Boats, at 10l. - - 180 0 0

90 stands of nets, at 40s. 180 0 0

£. 360 0 0

Interest, at 6 per cent. - - 21 12 0

Repairing the boats, 40s. each - - 36 0 0

Ditto nets, they last but two seasons 90 0 0

Wages of 90 fishermen, at 1s. 6d. a day,
8 weeks - - - 324 0 0

£. 521 12 0

N. B. At this expense of fishing, the
prime cost of the herrings, suppose 6000
taken by each boat a night, is 2s. per 1000 :
but it must be obvious that the boats cannot
always go out, neither will hired men fish
for their masters, as they will for themselves.
Hence the merchant may find it more advan-
tageous to buy at 4s. 2d. than to depend en-
tirely on his own boats,

Wages

	£. 521 12 0
Wages of 52 men, at 1s. 1d. a day, 8 weeks - - -	135 4 0
18 boats, 108,000 herrings a day, are 5,184,000; gutting at 5d. per 1000	108 0 0
Salt 10 tons per 100,000, or 518 tons, at 2l. 10s. for the curing house.	1295 0 0
Salt 246 tons, 17 cwt. at 2l. 10s. for the barreling house	617 2 6
9,874 Barrels, at 8 ton, or 64 barrels to the 1000 staves, will require 154,000 staves, at 7l. 1078 0 0	1078 0 0
164,000 hoops, at 30s. 246 0 0	246 0 0
Making 1s. 2d. per barrel 575 19 8	575 19 8
7 nails to every barrel, which is allowing one for accidents, 58,000, at 2s. 2d. - 6 5 8	6 5 8
Prime cost, 9s. 5d. a barrel.	1906 5 4
	4583 3 10
Freight of 9874 barrels to West Indies, at 3s. 4d. - - -	1645 13 4
Duty on export, with gaugers fees, 9d. a barrel - - -	370 5 6
	6599 2 8
Infurance and commission, 3 per cent. on that sum - - -	200 1 5
	6799 4 1
Interest on that sum 8 months, at 6 per cent - - -	274 15 2
	7073 19 3

The

The price in the West Indies rises from

20s. to 30s. sterling a barrel.

Average 25s.—9,874 barrels at that

rate	-	-	-	12342	10	0
Deduct expenses	-	-	-	7073	19	3
Profit	-	-	-	£. 5268	10	9

But as the herrings are not always to be taken in this manner, that is, 6000 a night by the merchants boats; it will be necessary to calculate the business in the more common way of carrying it on, by buying them of the country boats, at 4s. 2d. per 1000.

Interest as before	-	-	50	0	0
Purchase of 5,184,000, at 4s. 2d. per 1000	-	-	1080	0	0
Labour	-	-	135	4	0
Gutting	-	-	108	0	0
Salt	-	-	1912	2	6
Barrels	-	-	1976	5	4
Prime cost	-	-	£. 5261	11	10
Freight	-	-	1645	6	8
Duty	-	-	370	5	6
Insurance and commission	-	-	7277	4	0
			218	6	0
			£. 7495	10	0

Interest

	£. 7495 10 0
Interest on that sum, at 6 per cent. for 8 months - - -	299 17 2
	7795 7 2
Prime cost in West Indies 15s. 9 $\frac{1}{4}$ d. a barrel.	
Sell at - - -	12342 10 0
Expenses - - -	7795 7 2
	4547 2 10
4546, on the expenses of 7795, is 58 per cent.—bounty of 2s. a barrel	987 8 0
	£. 5534 10 10

Here appears a very noble profit; but fishing upon paper is an easier business than upon Loch Swilly; and it is necessary to observe, that the merchant who engages in this fishery, must provide, if he fishes himself, boats, nets, salt, barrels, and stores, all which must be ready, though not a herring should come into the Loch, or though storms prevent a boat going out. He must also have the sum ready in his counting-house for all the other expenses, in case the fishery proves successful, which upon the whole are circumstances that make great profits necessary, or the business would not be undertaken at all.

The investment of 8000*l.* in this fishery employs

	Men	Ships	Tons.
Fishermen - -	90	0	0
Gutters - -	40	0	0
Sundries - -	52	0	0
To bring the slaves, a ship of 200 tons, seamen -	16	1	200
764 tons of salt, 3 ships	50	3	764
9,874 barrels to the West In- dies, 1234 tons, 12 ships	120	12	1234
	<hr/> 368	<hr/> 16	<hr/> 2198

Besides boat-building, net making and coopers. And the 90 fishermen are a pure nursery of seamen; much of this great system of employment is in the depth of winter, when not demanded for other purposes.

August 8th, left Derry, and took the road by Raphoe, to the Rev. Mr. Golding's at Clonleigh, who favoured me with much valuable information. The view of Derry, at the distance of a mile or two, is the most picturesque of any place I have seen; it seems to be built on an island of bold land rising from the river, which spreads into a fine basin at the foot of the town; the adjacent country hilly, the scene wants nothing but wood to make it a perfect landscape. Passing Raphoe, found the husbandry in the neighbourhood of Clonleigh as follows. The soil is for the most part light loamy land, with single large stones, and very
wet

wet with springs, with considerable tracts of bog. Rents are from 15s. to 20s. the Cunningham acre, and some to 25s. and about towns some up to 30s. and 40s. Average rent of the whole county not more than 1s. Farms vary from 5 to 40 acres, in general 25 or 30, very many from 7 to 10. They are lessened by the farmers dividing them among their children. They generally sow flax, dress and spin it in their families. When cloth sells well, they get it wove by the weavers, who are also little farmers. At other times they sell the flax in yarn at market, many of them never having any woven at all. The spinners in a little farm are the daughters and a couple of maid servants, that are paid 30s. a half year, and the common bargain is, to do a hank a day of 3 or 4 hank yarn. Much more than half the flax of the country is worked into cloth; a great deal of flax is imported at Derry, this country not raising near enough for its own manufacture; their own is much the finest. Their tillage is exceeding bad, the land not half ploughed, and they like to have much grass among the corn for improving the fodder. Their course is;

1. Potatoes on 3 years lay. 2. Barley 10 barrels. 3. Oats 5 to 12 barrels. 4. Oats. 5. Oats. 6. Lay for weeds 3 years.

1. Potatoes. 2. Barley. 3. Oats. 4. Oats. 5. Flax 480 lb. clean scutched, or 30 stone.

They

They plant 14 meafures, each 2 bufhels of potatoe-feed an acre, the crop from 8 to 12 fcore meafures. The flax I faw was nothing but weeds and rubbifh of all kinds, yet the crop itfelf had an appearance of being good, as if the land was not to blame. As to manuring, they ufe very little more than the triffe they make in their ftable and cow-houfe. A few ufe lime, but not many; the price is 10d. to 13d. a barrel: a little woollen cloth weaved, but not near enough to cloath themfelves. They import a great deal from Galway. Land fells at 24 and 26 year's purchafe. Rents are very much raifed; but they are fallen within 4 or 5 years; in 40 years conjecture that they are doubled. Tythes are compounded. Oats pay 5s. Barley 7s. Potatoes, flax, and hay, 5s. In fome places potatoes free. Leafes ufually for 3 lives. Lord Abercorn only for twenty-one years and no lives, yet his eftate is well cultivated. The farmers generally re-let fome of their lands to cottars at a great increafe of rent. The poor people live upon oatmeal, milk, potatoes, and herrings; but the pooreft eat very little meat. A farmer of 10l. a year will have a good meal of beef or bacon every Sunday: in general they all live much better than they did formerly. I remarked that the labourers carried with them to their work an oat cake and a bottle of milk. All their milk is kept till fower, till which they do not make butter. Scarce any fuch thing as wheeled cars in the country, they are all fliding ones: a wheeled one 35s. a fliding one 2s. 6d.

2s. 6d. A plough 10s. 6d. A harrow of wood 1s. 1d. The fuel all turf, and much of it made by hand; a poor man's is 100 barrels a year, and will cost him 35s. The common people exceedingly addicted to thieving.

Building a cabin 5l. they are all of stone, which is plentiful: clay-mortar instead of lime. Almost all the farmers have a man-servant at 1l. 10s. to 2l. the half year entirely employed in the farm. A farmer of 10l. a year always one. Very little cloth made farther than Ballymaffey, but all over Donnegal much spinning.

The county of Tyrone is various; the finest parts are about Dungannon, Stewart's Town, &c. on Lake Neagh. From Strabane to Omagh much good; from Omagh to Ardmagh all cultivated. From Strabane to Dungannon almost all mountains: rent of the whole 4s. The bishop of Raphoe is a considerable farmer, and cultivates and hoes turnips. The dean has also done the same.

Mr. Golding has used much soapers waste, at 4d. a measure of two bushels, laid them on cold morassy soils, and found the benefit very great; it brought up quantities of red clover, and destroys moss effectually. Turnips would do excellently here, as beef rises from one-penny three farthings in November, to three-pence halfpenny and four pence in April. Mr. Golding has used Scotch cabbages for bullocks;
gene-

generally fats 2 beasts every year on them. Sows the seed early in August, and transplants them in April and May for succession; has had them in full perfection in February and March; has tried spring sowings, but they do not come to more than 5 or 6 lb. whereas the August sown plants rise to 35 lb. He has also fed sheep upon potatoes, buys them very forward in October, and puts them to his after grafs to keep their flesh, and in the severe weather gives them the potatoes with great success. He took the hint from seeing the sheep walk over the potatoe grounds, and scratching up the remaining roots in hard weather. The only evil resulting from the emigrations was, the money they carried away with them, which was considerable.

August 9th, to Convoy, where I was so unfortunate as to find Mr. Montgomery from home; passing on to Ballymaffey, I met that gentleman's oxen, drawing sledge cars of turf, single with collars, and worked to the full as well as the horses. They deserved wheels however. On the other side of Ballymaffey, it is curious to observe, how, as you advance towards the mountains, cultivation gradually declines, it is chequered with heath, till at last the heath is chequered with cultivation, spots of green, on the mountain sides, surrounded by the dreary wilderness; but there are no inclosures. The waste is exceedingly improvable, all the tract on the left before I came to the lake, and also beyond it, might easily be made excellent; it is bog, with a great fall every where,
extends

extends beyond the lake to the mountain foot, and is from 10 to 20 feet deep; rises in perfect hills, yet all bog. Lime is to be had here from 6d to 8d a barrel six miles off. I had two accounts, one of 6d, and the other of 8d, but clayey gravel is to be had every where on the spot. The road leads across the bog, and is made of it. I remarked in several places, little bogs, forming spots of moss growing on the water, and in some places rotting, with other plants growing out of that. Cars may go three or four times a day for lime, and bring three barrels at a time. I was the more attentive to this bog, because it appeared to me to be one of the most improveable I had seen, and the size of it makes it an object worth the attention of some spirited improver; it is not every where that so decisive a fall is met with for rendering the drains effective; the distance from lime is advantageous. Suppose a car, 1s. a day, and to bring eight barrels, carriage of it then is $1\frac{1}{2}$ d a barrel, and suppose the lime $7\frac{1}{2}$ d, in all 9d, 160, at that price, comes to 6 l. at which rate I am clear it would answer to lay any quantity on to such bogs as these. I had often heard of roads being made over such quaking bogs, that they move under a carriage, but could scarcely credit it; I was, however, convinced now, for in several places, every step the horse set, moved a full yard of the ground in perfect heaves. Got to a miserable cabin on the road, the widow Barclay's, which I had been assured was an exceeding good inn, but escaped without a cold, or the itch.

August 10th, got to Alexander Montgomery's, Esq; at Mount Charles, Lord Conyngham's agent, by breakfast; found he was so deeply engaged in the fisheries, on this coast, that I could not have got into better hands; with great civility he gave me every intelligence I wished; as an introduction to it, he took me a ride to the bays on the coast, where the fisheries are most carried on, particularly Inver bay, Macswine's bay, and Killibeg's bay. The coast is perfectly fawed by bays; the lands are high and bold, particularly about Killibegs, where the scenery is exceedingly romantic, and if the multiplicity of hills upon hills, and rocks, were planted, would be one of the most beautiful spots that can be imagined. The state of the fisheries may be judged from the number of boats employed in the several stations:

	1775.	1776.
Inver bay	52	72
Killibegs and Fintia	50	60
Tilin and Tawney	47	47
Bruckles	20	25
Boylagh and Rosses	50	50
Cloghanlee	18	18
Dunfanachly	20	25
Sheephaven	30	30
	<hr/>	<hr/>
	287	327
	<hr/>	<hr/>

For

MOUNT CHARLES. 243

For a comparison, I insert the following list of sea-faring men in Ireland, 1695.

	Seamen.	Fishermen.	Boatmen.	Total.	Papists.
Baltimore	9	188	84	281	268
Belfast and Carickfergus }	194	62	12	268	2
Coleraine	48	233	169	450	209
Cork	58	34	91	183	111
Donaghadee, } whereof } Masters, 35 }	283	28	2	313	0
Drogheda	22	56	0	78	61
Dublin	42	271	99	412	276
Dundalk and } Carlingford }	2	90	0	92	51
Galway	42	42	88	172	140
Killibegs	5	120	4	129	78
Kinfale	104	79	45	225	106
Limerick	13	0	137	150	132
Londonderry	56	46	22	124	36
Roffe	20	85	77	182	148
Sligo	11	68	8	87	60
Strangford	69	159	12	240	78
Tralee and Kerry	2	165	0	167	163
Waterford	36	83	50	169	143
Wexford	80	346	0	426	399
Wicklow	22	49	5	76	58
Youghall	40	114	46	200	135
Total	1158	2315	951	4424	2654

In Inverbay only of the above, there is a summer fishery for herrings, which begins the latter end of July, and ends the beginning of September. All the other places are winter fisheries, which begin in October, and end early in January, lasting eight weeks. Every boat costs 18l. to 20l. and has six shares of nets, at 3l. to 3l. 3s. each: the nets all made of hemp, from the Baltic, which cost, dressed, 8d. a pound, fit for spinning: 33 lb. of it in a share of nets: 4d. a pound paid for spinning it, or 11s. a share: weaving the nets 1d. a yard for one *fling*, or 63 meshes deep, 200 yards running measure, at that depth, in each share. Six hands in each boat, a skipper, and five men. In the common practice, a boat is divided into seven shares, the boat one; each net, half a one; and each man half: in which way they divide the produce, which vibrates between 10l. and 100l. average 35l. or per week 10s. a man. These boats belong, in general, to the common inhabitants of the country, farmers, &c. The other way of carrying the fishery on is, that those who have vessels on the bounty, fit them out at their own expense, and pay the skipper 1l. 11s. 6d. a month, and the common men 20s. a month; each a pair of trowsers, at 4s. 6d. feed them with as much potatoes, beef, and pork, as they will eat, and plenty of whiskey, which all together, comes to 20s. a month. The repairs of the boat and tackling are large, for all are built of fir, they come to 3l. per annum per boat, and the nets, Mr. Montgomery uses two seasons, and then sells

sells them for half price. In this manner of fishing, the boats catch each, on an average, 100,000 herrings, which is 1600 herrings a night, but the common boats of the country, not so well fitted up, take only 80,000. They are cured in bulk, that is packed into the holds of the vessels, from 20 to 100 tons each, and are sold all over the coast of Ireland. The quantity of salt necessary to the 80,000 herrings, which each boat catches, is 7 tons, at the price of 2l. 14s. a ton; this is the price, at which Mr. Montgomery sells, who has established considerable salt-works, making 450 tons annually, and has by this means reduced the salt, from 3l. 10s. to 5l. down to 2l. 14s. The vessels employed on this fishery, for the bounty, are from 30 to 100 tons. A vessel of 100 tons, carries in bulk, 500,000 herrings, or the produce of five boats; these calculations are in reference only to the average of nights and seasons; Mr Nesbit's vessel, of 60 tons, has been loaded by four boats, in three nights, and Mr. Montgomery has taken 100,000 in one night, with two nets, but these are extraordinary instances. The parliamentary bounty is 20s. a ton, but there must be four men for the first 20 tons, and one for every 8 tons over, the owners of the vessels employ no more boats, than to enable them, by the crews, to draw the bounty; and what these men are not able to get, they buy of the country boats, at an average of 5s. a 1000, which all are clear, answers much better than having boats of their own.

Account

Account of a vessel of 100 tons.

Building 2 boats, at 19l. £. 38 0 0

N. B. The vessel of 100 tons, will be navigated by 7 men, as there must be 14, by the act, to draw the bounty; 7 men must be supplied by boats, which may be called 2.

Nets - - - - - 38 0 0

The boats are 19 to 21 feet keel, 7 feet 4 broad, and 3 feet 4 in depth. The nets are 120 fathom long at the rope, and 7 feet deep. 76 0 0

Building, rigging, and fitting out a vessel of 100 tons, 700l.

Interest of that sum, at 6 per cent. 4 10 0

Repairing of two boats - - - 6 0 0

Ditto nets - - - - - 4 10 0

Wages of 12 men, at 20s. two months

£. 24 0 0

Board ditto - - - 24 0 0

Trowsers - - - 2 12 0

Skippers extra - - - 2 2 0 — 52 14 0

Purchase of 300,000 herrings, at 5s. 75 0 0

N. B. The two boats are supposed to catch, each 100,000, remain therefore for the cargo, 300,000

Forty tons of salt, at 54s. - 108 0 0

Packing, salting, &c. 4 men at 1s. a day, 48 days 9 12 2

If vessels are hired to carry them to markets 260 6 0

the price is 5d. a hundred for freight, or

4s. 2d. a 1000, and 104l. 3s. 2d. per

cargo for 100 tons 104 3 2

364 9 2
Insurance,

F I S H E R Y.

247

	£. 364 9 2
Insurance, $1\frac{1}{2}$ per cent, on 300l.	- 4 10 0
Supercargo - - -	- 20 0 0
	388 19 2
Interest on that sum for 6 months, at 6 per cent.	11 15 0
	400 14 2
At the ports they fell from 10s. to 35s. per 1000, on an average, at 23s. a 1000, 500,000 at that price - -	575 0 0
Expenses - - -	400 14 2
	174 5 10

And this account extends only six months from the first expenditure of the money, to the receipt from the cargo. If the vessel is the merchant's own, then the account will be as follows:

Expenses as above - -	£. 260 6 0
A vessel of 100 tons, 700l. Interest of which, at 6 per cent.	42 0 0
A year's pay of the captain, at 4l. a month	48 0 0
Six men, at 30s. -	99 0 0
Repairs and outfits, 10s. a ton	50 0 0
Stores for 7 men, at 15s. a month - -	63 0 0
	302 0 0
Per annum - - -	125 10 0
Which for five months	100 0 0
Deduct the bounty	100 0 0
Fees and charges 5 0 0 -	95 0 0
	30 10 0
Expenses - - -	290 16 0
	Insurance

	£. 290 16 0
Insurance cargo, 1½	
per cent.	4 10 0
Ditto on ship	10 10 0
	15 0 0
	305 16 0
Interest on that sum, for 6 months, at 6 per	
cent.	9 3 0
	314 19 0
Produce	575 0 0
Expenses	314 19 0
	260 1 0

Here appears to be a loss of 28 per cent. by accepting the bounty: but the explanation of this lies in the difficulty of being sure of a vessel on freight, this is not always certain, which induces them to build, though freighting those of other people is so evidently cheaper. Respecting the mode of taking the fish, the boats, as before mentioned, are provided with all the accoutrements necessary; and here it will be proper to mention an improvement of Mr. Montgomery's, by which he has saved greatly: in common the nets are tanned with bark, but he mixes tar and fish oil, 5 parts of tar, and one of oil, melted together, to incorporate thoroughly, and while quite hot, puts the nets into a tub, and pours it upon them, in quantity sufficient to wet them; draws it off by a hole at the bottom of the tub, immediately, in order that too much of it may not stick, and make them clammy, which would be
the

the case, if it cooled on them; at the bottom of the tub, should be an open false bottom, or the nets will stop the hole, and the mixture will not run off free enough. By means of this simple operation, the nets are prevented from rotting, and the fishermen are saved the trouble of ever spreading and drying them, which in common is done every day, and is a great slavery in the short days; the benefit has been found so great, that almost all the country has come into it, and every net on the coast would, this year, have been done, but the scarcity of the tar, owing to the American war, prevented it. In working the nets also, Mr. Montgomery has made improvements; he has found that corking the line under the strapped buoys is wrong, as it keeps it in an uneven direction; he has a vacancy of corks for three fathom on each side the buoy lines, but the middle spaces corked thick, which he finds to answer exceedingly well. He remarks that the fishery suffers very much, for want of an admiral being appointed, as in Scotland, to hear and determine differences; there is no order or regularity kept up, but much disturbance and loss for want of it. In the sale of the herrings, the merchant suffers greatly, by the competition of the Gottenburg and Scotch fishery. At Cork, great quantities of Gottenburg herrings are imported, which, though they pay a duty of 4s. a barrel, yet, as 2s. 4d. $\frac{1}{2}$ is drawn back on the re-exportation, and with an advantage of packing the herrings, of 20 Gottenburg barrels, into 25 Irish ones, and consequently having the drawback on 25, though the duty is only paid on 20,

with

with all these circumstances, great quantities of them are sent to the West Indies, to the prejudice of the Irish fishery. Another mischief is, that though there is a bounty of 2s. 4d. a barrel exported, yet such are the fees, and old duty, that the merchant receives only 11d. $\frac{1}{2}$ and that so clogged and perplexed with forms and delays, that not many attempt to claim it. The drawback on the foreign herrings is paid immediately on the merchant's oath, but the Irish bounty not till the ship returns, with I know not how many affidavits and certificates from consuls and merchants, it may be supposed perplexing when it is not claimed. The Scotch have a bounty per barrel, on exportation, which they draw on sending them to Ireland, by which means they are enabled, with the assistance of a higher bounty on their vessels, to undersell the Irish fishery in their own markets, while the Irish merchant is precluded from exporting to either Scotland or England; this is a very hard case, and certainly may be said to be one of the oppressions on the trade of Ireland, which a legislature, acting on liberal and enlarged principles, ought to repeal. The trade of smoking herrings, which is considerable in England, might be carried on here, to much greater advantage, if there was wood to do it with. In the Isle of Man they have smoak houses, supplied with wood from Wales; it is a strange neglect, that the landlords do not plant some of the monstrous wastes in this country with quick growing copse wood, which would, in five or six years, enable them to begin the trade. The
plenty

plenty of cod on this coast is very great, quite from Hornhead to Mount Charles, in winter, when the herrings set in, and may then be taken in any quantities. Some wherries come for cod, ling, glaffen, &c. all which are plentiful; but on the banks they are to be taken in summer, and in the winter they follow the herrings.

In all the bays on the coast, in March and April, there are many whales, the bone sort; they appear on the coast in February, and go off to the northward the beginning of May; sometimes they are in great plenty, and in November to February, there are many spermaceti whales; this is what induced Thomas Nesbit, Esq; of Kilmacredon, to enter into a scheme for establishing a fishery on the coast, and in executing it, was the inventor of the gun harpoon. Mr. Nesbit first used the gun harpoon, for killing whales, in the year 1759; he was induced to try this, from great difficulties he met with among the harpooners, who he had engaged for the fishery; in this year he began it, with firing lances at them, after they were struck by the hand, in order to kill them the sooner. From this he passed, in 1761, to firing the harpoon itself from the gun. He was then engaged with a company, for the purpose of carrying on the fishery, with several persons in Ireland, England, and the West-Indies. In the year 1758, he went to London, and bought a vessel of 140 tons, and engaged persons to come over as harpooners. In 1759, one whale was

was caught by the hand harpoon. In 1760, the Greenland harpooners, Dutch, English, Scotch, and Danes, were at it, and not one fish taken. This year there were several Greenland ships on the coast, not one of whom caught a fish. In 1761, with the gun harpoon, killed three whales, and got them all; after which he every year killed some, except one year, when he killed 42 fun fish in one week, each of which yielded from half a ton, to a ton of oil. Mr. Nesbit has since given it up, not from want of success in the mode of taking the whales, but from being put, by his partners, for want of knowledge in the business, to useless expenses. From many experiments, he brought the operation to such perfection, that, for some years, he never missed a whale, nor failed of holding her by the harpoon: he had for some time ill success, from firing when too near, for the harpoon does not then fly true, but at 14 or 15 yards distance, which is what he would chuse, it flies strait; has killed several at 25 yards.

When the harpoon is fired into the whale, it sinks to the bottom with great velocity, but immediately comes up, and lays on the surface, lashing it with tail and fins for half or three quarters of an hour, in which time he fires lances into it, to dispatch it, and when killed, it sinks for 48 hours, where he leaves a boat, or a cask, as a buoy to mark the place, to be ready there when the whale rises, that they may tow it into harbour, according as the wind lays. To carry on this business here, he knows from experience, that nothing more would be
wanting,

wanting, than a ship of 130 tons, with 100 tons of cask: three boats, with each 8 men, six to row, one to steer, and one with the gun, with ropes, harpoon, lances, &c. the whole very much inferior to the expence of equipping a Greenlandman. I have been the more particular in giving an account of this undertaking, because the society for the encouragement of arts, &c. at London, has long since given premiums for the invention of the gun harpoon, supposing it to be original.

In respect to the linen manufacture, it consists in all this country in spinning yarn only. Very little cloth woven here, except for the use of the people. They raise flax enough for their spinning in years when seed is plentiful and dry seasons, but some are so wet as almost to spoil the crop: all the women and children of ten years old and upwards spin. They very seldom let the seed ripen; they have tried it but found it did not answer so well as foreign seed. It is computed that there are two spinners in every family, who spin about one hank a day, or a spangle and a half a week; the medium is 2lb. to the spangle, or 4 hanks, which is half a pound of flax each day. A woman will earn, by spinning, according to the price of flax and yarn, from 2d. to 6d. but in general 2½d. or 3d. besides doing little family trifles. Most of the yarn goes to Derry.

The soil about Mount Charles is various; a great deal of stiff blue clay, which is perfectly tenacious

tenacious of water. Much bog, and a great range of high mountains near it, which break the clouds with a westerly wind, and occasion much rain. Rents, per acre, are from 5s. to 10s. 6d. arable, some up to 1l. 1s. wastes 2s. 6d. to 3s. 6d. inclosed. Mountains pay some rent, but not by the acre. The whole county through does not let for above 2s. 6d. There are very great extents of mountain all the way from Mount Charles to Ards, by Loch Fin, which is 30 Irish miles in a right line; it is a range of mountains, but most of the valleys are slightly cultivated, though corn does very bad in them from the wetness of the climate. The farms rise from 5 or 6 acres to 30 cultivated; but mountain farms are more extensive. The courses: 1. Potatoes, manured for with dung, or by the coast with sea weed; get good crops, and from the sea weed rather better than from dung. 2. Barley, if the land is good. 3. Oats. 4. Lay out for grafs; very few sow grafs seeds 2 or 3 years.

1. Potatoes. 2. Oats. 3. Lay out for grafs 2 or 3 years.

Upon dry land they use lime, which is sold at 6d. to 8d. the barrel of 28 gallons, or 3 bushels and a half, but generally burn it themselves. There is lime-stone at St. John's Point, and other parts towards Killibegs, and beyond it to the westward. They burn it with turf, which is plentiful every where. They have grey marle at Donnegal, and find a good effect
from

from the use of it. Upon the dry mountains they have flocks of sheep, not large ones; but every poor man keeps some, the wool their profit, and sell them at 2 or 3 years old. In stocking a farm they look not farther than having the horses and cows. Land sells at 21 or 22 years purchase, rack rent; it sold better from 1762 to 1768, and the rents are fallen. For two years they have been at a stand; but the fall has not been felt near the coast, the herring fishery keeping them up. The farmers here in general pay half a year's rent with fish, and half with yarn. Tythes are generally compounded in the gross. The middle men were common, but not now. The poor people live upon potatoes and herrings 9 months in the year along the coast, and upon oat bread and milk the other three. Very little butter, and scarce any meat. They all keep cows, most of them a pig or two, and a few hens, and all a cat or a dog. No tea. They are in general circumstances not improved. Rent of a cabin, with a garden and a cow's grass, 20 to 30s.

A farm of 20 acres.

1½. Potatoes. 1. Flax. 5. Oats. 1. Barley. 2. Mowing ground. 9½. Feeding. Rent 10l. Six cows, 2 horses, 6 sheep, 2 pigs. People increase. But little emigration. Religion more than half catholic. Rise in the price of labour 1d. a day in 20 years; and in provisions, one third in that time. The following is a return of population, procured by Colonel Burton's orders, on a part of Lord Conyngnam's estates.

	No. of heads of families	Wives.	Sons grown up to 14.	Other Chil- dren.	Men servants.	Maids servants.	Total.	Protestants.	Catholics.
Manor of Mount Charles.									
County of Don- negal 15,000 a- cres.	601	521	322	1478	127	105	3154	1138	2016
Manor of Magh- erymore, ditto county.	699						3587	737	3150
Particulars of part of Magh- erymore.	367	320	244	1047	45	42	2065	302	1763
Manor of Shana Golden coun- ty of Limerick, 4,500 acres.	282						1460		

Cars generally sliding ones, on account of the hills.

Expense of building a mud cabin 3*l.* of stone and slate 4*l.* In different places in Lord Conyngham's estate in Boylagh are many lead mines mixed with silver, none of them wrought; miners who have examined them say there is much silver in the ore. The lead is apparent in many breaches of the rocks.

August 11th, left Mount Charles, and passing through Donnegal, took the road to Ballyhannon; came presently to several beautiful landscapes, swelling hills, cultivated with the bay flowing up among them: they want nothing but more wood, and are beautiful without it. Afterwards likewise to the left, they rise in various outlines, and die away insensibly

bly into one another. When the road leads to a full view of the bay of Donnegal, these smiling spots, above which the proud mountains rear their heads, are numerous, the hillocks of almost regular circular forms; they are very pleasing, from form, verdure, and the water breaking in their vales.

Before I got to Ballyshannon, remarked a bleach green, which indicates weaving in the neighbourhood. Viewed the salmon-leap at Ballyshannon, which is let for 400l. a year. The scenery of it is very beautiful; it is a fine fall, and the coast of the river very bold, consisting of perpendicular rocks, with grass of a beautiful verdure to the very edge: it projects in little promontories, which grow longer as they approach the sea, and open to give a fine view of the ocean. Before the fall in the middle of the river is a rocky island, on which is a curing house, instead of the turret of a ruined castle, for which it seems formed. The town prettily situated on the rising ground on each side the river.—To Sir James Caldwell's; crossing the bridge, stopped for a view of the river, which is a very fine one, and was delighted to see the salmon jump, to me an unusual sight: the water was perfectly alive with them. Rising the hill, look back on the town; the situation beautiful; the river presents a noble view. Come to Belleek, a little village, with one of the finest waterfalls I remember any where to have seen; viewed it from the bridge. The river in a very broad sheet comes

from behind some wood, and breaks over a bed of rocks, not perpendicular but shelving, in various directions, and foams away under the arches; after which it grows more silent, and gives a beautiful bend under a rock, crowned by a fine bank of wood. Reached Castle Caldwell at night, where Sir James Caldwell received me with a politeness and cordiality that will make me long remember it with pleasure.

August 12th. The following account of the husbandry around Castle Caldwell, Sir James favoured me with. The soil in the vale to Belleek is a yellow clay, 1 to 2 spit deep on a limestone rock; the whole interspersed with bog and morafs. Large tracts uncultivated. Rents vary from 15s. to 20s. an acre cultivated, but mountain and mountain sides are not measured; wherever the plough goes, will yield 7s. at the lowest. In the mountains they pay but 3s. for the summer food of a cow; and for a horse 4s. 6d. The county of Fermanagh may be divided into 6 parts; one-sixth the lake at no rent. Mountains and bogs two-sixths, the rest of the county at 12s.

The course of crops is; 1. Potatoes. 2. Potatoes. 3. Barley or flax. 4. Oats. 5. Oats. 6. Oats. 7. Lay out for grafs. Wherever there are spots of meadow, they are mown. Great numbers of farms are taken in partnership in *Rundale*; indeed the general course is so, upon a farm of 100 acres, there will be 4, 5, or 6 families: but families will take such small spots as 5 or 6 acres. Farms in general rise from 5
acres

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acres to 3 or 400; but all the large ones are stock farms; in general none so high as twenty: all in *Rundale*, partnership or stock. Many of the latter part mountain, part arable, and these are the only farms of substance in the country. One of 80l. a year will require 4 or 500l. to stock it. These farmers buy year olds—for instance, 20; he buys in 20 year olds every year, and every year sells 20 four year olds: he gives 30s. each, and sells at 5l. 10s. or 6l. and this he reckons a reasonable profit. Also 3 and 2 year old heifers that have missed the bull, keep them through the winter, and sell them in May, and get 18s. to 20s. for wintering them on coarse grafs without any fodder. In summer they feed them all on mountains. Those who buy the mist heifers are farmers in Monaghan and Cavan, on coarse farms, who turn them on the mountains, give them the bull, and sell them out in the spring to the weaving farmers in the linen country, who change their stock.

The measures here are by pecks and barrels; the weight of the peck of potatoes in Ballyshannon is 5 stone, 4lb. and 10 pecks, make a barrel: in the country they give 6 stones. The acre the plantation measure. Of potatoes, which they set all in the trenching way, they plant 4 barrels an acre, and get on an average 7 or 8 for one, that is, 32 barrels an acre. The price is 8s. a barrel on a medium, or 12l. 16s. an acre; but it is obvious that this peck is a measure of their own. They manure generally for them with dung; but often with lime and bog mud mixed, and burnt clay, which they find does

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very well. In the county of Tyrone, towards Armagh and Dungannon, they will bring limestone 14 or 15 miles, burn it, and sprinkle their potatoe land with it to prevent the black rot. Rent of Tyrone on an average 7s.

Of barley they sow 20 stone; the barrel of barley is 25 stone, and of malt 20. An acre on an average will yield 10 barrels at 16 stone. Of oats they sow a barrel, at 20 stone, and get 8 for one. Of bere they sow the same, and get 9 barrels; barley sells better than bere generally; for flax they plough once on potatoe land. The expense of an acre they reckon,

Rent	-	-	-	-	0	15	0
County cefs	-	-	-	-	0	0	3
Tythe modus	-	-	-	-	0	0	8
Seed, 40 gallons, at 1s. 6d.	-	-	-	-	3	0	0
One ploughing	-	-	-	-	0	5	5
Clodding and stones 4 women	-	-	-	-	0	1	4
Weeding 6 women	-	-	-	-	0	2	0
Pulling 12 women a day	-	-	-	-	0	4	0
Watering 3 men and 1 horse	-	-	-	-	0	2	6
Graffing 6 women	-	-	-	-	0	2	0
Lifting and carrying, 2 women and 2 men, and 1 horse	-	-	-	-	0	2	6
Drying, 2 women and 12 load turf					0	1	8
Beetling, 24 women	-	-	-	-	0	16	0
Scutching 1d. a lb.							
					<hr/>	<hr/>	<hr/>
					£.5	13	4

Price of lime at the kiln 6d. a barrel. Sir James Caldwell has his stone quarried, carried, broke and burnt, and drawn 100 yards, for 4d. a barrel labour; fix score horse loads of turf cost 4s. cutting and sawing, and leading by water, costs

costs 5s. more, which 6 score loads will burn at the rate of a load and a half a barrel. They plough all with horses, 2 or 3 horses abreast.

Land fells, at rack rent, at 20 to 24 years purchase: has not fallen. Rents are fallen in 5 or 6 years 2s. an acre. There is a great deal of letting lands in the gross to middle men, who re-let it to others; these middle men are called *terny begs*, or *little landlords*, which prevail very much at present. These men make a great profit by this practice. The people in all the neighbourhood increase very fast. They are all in general much more industrious, and in better circumstances than they were some years ago. Their food, for three-fourths of the year, chiefly potatoes and milk, and the other quarter oatmeal: in the winter they have herrings. They have all a bellyful of food whatever it is, as they told me themselves; and their children eat potatoes all day long, even those of a year old will be roasting them. All keep cows, and some cocks and hens, but no turkeys or geese. Six people, a man, his wife and 4 children, will eat 18 stone of potatoes a week, or 252lb. but 40lb. of oatmeal will serve them. Rent of a cabin, garden, and one acre, 20s. a cow's grass 30s. a cow requires one acre and a half for summer; and they buy a little hay for winter, and give the cow small potatoes and cabbage-leaves, &c.

The common people are remarkably given to thieving, particularly grass, timber, and turf, and they bring up their children to *boking* potatoes, that is, artfully raising them, taking out
the

the best roots, and then replanting them, so that the owner is perfectly deceived when he takes up the crop. A poor man's turf from 15s. to 20s. Living is exceedingly cheap here, besides the common provisions, which I have every where registered, wild ducks are only 3d. and powder and shot: Plover, 1½d. and ditto: woodcocks, 1d. and ditto: Snipes, 1½d. and ditto; teal, 2d. and ditto, and widgeon the same; salmon, 1½d. a lb. trout, perch, pike, and bream, so plentiful as to have no price. Sir James Caldwell has taken 17 cwt. of fish, bream and pike, in one day: cod, 3s. a dozen: whiting, from 8d. to 1s. a dozen: herrings, from 3d. to 9d. per 100. lobsters, from 3s. 6d. to 4s. a dozen: oysters, 6d. to 20d. a 100. eels, 2s. a dozen: crabs, 1s. to 2s. a dozen: wages, 6l. dairy-maids, and others, 4l. There is very little weaving in this country, except what is for their own use, but spinning is universal in all the cabins. They receive for spinning spangle yarn, or four hanks, 1s. 2d. a spangle, and they will spin it in four days. Country servants are hired at 3l. a year, who engage to do the work of the house, and spin a hank, that is a dozen a day, there are 12 cuts to the dozen.

In the mountain tracts, the rents are paid by yarn, young cattle, and a little butter. They spin a good deal of wool, which they make into druggets, the warp of tow-yarn, and the west of wool. The following particulars of 34 of Sir James's labourers will shew the state of the poor in this neighbourhood, respecting their stock, potatoe land, and quantity of flax seed sown:

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No.	Rent.	Cows.	Souls.	Po.	Flax	Galls.
1	3 17 6	7	4	$\frac{1}{4}$		6
2	6 0 0	6	6	$\frac{1}{4}$		6
3	3 7 6	7	6	$\frac{1}{4}$		6
4	2 0 0	3	5	$\frac{1}{4}$		$3\frac{1}{2}$
5	2 8 9	2	7	$\frac{1}{4}$		5
6	3 0 0	5	7	$\frac{1}{4}$		7
7	1 10 0	0	6	$\frac{1}{4}$		7
8	2 5 0	2	8	$\frac{1}{4}$		3
9	4 0 0	3	10	$\frac{1}{4}$		6
10	4 0 0	4	6	$\frac{1}{4}$		0
11	1 8 0	4	6	$\frac{1}{4}$		6
12	3 15 0	6	5	$\frac{1}{4}$		3
13	1 8 0	4	5	$\frac{1}{4}$		6
14	1 8 0	4	6	$\frac{1}{4}$		6
15	2 10 0	5	9	$\frac{1}{4}$		6
16	2 16 8	6	9	$\frac{1}{2}$		7
17	2 0 0	1	6	$\frac{1}{2}$ R		4
18	3 8 3	2	8	$\frac{1}{4}$		4
19	3 15 6	3	9	$\frac{1}{4}$		7
20	5 16 3	4	6	$\frac{1}{4}$		4
21	1 5 0	3	4	$\frac{1}{4}$		5
22	2 2 0	3	3	$\frac{1}{4}$		4
23	3 15 0	2	4	$\frac{1}{4}$		8
24	1 17 0	3	4	$\frac{1}{4}$		3
25	1 8 6	2	3	$\frac{1}{4}$		5
26	1 1 0	2	6	$\frac{1}{4}$		$1\frac{1}{2}$
27	3 10 0	3	7	$\frac{1}{4}$		10
28	3 0 0	3	7	$\frac{1}{4}$		0
29	1 8 0	3	2	$\frac{1}{4}$		3
30	1 10 0	3	6	$\frac{1}{4}$		1
31	1 11 0	3	4	$\frac{1}{4}$		0
32	3 0 0	4	8	$\frac{1}{4}$		7
33	3 0 0	5	4	$\frac{1}{4}$		7
34	5 2 6	4	5	$\frac{1}{2}$		4
Totals	—————	121	204	=	—————	
Average	—————	$3\frac{1}{2}$	=	6	=	—————

Nothing can be more beautiful than the approach to Castle Caldwell; the promontories of thick wood, which shoot into Loch Earne, under the shade of a great ridge of mountains, have the finest effect imaginable: as soon as you are through

through the gates, turn to the left, about 200 yards to the edge of the hill, where the whole domain lies beneath the point of view. It is a promontory, three miles long, projecting into the lake, a beautiful assemblage of wood and lawn, one end a thick shade, the other grass, scattered with trees, and finishing with wood. A bay of the lake breaks into the eastern end, where it is perfectly wooded: there are six or seven islands among them, (that of *Bow* three miles long, and one and a half broad) yet they leave a noble sweep of water, bounded by the great range of the Turaw mountains. To the right, the lake takes the appearance of a fine river, with two large islands in it, the whole unites to form one of the most glorious scenes I ever beheld. Rode to the little hill above Michael Macguire's cabin; here the two great promontories of wood join in one, but open in the middle, and give a view of the lake, quite surrounded with wood, as if a distinct water; beyond are the islands, scattered over its face, nor can any thing be more picturesque than the bright silver surface of the water breaking through the dark shades of wood. Around the point on which we stood, the ground is rough and rocky, wild, and various, forming no bad contrast to the brilliant scenery in view. Crossing some of this undressed ground, we came to a point of a hill, above Paddy Macguire's cabin; here the lake presents great sheets of water, breaking beyond the woody promontories and islands, in the most beautiful manner. At the bottom of the declivity, at your feet, is a creek, and beyond it the lands of the domain,

main, scattered with noble woods, that rise immediately from the water's edge; the house, almost obscured among the trees, seems a fit retreat from every care and anxiety of the world: a little beyond it the lawn, which is in front, shews its lively green among the deeper shades, and over the neck of land, which joins it to the promontory of wood, called *Rofs a goul*, the lake seems to form a beautiful wood-lock'd basin, stretching its silver surface behind the stems of the single trees; beyond the whole, the mountainy rocks of Turaw, give a magnificent finishing. Near you, on every side, is wild tossed-about ground, which adds very much to the variety of the scene. From hence we passed to the hill in the mountain park, from whence the scenery is different; here you see a short promontory of wood, which projects into a bay, formed by two others, considerably more extensive, that is *Rofs a goul* and *Rofs moor east*. The lake sketching away in vast reaches, and between numerous islands, almost as far as the eye can command. In the great creek, to the right, which flows up under the mountain of Turaw, are two beautiful islands, which, with the promontories, scattered with trees, give it the most agreeable variety.

In another ride, Sir James gave me a view of that part of his domain which forms the promontory of Rofs moor; coasted it, and crossed the hills: nothing can exhibit scenes of greater variety or more beauty. The islands on every side are of a different character; some are knots

knots or tufts of wood, others shrubby. Here are single rocks, and there fine hills of lawn, which rise boldly from the water; the promontories form equal distinctions; some are of thick woods, which yield the darkest shade, others open groves, but every where the coast is high, and yields pleasing landscapes. From the east point of Rofs moor, the scenery is truly delicious. The point of view is a high promontory of wood, lawn, &c. which projects so far into the lake as to give a double view of it of great extent. You look down a declivity on the lake which flows at your feet, and full in front is the wood of *Rofs a goul*, at the extreme point of which is the temple: this wood is perfectly a deep shade, and has an admirable effect. At the other end it joins another woody promontory, in which the lawn opens beautifully among the scattered trees, and just admits a partial view of the house half obscured; carrying your eye a little more to the left, you see three other necks of wood, which stretch into the lake, generally giving a deep shade, but here and there admitting the water behind the stems and through the branches of the trees; all this bounded by cultivated hills, and those backed by distant mountains. Here are no objects which you do not command distinctly: none that do not add to the beauty of the scene, and the whole forming a landscape rich in the assemblage of a variety of beauties. The other reach of the lake varying under Rofs moor is a different scene, bounded by the mountains
and

and rocks of Turaw: to the right these reaches join the lake, which opens a fine expanse of water spotted with islands. It is upon the whole a scene strikingly agreeable. Little of the sublime, but the very range of beauty, gaiety, and pleasure, are the characters of the spot; nature makes no efforts here but those to please; the parts are of extreme varieties, yet in perfect unison with each other. Even the rocks of Turaw have a mildness in their aspect, and do not break the general effect by abrupt or rugged projections. It was with regret I turned my back on this charming scene, the most beautiful at Castle Caldwell, and the most pleasing I have any where seen. Rode round *Rofs a goul*, the promontory in front of the house, from which the views are exceedingly beautiful, commanding a noble hanging wood on the banks of Rofs moor, and the woody necks that stretch from the land beyond the house, with several islands, which give the greatest variety to the scene. On the point, Sir James has built an Octagon temple, which takes in several views that are exceedingly pleasing; this neck of land is a wood of 40 acres, and a more agreeable circumstance so near a mansion can scarcely be imagined.

Take my leave of Castle Caldwell, and with colours flying, and his band of music playing, go on board his six-oared barge for Enniskillen; the heavens were favourable, and a clear sky and bright sun, gave me the beauties of the lake in all their splendor. Pass the scenes I
have

have described, which from the boat take a fresh variety, and in all pleasing.

Eagle island first salutes us, a woody knole. Others pass in review; among the rest Herring island, noted for the wreck of a herring-boat, and the drowning of a fidler; but the boatmen love herrings better than music, and gave their name to the isle, rather than that of the son of Apollo. Innisnakeil is all wood. Rabbit island is 40 acres of pasture, which rises bold from the water. Innisnac Saint also 40 acres of grass. Then comes a cluster of woody islands, which rise in perfect hills from the waters edge, the wood dipping in the lake, and they are so numerous that the lake is cut by them into winding straits, more beautiful than can be thought. The reader may imagine how exquisite the view must be, of numerous hills of dark and complete wood, which rise boldly from so noble a sheet of water: they form a most singular scene. Wherever the shore is seen, it is rising lands; in some places woods, in others cultivated hills. Passing these sylvan glories, we come next to the Gully island, all of wood, and is 100 acres: much of it is bold rising land, and the oak dips in the water. What a spot to build on, and form a retreat from the business and anxiety of the world! Nature here is blooming. It is in the midst of a region where one would think she has almost exhausted herself in producing scenes of rural elegance. It belongs to Lord Ely; I envy him the possession. The only thing it yields its
owner

owner is a periodical profit from cutting its beautiful woods. Shelter, prospect, wood and water, are here in perfection; what more can be wished for in a retreat, if an unambitious mind gilds the scene with what neither wood nor water can give—content? The sacrilegious axe has desolated three parts in four of its noble covering; and it will be 15 years before the rough ground and naked stubs are again clothed.

Pass the hanging grounds of Castle Hume; some of them very beautifully crowned with wood, and the opposite coast of the lake, wood and cultivation. Car and Ferny islands bold lands cut into fields of corn give a fresh variety, and the woods of Castle Hume surround a bay to the right, at the bottom of which is the Castle half hidden with trees. It opens, however, to the view soon after, and accompanied on each side by a fine wood, and the surrounding ground various. The lake then takes the form of a bay, between some pretty cultivated slopes on one side, and Devenish island on the other, with its tower full in view. Advancing, the coast on the right consists of beautiful cultivated hills, divided into inclosures by hedges, and the waving hills rising one beyond another in a various and pleasing manner; the opposite shore is the same, but the view more distant. The island of Devenish is part of it very rich land; the poor people pay 5l. an acre for the old grass for one crop of potatoes. About Ballyshannon, it is 3l. or 4l. per acre.

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The barley on the island after the potatoes is exceedingly fine. When you come abreast of the round tower, look backwards, to the right the scenery is very beautiful, the wood at the extremity, the waving hills under grass and corn, which spread over this whole coast, form also the scenery in front, and unite with the lake to make a most pleasing landscape. Landed at Enniskillen, and that evening reached Castle Cool, the seat of A. Lowry Corry, Esq; who was absent in the county of Tyrone, but Mrs. Corry was so obliging as to procure me the information I wished.

August 15th, rode to the Topped Mountain, from whence is an immense prospect of many counties, and commanding Loch Erne from one end to the other, being above 40 miles long; the great sheet is towards Castle Caldwell, that to Belturbet is so thickly strewed with islands, that the water has more the appearance of several woods. Around Enniskillen, &c. land lets on an average at 10s. to 12s. an acre that is cultivated, but there is some mountain and bog that lets for little or nothing. Farms are various, many small ones of a few acres, but the most common size is 40 to 70 acres, with some large stock ones of 2 or 300l. a year: the soil is principally a wet tenacious clay. The system of these stock farms is, to keep cattle of various ages, from year-olds to fat ones of 5 years, according to the quality of the land: they keep but few sheep. Weaving is but just coming in, but increases much; the

the spinning is common all over the county in every cabbin, by the women and girls: they do not quite raise flax enough to supply their own demand.

The course of crops most general is, 1. Potatoes. 2. Barley. 3. Oats. 4. Flax. 5. Laid out for grafs. Farms very much taken in the rundale way by partnership.

The people increase very fast in this neighbourhood, and are in better circumstances than they were some years ago. Some live on potatoes and milk, for all keep cows, and they eat some flesh meat. The number of little farmers who are supported by their farms alone is considerable, from whence it is plain that linen has not taken deep root. There are two bleach greens within 7 miles, and all they bleach is made in the country. A woman will earn 4d. a day by spinning, and do something in the family besides. The manure principally used is lime, which on an average costs them about 5s. a barrel, and they lay 80 and upwards per acre.

August 15th, to Belleisle, the charming seat of the Earl of Ross. It is an island in Loch Earne of 200 Irish acres, every part of it hill, dale, and gentle declivities: it has a great deal of wood, much of which is old, and forms both deep shades, and open chearful groves. The trees hang on the slopes, and consequently shew themselves to the best advantage. All
this

this is exceedingly pretty, but it is rendered trebly so by the situation: a reach of the lake passes before the house, which is situated near the banks among some fine woods, which give both beauty and shelter. This sheet of water, which is three miles over, is bounded in front by an island of thick wood; and by a bold circular hill, which is his Lordship's deer park, this hill is backed by a considerable mountain. To the right are four or five fine clumps of dark wood; so many islands which rise boldly from the lake, the water breaks in straits between them, and forms a scene extremely picturesque. On the other side the lake stretches behind wood, in a streight which forms Belleisle. Lord Ross has made walks round the island, from which there is a considerable variety of prospect. A temple is built on a gentle hill, commanding the view of the wooded islands above-mentioned; but the most pleasing prospect of them is coming out of the grotto: they appear in an uncommon beauty; two seem to join, and the water which flows between takes the appearance of a fine bay, projecting deep into a dark wood: nothing can be more beautiful. The park hill rises above them, and the whole is backed with mountains. The home scene at your feet also is pretty; a lawn scattered with trees that forms the margin of the lake, closing gradually in a thick wood of tall trees, above the tops of which is a distant view of Cultiegh mountain, which is there seen in its proudest solemnity. To Lord Ross's very obliging attention I am indebted for the following

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ing particulars:—Rents about Belleisle are upon an average 10s. an acre for grafs and arable, but mountain fides are fet by the lump, according to the number of cattle they feed. The foil is all of blue clay. Farms are generally 50l. or 60l. a year; where there are weavers they are very small, but the number does not exceed a twentieth of the whole. They, however, increafe fast; they have doubled their number in 10 years. Seventeen years ago, there not being one bleach mill, Lord Ross erected one; after which more were built, but in the whole county not more than ten. Average rent of cultivated land in Fermanagh, 10s. Course, 1. Potatoes, 2. Barley, 3. Oats, 4. Oats, 5. Oats. 6. Laid out, six or seven years. 1. Potatoes, 2. Barley, 3. Oats, 4. Flax, 5. Laid out, some few grafs feeds.

Potatoes yield 20 barrels an acre; each 4 bushels; they plant two and an half to an acre; the price from 2s. 6d. to 20s. generally 10s. on stiff land, two crops of potatoes, but not on light. Barley yields from 10 to 15 barrels; oats from 6 to 10 barrels, but sometimes not 5.

Account of flax:

Rent and tillage	-	-	-	3	0	0
Seed, two bushels, at 12s.	-	-	-	1	4	0
Clodding, 3 boys, at 6d.	-	-	-	0	1	6
Pulling, 8 women, at ditto	-	-	-	0	4	0
Watering, two men and two horses, the men,						
6d. the horses, 1s.	-	-	-	0	3	0
Taking out and spreading, two men and six						
women	-	-	-	0	4	0

Lifting, three women, one horse, and one man 0 3 0
 Drying, two men and two women, 2s. and six
 kishes of turf, 6s. - - - £. 0 8 0
 Beetling at the mill, by the stone.

The linen wove here, is from 6 to 18,000, but in general 1200. A woman spins one hank, for which she has three half pence and board, if no board, four pence; the length of the webs vary, some ten yards, but in general double ones of fifty yards; it takes two hanks of yarn to every yard of the web; the weavers have five pence a yard for weaving it, and they will do three yards a day; they sell it at monthly markets. They breed up their sons more and more to weaving, as it increases much, and these people pay their rents by it, but they send off much more yarn than they weave.

The food of the poor is potatoes, butter-milk, and oat-bread. They all keep cows and pigs. Most of the country is under grazing, some of which farms rise to 500l. a year. They generally buy in year-old calves, for which they give, on an average, 11. 1s. to 11. 5s. and keep them till they are four years old, and sell them lean to the graziers of other countries, who have land that will fatten: sell them 5l. to 6l. a bullock, thus, every year, they buy in, and sell out a stock. Upon a farm in the neighbourhood, of 350l. a year, besides horses, cows, and sheep, the farmer sells one hundred bullocks every year. Many cows are fattened, bought in in May at 2l. 10s. to 5l. and sold out in November,

vember, at 11. 11s. 6d. profit, and a good acre will carry one of them, but in general it will take more. No dairies. Some sheep are kept, the lambs sold, at three and four months old, at 5s. to 10s. 6d. each, 7s. or 8s. in general; the wool of the ewe, 4s. 4d. Some buy two or three year old wethers, for fattening, in June, at 15s. and sell them fat in March or April following, at 11. 1s. to 11. 6s. Breeding ewes reckoned the most profitable, unless the land is very good. In moory land, they use lime for manuring, at 7d. a barrel, but if the farmer burns it himself, and has the stone convenient, it is done for 3d. with turf. A good deal of hollow draining, filled with stones, some with fods, but done only by gentlemen. Much corn, &c. by poor people, put in with spades, which they call *loys*, because they have no horses, and one acre of oats dug, is worth one and a half ploughed; some do it on this account, though they have horses.

Lord Ross has generally a small field of turnips and cabbages for feeding sheep in the winter; finds that cabbages are much the best, and lasts the longest.

August 17th, rowed to Knockinny, the deer-park, three miles across the lake, through a maze of woody islands. Land on Lady Ross's of 40 acres, in which she has cut walks leading through a great variety of ground; in some places through open groves of large trees, in others close dark wood; through lawns and rough

ground, from some of which there are various views of the lake, and from others it is so perfectly excluded, that one would not think water was so near, a cabbin for a poultryman, a covered bench, and a spot marked out for a cottage. As the boat approached Knockinny, a pretty bay opened upon us, round which, on one side, is a projecting point of wood, and on the other, the hill of Knockinny, with the wood rising up its side, uniting with that of the point to form one mass. From the hill the view is very fine; you look down on 11. or 12. wooded islands scattered over the lake, with others cultivated, and the country rising around it. Belleisle appears to stand in the midst of a very large wood. The fish, in this part of the lake, are perch, pike to 40lb. trout, eels, bream, &c. It is extraordinary that perch should appear in all the lakes of Ireland and in the Shannon at the same time, which was about 17 years ago. Large flights of swans sometimes appear here in winter, and are sure signs of a severe one.

Reached Florence Court, Lord Enniskillen's seat, situated on an eminence under a great ridge of mountains. That nobleman procured me with the politest attention the following particulars.

The soil in general is a thin surface, 4 to 8 inches of stoney mould, under that a tough yellow clay of 14 to 18 inches, and under that a purple lime stone gravelly clay, a good manure for tillage, but bad for grass. Lets on an average

age at 10s. an acre the new leases; but if there is bog or mountain, it is thrown in at that rent. Mountain fides of dry lime-stone soil will let at 6s. heathy ones thrown in. About Enniskillen, Lord Enniskillen has a considerable property, and heathy mountain within two miles of the town, lets at 9s. The town parks, from 40s. to 3l. 3s. The cultivated land, not town parks, from 12s. to 20s. In respect to the advance of rents, it will best appear by inserting the particulars of some of Lord Enniskillen's farms, at old and new rents, in various soils and situations at Florence Court, Enniskillen, near Swadling-bar, and Ballyshannon.

278 FLORENCE COURT.

Farms.	Years let.	Acres.	O. Rent.	N. Rent.
No. 1	1731	286	£. 20	£. 150
2	1750	37	6	18
3	1746	283	27	100
4	1740	90	10	37
5	1730	73	5	31
6	1747	150	18	61
7	1737	60	10	44
8	1731	66	8	40
9	1730	86	9	28
10	1731	46	6	20
11	1731	41	6	20
12 A Mountain Farm.	1736	99	9	20
13	1757	191	14	18
14	1747	43	6	18
15	1731	66	12	30
16 Mountain.	1734	107	12	31
17 Ditto.	1750	406	18	25
18 Ditto.	1745	316	34	150
19	1731	118	23	93
20	1752	63	22	36
21	1752	15	5	9
22	1738	223	15	82
23	1759	97	18	87
24	1732	27	6	32
25	1731	53	14	52
26	1731	80	14	60
27	1731	90	14	67
28	1731	97	15	90
29 Mountain.	1734	402	11	100
30	1732	224	27	61
31	1731	66	18	60
32	1731	75	14	56
33	1732	128	22	64
34	1732	314	27	100
35	1731	209	27	94
36	1731	57	10	50
37	1746	132	15	76
38	1744	314	28	82
39	1758	166	16	56
40	1735	91	15	68
41	1734	407	37	164
42	1732	33	9	30
43	1731	61	17	31
44	1731	116	5	48
45	1744	1070	102	350
46 Mountain.	1752	1-5	18	62
47	1734	190	23	95
48	1742	93	8	45
49	1742	93	8	45
50 Mountain.	1748	235	10	165
51	1733	454	25	70
52	1733	149	20	70
53	1749	126	34	87
54 Mountain.	1751	2371	65	340
		11,000	981	3807

The extremes of date may be called from 1730 to 1770, or 40 years, the average of the period would be 20 years; but we may safely say that in 30 years the rent is quadrupled. The courses of crops;

1. Potatoes. 2. Potatoes, reversing the lands. 3. Oats. 4. Oats. 5. Oats. 6. Lay out for weeds, &c.

1. Potatoes. 2. Potatoes. 3. Oats. 4. Oats. 5. Flax. 6. Oats. 7. Lay it down.

1. Potatoes. 2. Potatoes. 3. Barley. 4. Oats. 5. Oats. 6. Lay it out.

Tillage farms rise from nine acres subdivided, to large tracts in grazing ones. The manures are marle, lime-stone, gravel, lime, bog, and sod ashes; the marle is white and light, found under bogs, and in banks; that in the banks, about Florence Court, is upon clay, or gravel, with springs under it, which makes the marle run into forms like cinders, petrified, and of a reddish cast, as if from vitriolic acid. The whole country abounds with sulphurous, and other mineral springs. Very little of this marle used; they use the lime stone gravelly clay most, which gives them very good crops. The expente of lime, carriage incuded, is 8d. a barrel, flacked; they lay sixty barrels an acre. They burn their mountain land, lime, and make it, and set potatoes. In the year 1774, there were claimants for the Dublin Society's premiums, for 174 acres
of

of bog reclaimed, and 120 of mountain. In 1773, 38 moor, and 120 bog. No draining done by the farmers, but much by the gentlemen.

Potatoes they plant all on lays; plant four barrels per acre, each barrel 6 cwt. they are measured by the peck, so piled up as to weigh 3 stone each: the price from 5s. to 16s. the barrel; average, 8s. No hiring of land merely for planting potatoes, but the farmers will let the cottars take a crop of potatoes, if they dung the land. The produce, on an average, will be 32 barrels: thirty-two men will set an acre a day, with five children: when the potatoes appear, they shovel the furrows, which four men will do in a day: eight men will weed an acre in a day, and sixty-four men will take them up.

E X P E N S E S.

Rent	-	-	-	0	10	0
County cess	-	-	-	0	0	4
Four barrels of feed	-	-	-	1	12	0
Planting, 32 men, at 8d. ditto, five children, at 5d.	-	-	-	1	3	5
Shoveling, four men, 8d.	-	-	-	0	2	8
Weeding, eight men, 8d.	-	-	-	0	5	4
Taking up, sixty four men, 8d.	-	-	-	2	2	8
Sorting, and picking, sixteen men, at 8d.	-	-	-	0	10	8
Drawing home, seven horses	-	-	-	0	7	0
Manuring, 200 loads, at 1d.	0	16	8			
Drawing, four cars, 4 men, and 4 boys,	-	-	-	0	6	8
				-	1	3
					4	
					7	17
					5	
					PRODUCE.	

FLORENCE COURT. 281

P R O D U C E.

Thirty-two barrels, at 8s.	12	16	0
Expenses - - -		7	17 5
		£. 4 18 7	

Of oats, they sow two barrels an acre, and some more, and the crop twelve barrels. Of barley, they sow five bushels an acre, each eight gallons, the crop eight barrels. Much stubble and potatoe land, in wet soils, is dung for corn, and it takes eighteen men to dig an acre a day. Much flax is sown, both on the land, by its owner, and hired by cottars, who have no land fit for it; they hire a peck sowing, at 2 bushels and an half, or 2l. 14s. 2d. but the land is ploughed and harrowed into the bargain.

Rent and cefs - - -	£.	0	10 4
Seed, five bushels, at 12s. - -		3	0 0
Clods and stones, eight men, 8d. - -		0	5 4
No weeding			
Pulling, 16 women, at 6d. - -		0	8 0
Gathering, tying, and rippling, sixteen men, at 8d. - - - -		0	10 8
Watering, eight horses and cars, and eight men, the horse and car, at 1s. - -		0	13 4
Taking out, four men - - -		0	2 8
Spreading, eight women - - -		0	4 0
Lifting and carrying home, 4 cars, 8 women and 4 boys - - -		0	8 0
Drying and beetling by a turf fire, four men and thirty-two women - - -		0	18 8
		7 1 0	

Scutch-

282 FLORENCE COURT.

	7 1 0
Scutching, mostly at home, by women, but done for three halfpence per lb. 360 lb. the acre - - - - -	2 5 0
Heckling, thirteen pence a stone, twenty- two stone - - - - -	1 3 10
	10 9 10
Produce: 360 lb. or 22 stone, clean dref- fed, at 17s. 6d. - - -	19 5 0
Expenses - - - - -	10 9 10
	8 15 2

They spin all the flax they raise into three to five-hank yarn, on an average four. Many servants are hired for spinning, at 12s. a quarter, who do the business of the house, and spin a hank a day; if they do it for pay, it is 3d. a hank. A stone spins into 64 hanks; and when they have done it, it is sold at the markets and fairs: the tow they spin into two-hank yarn, which is wove into seven-hundred cloth, for home consumption. The weavers earn, on an average, 10d. a day. Many cows are kept, and much butter made by every little farmer, which they put into tubs of $1\frac{1}{3}$ cwt. and if one has not cows enough to make it, they join, in order to do it. Two cows will rear two calves, feed the family, and make a tub, which sells for 40s. per cwt. on an average, or 2l. 10s. the two cows; a cow requires two acres for her summer food, or if they have it, more, and her winter's hay, 10s. A good cow, if no milk is taken from her, will

will make 7lb. of butter a week; a middling one, four pounds and a half, and she will give twelve quarts a day. Many pigs kept, but no proportion observed to the number of cows, which are kept in the house at night in winter, but out all day. The calves suck the cows three months before weaning; many do not suck at all, but are weaned in a few days. The management of the grazing farmers, is to buy in year olds, at 20s. on an average, keep them till they are four years old, and sell them from 4l. to 10l. Some of these farmers occupy very large farms, even to 1000l. or 1500l. a year, but these are rare. Some buy in at three years old, and sell out at four; some at four, and sell at five; some at yearlings, and sell out at three, according to their lands. The common farmers buy in *mist* heifers, in November, and sell them in May, when they buy dry cows, which they sell fat in November, and make on the fattening, 30s. a head, and on the *mist* heifers, 16s. on an average. The little farmers that have lands fit for sheep, keep a few for cloathing their families, very many of them spinning wool enough, and weaving it for their own cloaths, pettycoats, blankets, &c. also stuffs for the women. The girls are seen in summer in their striped lincens and whites of their own making, and in winter in their woollen stuffs. They clip from a ewe, about 3lb. on average.

Goats were so common that every person had them from the ease of keeping, as they brouze only on bushes, and 20 were not reckoned a *sum*. This term should be explained,
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it implies a portion of land sufficient for a given stock; for instance, keeping a cow is a sum; a horse a sum and an half; 8 sheep; 6 ewes and 6 lambs; 3 year olds; a 2 year old, and a year old; a 3 year old; 20 geese; a barrel of potatoes setting; a peck of flax sowing; a barrel of corn sowing, and a cow's grass; all these are sums. They plough all with horses, except gentlemen, 3 abreast, and do half an acre a day. Drawing by the tail not done these 7 years. The price per acre 10s. Of digging by the acre 12s. and the crop 10s. an acre more; but they reckon that nothing in the world *wears out* the land more than digging. They lay their wet lands in narrow ridges of 5 furrows. The horses get no oats, yet they are not more than from 6s. to 12s. a sack, of 2 barrels measure; the barrel weighs 9 or 10 stone. Average price 9s. In hiring a little farm, no attention given to what stock they have. Land sells at 21 years purchase, rack rent, which is lower than 4 or 5 years ago. Rents are fallen in 4 years 2s. an acre. Tythes compounded, small and great ones, by the lump. The leases most common are 3 lives, or 31 years. *Tierney bogs* are now done with. The people increase considerably, notwithstanding the emigrations, which were great till within these 2 years. Their circumstances vastly improved in 20 years; they are better fed, clothed, and housed; more sober and industrious in every respect. Their food is potatoes and oaten bread, and a bit of beef or bacon for winter. All keep cows, and most of them pigs, and some poultry; many turkeys
and

and geese. No drinking tea. The religion some catholic, but a great many protestants. In 20 years there is a rise of 2d. a day in labour. In provisions there has been a considerable rise; 20 per cent. in meal. A sledge car costs 2s. 2d. Wheel car 1l. 14s. 1½d. A plough 11s. 2½d. A poor man's turf for a year will cost him 20s. Building a sod cabin 2l. Ditto of stone and thatch 15l.

August 18th, took the road by Swadling-bar for Farnham. That spaw of the north of Ireland is a little village, which appears to be but a poor residence for the numbers that resort to it. I took the Killishandra road, from thence to Farnham; in about 3 or 4 miles it leads along the edge of a lake, through a pretty wood which hangs to the water. Passed Mr. Henry's, a house very agreeably situated amidst woods, which spread to the right and left, and above it. Many lakes are in this country; I passed several large ones, which communicate with each other by a river. The road crosses a variety of bog and moory ground, perfectly improveable; lime cheap, but little seems to be done or doing. At Mr. Nesbit's enter a rich woodland country. The bishop of Kilmore's palace is on a considerable hill, yet sheltered by very fine trees; the country here is beautiful. I had been favoured with an invitation from the bishop, but he was then at Dublin. The woods of Farnham appear very finely from hence. Reached that place in the evening time enough for a ride with the Earl on the borders
of

of his lakes. These are uncommonly beautiful; they are extensive, and have a shore extremely varied. On one side large thick hedge row trees, with meadows behind them; on the other a most noble range of hanging wood, which spreads on each side to a great distance, covering a bold shore, and to a considerable height, nor are they uniform in their outline; the hills over which they spread vary greatly; in some places presenting a continued sweep, in others, breaking the line, and projecting into the lake. In one part the shore consists of grass inclosures, the hedges scattered with trees, and mounting upon the slopes, form a very fine scenery. Nothing can be more pleasing than the whole to the right of the lake; the meadows are of undulating lands that wave about in a variety of mild forms; a most pleasing scenery. These beautiful fields rise above the lake, which they command in some places, and in others retire from. Upon the whole Farnham is one of the finest places I have seen in Ireland; the water, wood, and hill, are all in a great stile, and abound in a variety of capabilities.

Cabbages Lord Farnham has cultivated 3 years; in 1774, he had 4 acres manured with lime and earth, and of different sorts, flat dutch, early yorkshire and greenbare cole, the seed was sown in the spring, and planted out in June, in rows 3 feet asunder, and horse-hoed clean; found them for milch cows much better than turnips; plough bullocks; also fattening bullocks, that had the summer grass, fattened very well on them; lasted till the latter end of February;

bruary; the bore cole longer; the cabbages came to a good size, and the crop paid extremely well. Tares and beans were sown after them, and yielded a great produce.

In 1775, six acres, manured with lime and ditch-earth, well mixed, and at planting time, a little dung laid to each root; the sorts the same as last year, with some red cabbage; the crop very fine, many came to 16 lb. used for the same purposes, and answered perfectly well. This year I viewed the crop, and a very fine one it was, clean, well horse-hoed, and promises to be a great produce. Upon the whole, Lord Farnham strongly recommends the culture from experience; if he was to farm 40 years, he would never be without them for his cows, his plough bullock, and for finishing those fat beasts which have had the summer grafs; he thinks them far better than turnips; that an acre will go farther, is easier cultivated, and got from the land with less damage. Nor is this opinion founded from any ignorance of turnips, his Lordship lived several years in Norfolk, and attended to the immense advantages reaped in that county from the cultivation of them; he introduced them at Farnham the same time as cabbages; they are difficult to cultivate in Ireland, from the ignorance of the people in hoeing; he has drilled part, and had part broad cast; the drilled much the best, from their being so much better hoed; drills in furrows two feet asunder; I saw this year's crop, and found them very fine, clean, and promised to be good. Since this was written, Lord Farnham informs me, that in 1777, he

he had 14 Irish acres of turnips, which kept 50 working, and fattening oxen, and dairy cows, besides 60 fat sheep; some of the oxen were sold fat from them, at from 17l. to 20l. each; the Lancashire breed that had been worked. The same year he had one acre of carrots, which he applied to feeding horses, and instead of giving 4 barrels of oats a week, they had only one, the rest being deducted on account of the roots. That in England, he fed his whole stud with them, nor would the horses touch an oat, while they could get carrots. Washing he found so expensive, that to lessen it, he put them in baskets in a stream, and this saved half; the soil not light. They were left in the ground, and drawn in the winter, as wanted.

Lord Farnham mentioned one circumstance of turnips, new to me, which was his feeding his horses in Norfolk with them. His brood mares, and hacks, of which he had a great number, ran in the park at Hunston, with his bullocks, that were fattening on turnips, and they followed the carts as eagerly as the beasts; had no other food, and did perfectly well on them. His Lordship has made great improvements in some of his lands by means of hollow draining. Very wet clays, over-run with rushes and other aquatic rubbish, he has converted into dry found healthy pastures. The principal drains are filled with stones, the lesser ones with sod.

In the breed of cattle he has been equally attentive, having been at a considerable expense to procure the very best Lancashires; and what
is

is uncommon, without spoiling his dairy: for his cows give much milk. After falling off a good deal, they make 6 or 7lb. of butter each a week, besides supplying his numerous family with milk and cream. The bull-calves he rears for oxen, works them till they are six years old, and then fattens them. Draft oxen he finds infinitely more beneficial than horses. The breed of strong horses he has also been very attentive to improve, buying a stallion of Mr. Bakewell, and has bred many, which sell readily at 25l. each, at 4 years old.

In planting, Lord Farnham observed at Farnham, that no tree grows to so large a size speedily as the silver fir. He has many of a great size, planted by his father about 40 years ago, in a wet clay soil on a rock; we measured some of them 12 feet in circumference at the ground, and one $7\frac{1}{2}$ at 5 feet high: this tree contains 76 feet of solid timber. What is very uncommon, he pointed out many oaks that are destroying the Scotch firs planted with them, having outgrown and rising completely above them. This I do not remember having noticed before. In the same plantation the beech generally beats the Scotch fir and the ash, though the latter suits the soil very well; indeed the beech oak and silver fir are the capital trees. One use he has put the silver fir to, in which it answers perfectly, which is boat-building; he has a boat built of it, which has lasted as well as if of the best oak. This is a hint which may prove of infinite use. I remember Mr. Mitford in

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Hampshire flooring his library with silver fir, fresh cut down, and the boards not contracting in the least: a quality very valuable in ship-building. He can sell Scotch fir out of his woods readily at 40s. a ton, even very poor trees.

The soil about Farnham is in general a good loam, from 4 to 10 inches deep, and under it a yellow or blue clay 2 feet deep, and under that a flaty gravel, a quarry of lime-stone, or blue whin-stone. It is in general very wet; hollow drains lay it dry, if there is a fall. From Cavan to Belturbet it is dry rough rocky ground. From Killishandra to Knockwinn, dry gravel. From Cavan to Virginy, heathy, which yields good corn, with lime. Rents by new leases in general, 14s. to 20s. old ones 5s. to 10s. Cavan and Kilmore the highest. There is a great deal of bog and mountain, which with lakes, amount to half the county. Average rent about 6s. by another account I had, it is 7s. 6d. Farms are generally about 100 acres, 50 to 100, and these re-let, from 2 to 10 acres, to the poor people, who are cottars, and pay their high rent by labouring.

Courses: 1. Summer fallow. 2. Wheat. 3. Oats or Barley. 4. Potatoes. 5. Wheat or barley.

1. Fallow. 2. Wheat. 3. Oats. 4. Oats. 5. Oats. 6. Oats. 7. Oats. 8. Oats. 9. Lay out for grafs. No feeds sown.

1. Potatoes. 2. Potatoes. 3. Flax. 4. Oats. 5. Oats. 6. Oats. 7. Lay out for grafs.

They

They sow 4 bushels of wheat, or 20 stone an acre, and it yields 7 barrels. There is a good deal sown, and several flower mills in the country. Of barley they sow 4 bushels, and get 9 barrels, 16 stone to the barrel. They sow 8 bushels of oats, and get on an average 10 barrels. Of potatoes they plant 14 barrels to the acre, each 20 stone, and the crop is usually 60, and the price 5s. to 10s. Average 7s. 6d.

Rent	-	-	-	-	0	16	0
14 Barrels	-	-	-	-	5	5	0
Planting, 36 men a day, at 1s. no board, 6d.							
- with it	-	-	-	-	1	16	0
Shovelling, 8 men	-	-	-	-	0	8	0
Weeding, 10 boys, at 4d.					0	3	4
Taking up, 72 men	-	-	-	-	3	12	0
Manuring	-	-	-	-	1	0	0

£. 13 0 4

P R O D U C E.

60 Barrels, at 7s. 6d.	-	-	-	22	10	0
Expenses	-	-	-	13	0	4
Profit	-	-	-	£. 9	9	8

But little lime used in the country, though in some places lime-stone is plentiful; the price is 6d. to 10d. the barrel slack. Much marle used about Ballyconnel and Killishandra; the white light sort from under bogs: they use it on heathy moors with success; for which purpose they use lime also. Before they plough it, they lay the lime on, 150 barrels roach, and

then either sow oats, or plant potatoes, and this perfectly kills all the heath, (*erica vulgaris*) and makes very fine land after it. Upon dry heathy ground at Ballyconnel, Mr. Swan, Lord Farnham's manager, has seen heaps of lime-stone laid on the heath near kilns, and has remarked that where this stone was laid without burning or breaking, there the heath was completely killed, and a full crop of white clover (*trifolium repens*) came up, from the dust that had rubbed off; a strong proof that pounded lime-stone would be an admirable manure. The stock farmers, who, however, are not large ones, 150 acres being a good farm, are many of them in the succession business of buying in young cattle, and selling them out older without fattening; others on better lands, buy in dry cows in May, and sell them fat in November, making from 30s. to 40s. a head. But few fat bullocks, nor is it a great sheep country, nor any dairies; but all the little farmers and cottars, keep one, two, or three. If they pay for grazing a cow, it is 20s. to 30s. They keep also many pigs, from one to five, in every house. They plough all with horses three or four in a plough, and all abreast. Here let it be remarked, that *they very commonly plough and harrow with their horses* DRAWING BY THE TAIL; it is done every season. Nothing can put them beside this, and they insist, that take a horse tired in traces, and put him to work by the tail, he will draw better: quite fresh again. Indignant reader! this is no jest of mine, but cruel, stubborn, barbarous truth. It is so all over Cavan.

Land

Land sells at 22 years purchase, rack rents: it has fallen 2 years. Rents have fallen within 4 or 5 years considerably; those that were taken 7 or 8 years ago, have fallen from 3s. to 8s. an acre. Tythes are generally hired by proctors, who view the farmers crops, and compound with them, making a considerable profit by it. They screw up the poor tenants and people very severely. The people are in general in much better circumstances than some years ago; more industrious, better fed, clothed, and lodged: they increase very much. Potatoes, and milk and butter, are their food, and oaten bread when the potatoes are not in season: scarce any flesh meat among the poor. The linen manufacture consists principally in spinning, which is universal all over the county for girls and women; but weaving is by no means general, nor does it increase in this neighbourhood. A woman, by spinning, will earn 4d. on an average. They do not raise enough for supplying their wheels, for much is brought from Dublin. There are four bleach greens in these parts, at Ballyconnel, Ballynagh, Scrabby, and Ardvagh. Building a mud cabbin 4l. 4s. ditto of stone, lime and slate, 30l. ditching, 6 feet wide and 5 deep, 1s. 1d. a drain 2 feet deep and 3 wide, 2d. to 3d. a perch. Threshing wheat 1s. a barrel. Oats 7d. Barley 8d. Farming man's wages 5l. A lad 3l. to 4l. A woman in summer 6d. a day. A wheeled car costs 1l. 10s. A plough 9s. A pair of harrows 12s.

August 20th, took my leave of Farnham, and passed by Cavan to Granard; got in that neighbourhood,

bourhood, into a fine tract of dry, found, gravelly land, which lets, on an average, at 11. 1s. through the barony : use it very much for fattening some bullocks, cows chiefly, and a few sheep. The farms are in general large, many about 200 acres. It is all a lime-stone gravel. In the town of Granard, is one close of 50 acres, called Granard Kiln, immediately under a mound of earth, an antient Danish intrenchment, which regularly supports 50 fat cows, 100 sheep, 6 horses, and is reckoned the best spot in the county, worth 35s. an acre. The country, all the way from Cavan to near Carrickglass, within 2 miles of Longford, is exceedingly bare of trees.

Reached Ballynogh, the seat of W. G. Newcomen, Esq; who has many trees, and well planted hedge-rows, about him; he favoured me with the following particulars: about that neighbourhood, lands let at 13s. 6d. from 7s. to 20s. The rent of the whole county of Longford may be reckoned at 12s. an acre, on an average, of all that is cultivated, and one-sixth part bog and mountain, which yields no rent. The soil is, in general, a tolerable vegetable mould on the surface, for three or four inches deep; under that, two-inch thick of blue clay: which retains water under that yellow clay for two or three feet, and then every where lime-stone gravel. This is generally the soil of the whole county, except the barony of Granard, and a part of the county, called the Callaw, which is a light lime-stone rocky ground, producing fine wheat, and good sheep.

Leitrim

Leitrim lets at 4s on an average. In Leitrim there are many mountain improvements, by setting fire to the heath in summer, liming it the following spring, marling upon that, and then plant potatoes, get great crops, and make fine land of it. The size of farms rise commonly to 5 or 600 acres, but the general size is about 100 acres, with many small ones: *Rundale*, or the hiring of farms in partnership, is very common, three or four families will take 100 acres. A great part of the country is let to tenants who do not occupy, but re-let at advanced rents to the poor people. The course of crops is: 1. Potatoes. 2. Potatoes. 3. Bere. 4. Barley, or Oats. 5. Oats. 6. Lay out for weeds, four or five years.

1. Potatoes. 2. Bere. 3. Oats. 4. Oats.
5. Lay it out.

1. Potatoes. 2. Flax. 3. Bere. 4. Oats. 5. Oats.

Of potatoes, they sow four barrels to an acre, each 64 stone, and get 40 in return; the price 5s. to 14s. average 8s. Of bere they sow 20 stone, and get 10 barrels. Of barley ditto, get 12. Oats they sow 2 barrels, at 14 stone, and get 15. The waste mountains are improving very fast, by families hiring spots of heath, building their cabbins on them, and improving them under a rent of 5s. to 8s. an acre. They bring it all in by potatoes, but use no lime, though they could have it cheap, for lime-stone is on the spot, and plenty of turf to burn it with; this is the case with Cornclanew, near Carrick Glas. White marle is found under the bogs, but scarce any of it used. The system of cattle most common, is to buy yearlings, at 40s. and keep

keep them till three or four years old, and sell them lean at 5l. to 5l. 10s. buying in some every year, and selling out the same number. Fattening cows is also very common, bought in in May, at 3l. to 5l. and sold out in October, at 30s. to 40s. profit. It is not reckoned bad land, if three acres fatten two. No cows for dairies, they are kept only by little people. Ploughing all with horses, a pair a-breast, but no drawing by the tail; this practice they utterly deny here. Land sells rack-rent at $18\frac{1}{2}$ years purchase. Let for ever and well secured, 20 years purchase. The price has fallen within four years; rents have also fallen three shillings in the pound in six years, and are at present falling, from the low prices of grain. Tythes taken generally by the proctors, who are very civil to gentlemen, but exceedingly cruel to the poor. The country evidently encreases very much in population: the people are in better circumstances than they were 20 years ago, better cloathed, better fed, and more industrious; yet at present it is found, and I have had the same remark made to me, at many other places, that they only work to eat, and when provisions are plenty, will totally idle away so much of their time, that there is scarce any such thing as getting work done. The religion is principally Roman; no emigrations. There is a better yeomanry than is common in Ireland. Many farmers, of from 100 to 250 acres. Rent of a cabin and garden, 30s. A cow's grass 1l. 10s. All the cottars have some land: all keep cows, and many pigs and geese. I remarked for some time
of

late, that the geese are plucked, and upon enquiry, that every goose yielded three farthings or a halfpenny in feathers per annum. They make a dreadful ragged figure. The poor live upon potatoes and milk, it is their regular diet, very little oat bread being used, and no flesh-meat at all, except on an Easter Sunday, or Christmas-day. Their potatoes last them through the year; all winter long only potatoes and salt. Firing costs them 30s. a year for labour in the bogs. Building a mud cabin, 4l. Ditto of stone and lime, 37 feet by 15, 17l. Another, 40 feet by 14, 11l. These are the measures of two, which Mr. Newcomen has built at that expense. The linen manufacture spreads through Longford. It has increased considerably, from a remarkable circumstance which happened three years ago, which was a gentleman unknown, giving 500l. to be distributed to poor weavers, in loans of 5l. each, to be repaid, at 25s. a quarter, to enable them to carry on their business with more ease. This had great effects. There are three bleach greens in the county; the weaving increases; spinning is universal throughout all the cabins, and likewise through all the county of Leitrim, but there is not so much weaving as in Longford.

August 21st, to Strokestown, the seat of Thomas Mahon, Esq; Passed through Longford, a cheerless country, over an amazing quantity of bog, and all improveable; a great one in particular, on the banks of the Shannon, two miles over, and I found it reached many miles beyond Lancsbro'.

Lanesbro'. Mr. Mahon has 500 acres of it. A great fall lies every way, a good road is made over it, and lime is burnt on the edges for 3d. a barrel roach; besides lime, they have limestone, gravel and sand every where, which laid on the bog, drained or not drained, produces a sheet of white clover; what a field is this for improvement, yet nothing done! Crossed the Shannon, which is here a considerable river, and entered Connaught, The first appearance of Strokestown woods are very noble, from a hill which looks down on them; they are very extensive, of a great growth, and give a richness to the view, which is a perfect contrast to the dreary scene I had passed. Mr. Mahon neglected no means of having me well informed in the following minutes. Land about Strokestown sets at 25s. The average of the whole county is 11s. including bog; mountain there is very little. The county of Leitrim, 2s. on an average. A great part of Roscommon, particularly from Athlone to Boyle, 30 miles long, and 10 broad, is sheep-walk, and lets on an average, 12s. an acre. It is generally walk, only patches of potatoes and corn for the workmen. The soil of it lime-stone. These sheep-walks I had heard so much of, that I was eager in my enquiries concerning them; they were some years ago divided into much larger farms than at present, for there were men who had 20,000 sheep, whereas now 6 or 7000 is the greatest flock. The farms rise to 3000 acres, few under 4 or 500. They stock commonly at the rate of two sheep an acre, and reckon the profit to be lamb and wool, the lamb sold

in August, at 12s. and 5lb. of wool from the ewe, at better than 1s. per lb. or 17s. a head.

They feed them all the year on grafs, having no turnips; but in severe weather give them hay. They have much other cattle with them, such as yearlings, two year olds, three year olds, &c. selling them four year olds to such as want them for fattening. In wet years they are in some places troubled with the rot, but it is not at all common. These sheep walks decrease as the people become more numerous: parts are ploughed up, but very few instances of sheep gaining upon tillage. The cottars are never suffered to keep sheep, but have cows grazed for them, as in other parts.

This part of the country is not populous, but more so than it was. These sheep-walks are here reckoned much better than the Curragh of Kildare. They are not regular in stocks of ewes, but keep a various stock. A man that has 1000 sheep will have 400 ewes, 200 yearlings having sold 200 of the worst lambs, 200 two year olds, and 200 three year old weathers, which he sells fat; consequently his annual sale will be 200 lambs, 200 fat wethers, and 100 of the worst old ewes.

200 lambs, casualties and missing reducing				
them to 150, at 10s.	-	-	75	0 0
200 fat wethers, at 20s.	-	-	200	0 0
100 old ewes 10s.	-	-	50	0 0
Wool, 1000 sheep, 4s.	-	-	200	0 0
			£. 525	0 0

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The country is divided into inclosures by stone walls generally, so that one shepherd is all that is kept to a flock. The wool goes mostly to Corke, where it is spun into worsted and exported; this is the account I had in this country. All these sheep-masters mix, as I before observed, other stock with their flocks; besides 2 sheep per acre, they will keep at the rate of 40 yearlings, and 2 or 3 year olds to every 100 acres. The soil is brown loam on limestone gravel. Farms about Strokestown consist generally of *Rundale* ones, upon 2 or 300 acres, there will be 10 to 15 families, nor is it thought here a bad system. Much the greatest part of the land is grafs; but what they have in tillage they arrange in the following course:

1. Potatoes. 2. Potatoes. 3. Flax. 4. Barley. 5. Oats. 6. Lay out for 6 or 7 years. None of them sow grafs seeds.

1. Potatoes. 2. Potatoes. 3. Wheat. 4. Oats. 5. Oats. 6. Lay out.

Much land is let for grafs, potatoes at 5l. 5s. 4l. and 4l. 4s. afterwards for a crop of flax. They plant 4 barrels, at 5½ cwt. each; and they get about 50 barrels an acre, the price from 4s. to 15s. average 8s. To sell them on the foot growing 10l. is reckoned a high price. Of flax seed they sow 11 pecks per acre, or a hoghead 2 acres; an acre sold *on the foot* (that is as it grows) is worth 8l. on an average. They commonly sow a barrel, or 20 stone of wheat to the
acre

acre. Mr. Mahon only 12. They get 6 in return. They sow 2 barrels of barley, and get 9. Of oats they sow 2 barrels, and get 10. Lime stone gravel the great manure; they put 1500 load, at 5 cwt. each, on an acre, and it costs 11. or 11. 1s. It does best on strong land, especially free stone; it will last 7 years, in which time they will take 7 crops. Of lime they use no great quantity; but when they do, lay 50 barrels an acre. Mr. Mahon compared different quantities of it, from 50 to 100, and the more was laid the better it was, but the lime-stone gravel better than any of them. About Strokestown, Mr. Mahon can have turf in one hole and lime-stone in another, and he burns it in arched kilns, with several eyes, the stone 15 deep over them, and 200 barrels of lime to each eye; it burns in 60 hours, each eye takes 10 clamps of turf, at 4s. each, including drawing, each clamp 30 kishes. Quarrying and breaking, burning, filling, and building and emptying, 21 an eye, in all 41. for 200 barrels roach, or about 5d. a barrel. They have both white and grey marl under the bogs, the light sort, but the gravel and sandy lime-stone is so much better that nobody uses it. They plough with 4 horses 2 and 2 abreast. Mr. Mahon, with 2 abreast by boys, taught by a ploughman he had from Bury in Suffolk, who by ploughing in that manner, without a driver and with a Suffolk plough, did as much in one day as the country people in three: by teaching lads for Mr. Mahon and his neighbours, was the means of very much improving the tillage of the neighbourhood.

hood. Land sells at 21 and 22 years purchase: it let within 3 or 4 years at 5 per cent. less than 15 years ago, but it is now rising. Tythes are sometimes taken in kind, but more commonly set to the farmer. Wheat 8s. Flax 8s. Oats 3s. Barley and bere 8s. Much land let to those who do not occupy it, but who re-let it to others at an advanced rent.

The linen manufacture of spinning is spread not only through Roscommon, but all Connaught, and in Roscommon they raise flax enough for their own use; weaving is creeping in by degrees, about a twentieth part of their yarn is woven in the country, into linens of 10 or 12 hundred, and sheetings half quarter wide, at 10d. to 1s. 4½d. a yard. The yarn spun is mostly 2 hank yarn. A woman will spin 6 hanks a week, of 4 hank yarn, at 4d. a hank, 4d. a day by 4 hank yarn, and 3d. a day by 2 hank yarn. The people are upon the increase, but not much; they are better fed than 20 years ago, and better clothed, but not more industrious, or better housed. They live on potatoes and milk, and butter. Scarce any but what keeps a cow or two; they are not allowed to keep pigs in general, but many will a tolerable quantity of poultry. The rent of 1 acre, and a house, is 20s. the grass of a cow 1l. 2s. The men dig turf, and plant potatoes, and work for their landlord, and the women pay the rent by spinning. Great rise in prices, butter one-third, beef one-fourth, poultry one-half. Price of a car 1l. 14s. a plough 10s. 6d.

Oak

Oak timber 3l. 3s. to 5l. a ton, ash ditto 2l. to 3l. elm ditto. A mud cabbin 5l. 5s. ditto stone and slate 15l. A mason's perch of a wall 4s. Near Castle Plunket, a bog of Mr. Arthur Irvin's, let at 1l. 2s. 9d. a perch, 160l. per acre, it is 21 deep of fine turf.

Mr. Mahon's woods are all of his own planting, and having besides 100 acres, a vast number of hedge-rows well planted round many inclosures, which join those woods, they all take the appearance of uniting into one great range of plantations, spreading on each side the house. It is one of the strongest instances of a fine shade being speedily formed in the midst of a bleak country that I have any where met with, being a perfect contrast to all the neighbourhood. He began 35 years ago with ash, which trees are now 70 to 80 feet high.

But the generality of the plantations are from 17 to 30 years old, and are for that age, I think, the finest woods I ever saw; they consist of ash, oak, English and French elm, beech, maple, spruce, Scotch and silver fir, larch, &c. Of all these the beech are the finest trees, and of the greatest growth, many of them 3 and 4 feet in circumference, and 30 to 40 feet high. The bark is bright and beautiful, and every tree gives the strongest signs of agreeing perfectly with the soil. One very particular circumstance of this tree, Mr. Mahon tried, which deserves the attention of those who have deer; he made a plan-
tation

tation of all sorts of forest trees in his park, in order to see how far the deer would let them escape: they eat up every tree he planted, the beech alone excepted, not one of which did they touch either leaf, branch, or bark; it was 18 years ago, and they are all now as fine trees as ever were seen. Next to the beech, the largest tree is the silver fir, of which he has many in 20 years, of a great size. After this the oak, which thrives admirably well; then the English elm. But the tree which outgrows these and every other he has planted but 5 years, is the Lombardy poplar. The growth almost exceeds belief! In 5 years they are 35 feet high, and I saw many of 2 years old 12 feet, and the year's shoots 5 or 6 feet. His hedge-rows, Mr. Mahon has planted with uncommon attention, the ditches are single, with a row of trees among or above the quick, another row on the back of the bank, and a third on the brow of the ditch; these, with a lofty growth of the quick, form so thick a shelter, that one cannot see thro' it, so that almost every inclosure has the appearance of a field, surrounded by a wood. Of these inclosures thus planted, he has 16 of from 6 to 20 acres each. Mr. Mahon's breed of both cattle and sheep are improved by a bull and a tup, which he bought of Mr. Bakewell; and has bred from them with great success. He is in the succession system, which is, buying in a certain number of yearlings every year, and killing the same number fat, from 5 to 7 years old: but in common they are only kept till 4 or 5.

At Clonells, near Castle rea, lives O'Connor, the direct descendant of Roderick O'Connor, who was king of Connaught 6 or 700 years ago; there is a monument of him in Roscommon church, with his scepter, &c. I was told as a certainty, that this family were here long before the coming of the Milesians. The possessions formerly so great are reduced to 3 or 400l. a year, the family having fared in the revolution of so many ages, much worse than the O'Neil's and O'Brien's. The common people pay him the greatest respect, and send him presents of cattle, &c. upon various occasions. They consider him as the prince of a people involved in one common ruin.

Another great family in Connaught is Macdermot, who calls himself prince of Coolavin; he lives at Coolavin in Sligo, and though he has not above 100l. a year, will not admit his children to sit down in his presence. This was certainly the case with his father, and some assured me even with the present chief. Lord Kingsborough, Mr. Ponsonby, Mr. O'Hara, Mr. Sandford, &c. came to see him, and his address was curious: "*O'Hara! you are welcome; Sandford, I am glad to see your mother's son: (his mother was an O'Brien) as to the rest of ye, come in as you can.*" Mr. O'Hara of Nymphsfield, is in possession of a considerable estate in Sligo, which is the remains of great possessions they had in that country: he is one of the few descendants of the Milesian race.

Since the bounty on the inland carriage of corn to Dublin, much is sent from the county of Roscommon, and even farther from Sligo and Mayo; and this business of carriage was mentioned to me as a proof of the great excellency of the Irish car. They carry from 9 cwt. to 12 cwt. with a single horse that is not worth above 5*l*. The distance from hence is 67 miles, and they are 9 days going and returning: they come back loaded. For 16*s*. 3*d*. they will carry a load of any thing to Dublin, without the advantage of any bounty.

August 23*d*, leave Strokestown, and take the road to Elphin, through a country principally sheep walks; the soil dry sound gravel, and stoney land. Waited on the bishop, who was so obliging as to procure me several valuable particulars concerning the neighbourhood.

His Lordship shewed me the particular of his bishoprick, which consists of very large tracts of land both in Roscommon and Sligo, from this the rental appears. The total of his particular are, 18,223 profitable acres, 5,382 unprofitable. Rent 1,742*l*. Fines 1,216*l*. 23,000 acres, let for 1,742*l*. must necessarily be very moderate. Respecting sheep walks, the following is an account of what a farm of 1000 acres is on an average; 2000 sheep kept on it worth 14*s*. 100 bullocks, that is, 60 two year olds, and 40 three year olds.

Annual Sale.

500 wethers, at 20s. to 24s.	-	550	0	0
100 culled ewes, at 8s.	-	40	0	0
2000 fleeces, 5lb. at 10d. average	-	416	0	0

That is 10s. a head	-	1006	0	0
Profit on 100 young cattle	-	200	0	0

£. 1206 0 0

20 acres grafs potatoes let at 3l. 3s. to 4l.				
fay	-	70	0	0
10 acres meadow fold at 50s.	-	25	0	0
5 fillies and colts, at 6l.	-	30	0	0
30 acres of wheat, bere and oats, at 5l.		150	0	0
10 acres flax let at 3l. to 4l.	-	35	0	0

£. 1516 0 0

Expenses.

Rent	-	750	0	0	Produce	-	1516	0	0
Cefs	-	30	0	0	Expenses	-	1130	0	0
10 men	-	80	0	0					
Wear and tear	10	0	0	0	Profit	-	£. 386	0	0
Interest 2000l.									

 stock, 6 per

 cent. - - 120 0 0

Tythe - - 40 0 0

Loffes on stock

 3s. a head on

 sheep - - 100 0 0

£. 1130 0 0

Farms in general are from 100 to 1500 acres; and rents from 12s. to 15s. an acre. Ten years ago flocks amounted to 9 or 10,000, but now not above 2000. Average rent of the whole county 10s. From Elphin towards Kingston, especially near the latter, the soil ranks among the finest I have any where seen. It is a dry found mellow sandy loam, deep and very rich, the herbage excellent. It is generally under sheep with many bullocks.

To Lord Kingston's, to whom I had a letter, but unfortunately for me he was at Spaw. Walked down to Longford Hill, to view the lake; it is one of the most delicious scenes I ever beheld, a lake of 5 miles by 4, which fills the bottom of a gentle valley almost of a circular form, bounded very boldly by the mountains. Those to the left rise in a noble slope; they lower rather in front, and let in a view of Strand mountain, near Sligo, above 20 miles off. To the right, you look over a small part of a bog to a large extent of cultivated hill, with the blue mountains beyond. Were this little piece of bog planted, the view would be more complete; the hill on which you stand has a foliage of well grown trees, which form the southern shore. You look down on 6 islands, all wooded, and on a fine promontory to the left, which shoots far into the lake. Nothing can be more pleasing than their uncommon variety; the first is small, (Rock Island) tufted with trees, under the shade of which is an antient building, once the residence of Macdermot. The next a mixture of
lawn

lawn and wood; the third, which appears to join this, is of a darker shade, yet not so thick but you see the bright lawn under the trees. House island is one fine thick wood, which admits not a gleam of light, a contrast to the silver bosom of the lake. Church island is at a greater distance; this is also a clump, and rises boldly. Rook island is of wood; it opens in the center, and shews a lawn with a building on it. It is impossible to imagine a more pleasing and cheerful scene. Passed the chapel to Smithfield Hill, which is a fine rising ground, quite surrounded with plantations; from hence the view is changed; here the promontory appears very bold, and over its neck you see another wooded island, in a most picturesque situation. Nothing can be more picturesque than Rock island, its ruin overhung with ivy. The other islands assume fresh and varied outlines, and form upon the whole one of the most luxuriant scenes I have met with.

The views of the lake and environs are very fine as you go to Boyle; the woods unite into a large mass, and contrast the bright sheet of water with their dark shades.

The lands about Kingston are very fine, a rich, dry, yellow, sandy loam, the finest soil that I have seen in Ireland, all grass, and covered with very fine bullocks, cows, and sheep. The farms rise to 500 acres, and are generally in divisions, parted by stone walls, for oxen, cows, young cattle, and sheep separate. Some of the lands will carry an ox and a wether per acre; rents 15s. to 20s.

Dined at Boyle, and took the road to Ballymoat; crossed an immense mountainy bog, where I stopped, and made enquiries; found that it was ten miles long, and three and a half over, containing thirty-five square miles; that limestone quarries were around, and in it, and limestone gravel in many places to be found, and used in the lands that join it: in addition to this I may add, that there is a great road crossing it. 35 miles are 22,400 acres. What an immense field of improvement! nothing would be easier than to drain it, vast tracts of land have such a fall, that not a drop of water could remain. These hilly bogs are extremely different from any I have seen in England. In the moors in the north, the hills and mountains are all covered with heath, like the Irish bogs, but they are of various soils, gravel, shingle, moor, &c. and boggy only in spots, but the Irish bog hills are all pure bog to a great depth, without the least variation of soil; and a bog being of a hilly form, is a proof that it is a growing vegetable mass, and not owing merely to stagnant water. Sir Laurence Dundas is the principal proprietor of this.

Reached Ballymoat in the evening, the residence of the Hon. Mr. Fitzmaurice, where I expected great pleasure in viewing a manufactory, of which I heard much since I came to Ireland. He was so kind as to give me the following account of it, in the most liberal manner:

Twenty years ago the late Lord Shelburne came to Ballymoat, a wild uncultivated region, without industry or civility; and the people all roman catholicks, without an atom of a manufacture, not even spinning. In order to change this state of things, his Lordship contracted with people in the north, to bring protestant weavers, and establish a manufactory, as the only means of making the change he wished; this was done, but falling into the hands of rascals, he lost 5000l. by the business, with only 17 protestant families, and 26 or 27 looms established for it. Upon his death, Lady Shelburne, wished to carry his scheme into execution, and to do it, gave much encouragement to Mr. Wakefield, the great Irish factor in London, by granting advantageous leases, under the contract of building and colonizing, by weavers from the north, and carrying on the manufactory. He found about 20 looms, working upon their own account, and made a considerable progress in this for five years, raising several buildings, cottages for the weavers, and was going on as well as the variety of his business would admit, employing 60 looms. He then died, when a stand was made to all the works for a year, in which every thing went much to ruin. Lady Shelburne then employed a new manager to carry on the manufacture upon his own account, giving him very profitable grants of lands, to encourage him to do it with spirit. He continued for five years, employing 60 looms also; but his circumstances failing, a fresh stop was put to the work.

Then

Then it was that Mr. Fitzmaurice, in the year 1774, determined to exert himself in pushing on a manufactory, which promised to be of such essential service to the whole country. To do this with effect, he saw that it was necessary to take it intirely into his own hands. He could lend money to the manager to enable him to go on, but that would be, at best, hazardous, and could never do it in the complete manner in which he wished to establish it. In this period of consideration, Mr. Fitzmaurice was advised by his friends, never to engage in so complex a business as a manufactory, in which he must of necessity become a merchant; also engage in all the hazard, irksomness, &c. of commerce, so totally different from his birth, education, ideas and pursuits; but tired with the inactivity of common life, he determined not only to turn manufacturer, but to carry on the business in the most spirited and vigorous manner that was possible. In the first place he took every means of making himself a complete master of the business; he went through various manufactures, enquired into the minutiae, and took every measure to know it to the bottom. This he did so repeatedly, and with such attention in the whole progress, from spinning to bleaching, and felling, that he became as thorough a master of it, as an experienced manager; he has woven linen, and done every part of the business with his own hands. As he determined to have the works complete, he took Mr. Stansfield, the engineer, so well known for his improved saw-mills, into his pay; he sent him over to Ballymoat, in the
winter

winter of 1774, in order to erect the machinery of a bleach-mill, upon the very best construction; he went to all the great mills in the north of Ireland to inspect them, to remark their deficiencies, that they might be improved in the mills he intended to erect. This knowledge being gained, the work was begun, and as water was necessary, a great basin was formed, by a dam across a valley, by which means 34 acres were floated, to serve as a reservoir for dry seasons, to secure plenty at all times. All the machinery of the mill is perfectly well constructed, and worthy of the artist who formed it; in general it is upon the common principle of other bleach-mills, only executed in a manner much superior to any other in Ireland, but in several particulars it is much improved; a washing-wheel, on the new construction used in England, is added; beetlers are improved in their motion on the cylinder, by giving something more of time to their rebound; the motion given to the rubbing boards is in a manner different from the common, and in general, the wheels are all so proportioned, that every operation may go on in the full velocity, without one part being stopped at all upon account of another, which is not generally the case; the water wheel is also formed to work with the least quantity of water possible; all the works going on with no larger quantity than will flow through a pipe of a 9-inch bore. Here are two beetling cylinders, three pair of rubbing boards, a pair of stocks, a washing wheel, two large coppers for boiling or bucking, a room for drying, and another for
folding,

folding, the whole contained in a well-erected edifice, 81 feet long, by 28 feet broad, and 17 high.

In the first year, 1774, not having a bleach-green, he only kept the looms going, to sell the linen green; 65 in that year worked 1730 webs, each 50 yards long and seven-eighths broad, on an average 10 hundred linen. In 1775, the number of looms was 80, and they worked 2110 pieces of the same linen. At present the number is 90, and preparations are made for there being 120 by this time twelve-month: and Mr. Fitzmaurice has no doubt of having 300 in two years time. In establishing and carrying on this manufactory, the increase has been by weavers from the north, for whom he builds houses as fast as he can, and has many more applying than he can supply by building. They come with nothing but their families, and Mr. Fitzmaurice fixes them in houses, finds them a loom, and every thing necessary for their work, and employs them upon his own account; their rent for their house and garden being proportioned to their idleness.

The full rent he fixes for a stone and slate cottage, that costs him 50*l.* is 40*s.* if the weaver is idle; but in proportion to the number of webs he weaves his rent is lowered; besides which encouragement, he gives premiums for the best weaving and spinning throughout the manufactory.

In

In order to shew how far this system of employment is of importance to the neighbourhood, I may observe that the 80 looms, besides the 80 weavers, employed 80 persons more, which are usually women; quilling, warping, and winding; the quilling by children and half as many children for quilling in all 80 men, 80 women, and 40 children.

The 2110 pieces worked last year consumed 132,930 hanks of yarn, at 63 to each, allowing for accident and waste, which is spun here, and as a woman spins a hank a day (it is 3 hank yarn) it employs at 300 days to the year, 443 women.

I should be particular in remarking, that all the houses he built for the weavers, have no more than half a rood of potatoe-garden to them, Mr. Fitzmaurice finding them a cow's grass, for which they pay 30s. He does this, because he would not wish to have them farmers, which he thinks does not at all agree with their business of weaving. He has planned much greater works; has procured a patent for a market, which he designs to establish; to build a large handsome market-house, at an expense of 1000l. to pull down all the old cabbins in the town, and rebuild them in regular streets, of good houses, for weavers and mechanics. To convert a large house, at present used in the manufactory, into a handsome inn; a large house for a master weaver, and lastly, a mansion-house for himself in the stile of a castle, and suitable to the ancient

ancient ruins, situation, and grounds. For these purposes, he has employed Mr. Paine, the architect, to give designs, and execute the whole. These are great works for the ornament and improvement of a country, and united with the flourishing progress of the manufactory, promise to make Ballymoat a considerable place. Too much praise cannot be given to a man, who, in the prime of life, when pleasure alone usually takes the lead, should turn his attention and expense to objects of such national utility and importance, which have for their aim, the well being, happiness, and support of a whole neighbourhood.

It may be of use to inform those who may entertain thoughts of a similar establishment, what the expense of these works have been, with this view I requested the particulars of Mr. Fitzmaurice, and they are as follow: forming the reservoir of water, the bleach-mill, a green, a boiling-house, a house for the master bleacher, and 3 or 4 houses for bleachers, cost in the whole 1500*l.* of this 160*l.* was for forming the reservoir. A house of stone and slate sufficient to contain a family, and four looms, costs 55*l.* and the 4 looms 8*l.* 8*s.*

In order to shew the full expense of establishing a manufactory, that employs one hundred looms, the following particulars will be of use; they will also shew, that views of private profit

profit have not actuated Mr. Fitzmaurice to this undertaking, as it is nothing but a very skilful management, or fortunate prices can make it advantageous to a gentleman, whose views ought to be more distant, to the increase of useful population, and thereby of the rental of his estate.

The bleach mill and green	-	1500	0	0
25 cottages for the 100 looms, at 55l.		1375	0	0
Other building for a clerk and master weaver	-	200	0	0
100 looms, yard-wide or under	-	210	0	0
Interest of that sum, at 6 per cent. for a year	-	197	0	0
163,800 hanks of yarn, at 63 to each piece, and 26 pieces to each loom, per annum, at five-pence three farthings per hank	-	3924	7	6
Purging the yarn, one halfpenny a hank		341	5	0
N. B. It is now sixpence-halfpenny, and even raising, but that is very high, 5d. is a low price.				
1 per cent. on ditto, 3900 for carriage and expenses	-	39	0	0
Pay of 100 weavers at 3½d. a yard for a ten hundred cloth, or 14s. 7d. a piece, say 15s. as they run to 51 yards, 2637		1977	15	0
Pay of a master weaver	-	100	0	0
Pay of a yarn-buyer and sorter	-	25	0	0
		<hr/>		
		£. 9889	7	6
		<hr/>		

318 B A L L Y M O A T.

Brought over	-	£. 9889	7	6
Needle marking 2637 pieces, at 1d. each			10	19
As to bleaching, the fairest way, is to suppose, that the expence of it amounts to as much as the bleachers charge, which is 1 $\frac{3}{4}$ d. a yard, this includes the bleachers profit, 6s. 4d. $\frac{1}{2}$ a piece	-		840	10
Package 5s. per pack, of 100 pieces, each 25 yards	- - -		13	4
Carriage to Dublin 20s. a pack of 100			53	0
Commission to the Dublin factor 2 per cent. on 5274 pieces, at 1s. 3d. per yard, or 11. 7s. 1d. a piece, or 8239l. two per cent. on this sum	- - -		164	15
N. B. On fine goods, 5 per cent. owing to the tediousness of selling them, and 5 months credit, instead of 2.				
Porterage in Dublin 2s. 6d. a pack	- -		6	10
			<hr/>	
		£. 10,978	6	3
			<hr/>	

Annual expence.

Interest on the first stock	197	0	0
Yarn - - -	3924	7	6
Purging and carriage	380	0	0
Weavers - - -	1977	15	0
Overfeers - - -	125	0	0
Marking - - -	10	19	9
Bleaching - - -	840	10	0
Package and carriage	66	4	0
Commission - -	164	0	0
Porterage - - -	6	10	0
		<hr/>	
	£. 769-	6	3
		<hr/>	

As

As the money is turned juſt twice a year,

half this is to be charged as ſtock, or	3846	0	0
Buildings - - -	3285	0	0

Therefore the capital for the undertak- ing is - - -	7131	0	0
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Interest on that at 6 per cent. -	427	0	0
Sundry expenſes on 5274 pieces -	7692	0	0

£. 8119 0 0

P R O D U C E.

5274 pieces, at 1l. 11s. 3d. -	8239	0	0
Expenſes - - -	8119	0	0

Remains - - -	120	0	0
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Hence there appears to be ſome profit on this account, beſides all that is on the bleaching; alſo the rent of 25 houſes, which may be reckoned at 100l. a year.

But if they ſell only at 1l. 7s. 1d. the account would then be:

Expenſes - - -	8119	0	0
Produce 5274, at 27s. 1d. -	7141	0	0
Loſs - - -	978	0	0

Let

Let me observe upon this, that such accounts are never accurate, and they should be taken rather for framing general, than particular ideas. At first sight, it might be thought, that proving too much in the little or no profit of such an undertaking, is proving nothing, as the trade could never be carried on; but this would not be a just conclusion. The linen business is not conducted thus; the drapers, who are bleachers, purchase the linen, not weave it on their account; and here lies probably much of their profit, they take advantage of the variation of *times*, to use a commercial term, and often get the linen under its fair value; they have the opportunity of taking advantage of all temporary necessities among the weavers; but at all events, they know to a farthing the value they can give, and they do not buy a piece more than suits them. But if the weaving was done on their account, they would be obliged to make the linen, however dead the market, or else have their men idle. Another observation which goes generally to all undertakings of this sort is, that the uniting in one person several branches of a manufacture, will rarely be found advantageous. If every step is a distinct trade, alone occupying both capital and attention, the fabric is the more like to thrive. That Mr. Fitzmaurice, with great activity and a good understanding, can make himself a master of the business, nothing but contraction can doubt; but I question whether the most sagacious draper in Ireland would make considerably, if he wove the
cloth

cloth as well as bleached it; hence therefore, the part of the preceding calculation the most applicable to gentlemen, is the detail of the expenditure of 3285*l.* because for that sum, 100 weavers and a bleacher would be set to work, to whom the landlord might give what encouragement he pleased in bounties per piece, made and bleached, but neither the one or the other on his own account. After all, I see every reason to assert, that a gentleman, for a shilling he will ever make by manufactory, will profit a guinea by the improvement of land; have rascals to deal with in one line, and honest men in the other.

Mr. Fitzmaurice observes, that the art of bleaching depends so much on niceties, and not a little on matter of opinion in the drapers, who buy the linen, that it is difficult to lay down any rules for it; there are some points however, which deserve attention; first, in respect to the use of lime, which though great chymists have proved to be perfectly harmless and useful, if used with skill and caution, yet the bleachers positively deny the use of it, whether to indulge the prejudice of the common people against it, or for profit in making the worst ashes equal to the best, cannot be well ascertained. As to bucking and boiling, it is very observable that the finest liness being made of the hardest and toughest fibres of the flax, which stand the operation of scutching, (which by the way is a very strong reason why the finest

linens should be incomparably more lasting than the coarser ones) make a distinction between boiling and bucking, the first is the most severe operation, and therefore necessary for the tough materials, the other proper for the coarse and weaker ones. But they are the same thing if done with attention; a thorough bucking is equal to a mild boiling, but depending both on the degree in which they are performed. With regard to rubbing boards, the general prejudice to them being founded on fact, can only arise from the bleachers saving soap; if used in a proper quantity, there is not the least objection to them.

Account of flax about Ballymoat. The greater part of the poor people about Ballymoat allot about half a rood of land to the growth of flax, the rent 7s. 6d. this is sown with about five gallons of seed, medium price 5s. 6d. the 5 gallons. From breaking and scutching, the above yields to the grower, from 84 to 112 cwt. that is, 6 to 8 stone. If the flax be dried, as well as broke and scutched at the mill, the charge is 16d. a stone; if only the two latter, it is only 14d. or if scutched, only 10d. After scutching, it is worth, rough, 5s. to 6s. a stone.

	DR.		CR.
Rent - - -	0 7 6	Value of 8 stone. -	2 0 0
Seed - - -	0 5 6		
Breaking, drying, } and scutching }	0 10 8		
Profit for labour -	0 16 4		
	<hr/>		
	£. 2 0 0		<hr/>
			£. 2 0 0
			<hr/>
			After

After scutching, it is heckled or split into small pieces of different qualities; one half produces the best sort, which is spun to about three hank yarn, that is, three hanks to the pound: the half of the remaining half, i. e. one quarter of the whole, is called heckled tow, and is spun into an inferior sort, two hank yarn; the remainder is called *backings*, and is spun into the coarsest stuff, of which is made sacking, coarse sheeting for the poor, &c. At this period the weight is not diminished above 4 lb. in the cwt. and the best sort is worth at a medium, 9d. a lb. the second sort worth 6d. and the coarsest about 1½d. after payment of 1d. per lb. for the two first sorts.

DR.			CR.										
Rough flax	-	-	2	0	0	56 lb. heckled of best sort	2	2	0				
Heckling	-	-	0	7	0	28 lb. at 6d.	-	0	14	0			
Profit	-	-	0	12	0	Backings	-	-	0	3	0		
			<hr/>						<hr/>				
			£.	2	19	0				£.	2	19	0
			<hr/>						<hr/>				

The hecklers generally travel about to the houses of poor people to get this work to do. Four men will be taken up 2 days in doing the above quantity. Spinning is performed by women and children; one diligent person will spin about one hank, containing 12 *ents*, each ent having 120 rounds, from two yards and a half in circumference in a day. If carried then to market, it generally produces 5d. per hank, or a dozen to the spinner, and is generally bought by jobbers or by poor manufacturers.

Upwards of 40,000l. per ann. in yarn is exported from Sligo to Manchester and Liverpool. It is supposed that there is as much yarn exported raw from Ireland, as is manufactured in it. The first step taken by the manufacturer is to steep the yarn in lukewarm water for a day or two; it is then boiled 12 hours in a strong lee of barilla ashes, after which it is bleached for 3 weeks or a month, and when dry, is dressed and softened by being hung in a frame, and rubbed in a clipped stick, after which it is sorted into different degrees of fineness, first by weight, and then by the eye, when it is ready to be delivered to the weaver, with the *reed* and *geers* adapted to manufacturing it. The grist or fineness of the yarn, determines the *set* or fineness of the reed through which it is to be wrought. The reed is divided into *beers*, each beer containing 20 splits, each *split* two *threads*. These threads are called the *warp*. The threads thrown across by the shuttle are called the *woof*t. Five beers are what is commonly called a *hundred*, the number of which hundred is regulated by the skill of the manufacturer, so as to make the cloth thick or thin in the breadth: and the number of these hundreds constitutes the fineness and value of the cloth. N. B. The extremities are from 400 splits in the breadth of one yard to 2500. The rule to ascertain the true value of any given piece of cloth by inspection with a glass. Apply the glass to the cloth, reckon the number of threads in the warp, which are magnified by

by the glafs, and by as many threads as are fo counted, fo many hundreds is the finenefs of the cloth, which hundreds when doubled, and half of the firft number added, i. e. 10 threads giving as many hundreds, them doubled make 20, and half added 25. Of fo many hanks of yarn does a piece of cloth of 20 yards confift of, fairly and honeftly made. Learn the value of yarn, add the weaving and bleaching, and the addition gives the value out of the manufactory.

An Acre.

Forty gallons feed, 1s. 6d.	-	3	0	0
Two ploughings	-	1	0	0
Two harrowings	-	0	6	0
Clodding, four women	-	0	2	0
Weeding, ten ditto	-	0	5	0
Pulling, twenty women, a day, 3d. and diet, 3d.	-	0	10	0
Binding, four men, 6d. and 3d. diet	-	0	3	0
Carrying, fix horfes, a day, at 1s. 6d.	-	0	9	0
Watering and fodding, fix men	-	0	4	6
Taking out, four men	-	0	1	6
Spreading, twelve women	-	0	6	0
Lifting, twelve women	-	0	6	0
Carrying, two cars and four men	-	0	6	0
Drying, four men and four women	-	0	5	0
Twelve kifhes turf, 8d.	-	0	8	0
Beetling, forty women	-	1	0	0

£. 8 11 0

Scutching

Brought over	-	£. 8 11 0
Scutching, 1s. a stone, fifty-six stone	-	2 16 0
Heckling, 8d. a stone for the flax, 1d. per lb. for the tow, 4 lb. of the first to the stone, scutched, or 14 stone, heckled, at 8d.	- -	0 9 4
Three pound of tow to the stone, 168 lb. at 1d.	- -	0 14 0
Rent	- - - -	0 16 0
		<hr/>
		£. 13 10 4
		<hr/>
If the land is hired ready dressed	-	11 8 4
Rent	- - - -	2 0 0
		<hr/>
		13 8 4
		<hr/>
This if a cottar, but if not the rent is 3l. which will make it	- -	14 8 4
		<hr/>
Value of the heckled flax, 7d. to 1s. average 9d. a lb. or 12s. a stone	-	8 8 0
One hundred sixty-eight pound of tow, at 6d.	- -	4 4 0
Six pound of Backings to the stone, 336 lb. at one halfpenny	- -	0 14 0
		<hr/>
		£. 13 6 0
		<hr/>

Very little weaving in Sligo, but a little scattered spinning every where; the women earn 3d. or

3d. or 4d. a day, by a hank a day. 80,000l. of yarn last year exported from the port of Sligo. Price of labour, cottars 5d. others 6d. Heaps of weeds burning all over the country for ashes for boiling the yarn, by poor people. An acre of weeds has been sold for 6l. 6s. One sixth of the county bog and mountain, the rest 15s. an acre. The farms rise to large ones, that are grazing, but all the tillage is carried on by cottars, or very inconsiderable ones. The courses are;

1. Potatoes. 2. Flax. 3. Oats. 4. Oats.

1. Potatoes. 2. Potatoes.

Barony of Corra, the best in the county; the high lands all lime-stone. Rent about Ballymoat. 20s. Potatoes yield 26 barrels, at the average price of six shillings, it weighs 10 cwt. Wheat yields six and an half, or seven barrels. Oats 10 ditto. A great plenty of marle, and lime-stone, and lime-stone gravel in all the country, but none used, except by such as are forced to do it by their landlords. Of these the most generally used is the lime-stone gravel. A good deal of mountain improved by little farmers, by their landlord's directions. John Kelly, a little cottar on Mr. Fitzmaurice's estate, is a strong instance of this, and his mode of doing it, has been by paring and burning, and spreading the ashes. He then puts in potatoes immediately, gets good crops, then good oats, and would, if he was able, sow grass seeds.

Sunday, August 26th, to the Right Hon. Joshua Cooper's, at Mercra, who not only received

ceived me with the utmost politeness, but was so obliging as to send for a neighbouring gentleman, in order between them, with other assistance, to answer all my questions, which was done in the most attentive and satisfactory manner. About which place the rent of land, on an average, 15s. Some of the mountains, that are not lime-stone, let for very little, 2s. but the lime-stone ones are good land universally, and yield almost as high rent as the rest of the country. Farms in culture are exceedingly small, the poor people divide and take them in partnership, four or five to a plough land of 100 acres, but they subdivide down to five or six acres, and in general all the tillage is done by these little occupiers. There are some large grazing farms up to above 1000 acres, which are under sheep and bullocks. One seventh of the county may be reckoned bog, and unimproved mountain, and the other 6-7ths, 15s. Mayo one third, perhaps half, bog and mountain, and two-thirds, at 12s. Galway more than one-third bog, mountain and lakes. The courses of crops pursued here ;

1. Potatoes. 2. Barley. 3. Cats. 4. Oats.
5. Oats. 6. Oats. 7. Oats. 8. Left out seven
years to sheep.

1. Potatoes. 2. Flax. 3. Barley. 4. Oats.
5. Oats. 6. Oats. 7. Oats. 8. Oats. 9.
Lay out.

1. Pota-

1. Potatoes. 2. Flax. 3. Barley. 4. Oats.
5. Oats. 6. Oats. 7. Potatoes.

1. Potatoes. 2. Barley, which is the best course I have met with in Ireland. Wheat is coming in in the following course,

1. Potatoes. 2. Wheat. 3. Oats, 4 or 5 years. Some wheat on summer fallow. Grafs land hired for potatoes, at 5l. if not an acre, is

Rent	-	-	-	0	15	0
Cels	-	-	-	0	0	4
Tythe	-	-	-	0	0	0
Manuring labour, 20 men, and 3 horses				1	5	0
Seed, thirty pecks, each 6d.			-	0	15	0
Putting in first digging, 30 men, at 6d.			-	0	15	0
Second covering, shovelling ditto			-	0	15	0
Third ditto, fifteen men			-	0	7	6
Wedding, eight men			-	0	4	0
Digging up, sixty men a day			-	1	10	0
Picking and gathering, one man to four			-	0	7	6
Carrying home, five men and five horses			-	0	5	0
Picking over and shifting			-	0	5	0
				<hr/>		
				£.	7	4 4

P R O D U C E.

300 pecks, 56lb. each, at 6d. per peck 7 10 0

If they, which is very common, hire grafs land for it, the rent is 4l. 4s. on an average, then

Rent	-	-	-	-	-	4	4	0
Other expenses as before						6	9	0
						<hr/>		
						10	13	0

P R O D U C E.

P R O D U C E.

Three hundred and fifty pecks, at 6d.	-	8 15 0
Profit	-	<u>£. 1 18. 0</u>

Many are planted in bogs that are drained; they are the first thing they plant, manuring with both lime-stone gravel and dung, the first will not do alone, very little dung will do: the crops are superior in quantity to those from any other land, they will get 50 pecks more than from the grass land. They feed their cows and pigs with them when plentiful. Mr. O'Hara of Nymphsfield fattened many bullocks with them, and found that they did exceedingly well. Of barley they sow a barrel per acre, which is here 14 stone, and get on an average 14 barrels an acre. In Terrera barony they get great crops, sometimes 20 barrels an acre. They sow 2 barrels of 12 stone of oats, the mean produce 10 barrels, some not above 5 or 6. Of wheat they sow 12 stone, and the crop 6 barrels. Every body sows a patch of flax; a farming cottar, with 6 or 7 acres, will sow 6 or 8 gallons. The quantity of seed 40 gallons per acre. The value *fold on the foot* is in general 8l. and the crop is calculated that a gallon of seed produces a stone of scutched flax, or 40 stone per acre. The quantity of waste improved is very considerable; it is moory mountain, about 12 inches deep. In much of this, immediately under the moor, is a thin stratum of what they call *lack-clay*, which is like baked clay, the thickness of a tile, and no water gets through it. Under it
lime-

lime-stone gravel. Trenching the land for potatoes, breaks this stratum, and lets the water through at once, and no other drains are necessary. In less than a century, almost the whole country, as well as Roscommon, was a moor. The mode taken has been by lime-stone gravel chiefly, and this goes on so much, that the moors are worth a considerable rent; the crops they give at first are very great. The expense of gravelling is 2l. 2s. an acre. 2000 horse-loads in baskets on their backs is the quantity, it changes the nature both of moors and clays intirely, and lasts for ever.

In this country there are large tracts of grass land, which will rear the largest oxen, but will not fatten them; but if gravelled, will fatten them perfectly. Lime not used as a manure in common, though there is an amazing quantity in the country; the price of burning will be four-pence halfpenny a barrel of roach lime. A barrel of turf will burn a barrel of lime; a barrel of turf is one-third of a kish. Turf mold laid on a clay meadow will give one good crop. The system of cattle is various; the graziers upon good grass buy in cows in the month of May, at 3l. 10s. average, and sell out in November and October, at a profit of 1l. 10s. also buy oxen 3 year old in October, give them coarse hay, and sell them fat or in good order the autumn following; buy in at 4l. 10s. and sell out at 7l. and he will take for meadow half an acre of hay, and one and a half for summer; besides which there will be one sheep
and

and a half per acre the year through, which will pay 12s. Upon worfe land they go into the fucceffion fyftem, which is buying year olds at 25s. on an average: thefe, as well as the preceding for cattle, which at 4 year old come to 5 cwt. which is the common fize of the county. He keeps them 3 years, and felling them lean at 4l. 10s. but thefe fyftems are always united on the fame farm, as they have all forts of cattle to fuit different foils. No dairies.

The fheep fyftem is not of confequence, for there are fcarce any flocks kept. Twenty years ago the baronies of Corra and Terrera were continued fheep-walks; but now the former is all potatoes and barley, and much of the latter is broken up, fo that upon the whole tillage has gained very much on grafs. The fheep there kept are both fattening and breeding; they keep their lambs till three year wethers, and fell them fat at 16s. that is, 18lb. a quarter, at 2d. a lb. The ewe lambs will be kept, and old ewes culled and fold off half fat, at 10s. The fleeces on the average of the whole will be 4lb. Mr. Ormsby gets 8 and 10 lb. from his wethers. Swine increafing, no pork exported from Sligo till laft year, but now they are getting into it. Horfes are ufed for tillage only, 4 in a plough abreaft, and fome harrowing ftill done BY THE TAIL; they will plough half an acre a day, or more commonly three days to an acre. Upon wet lands they plough into ridges arched, but never water furrow. They know nothing of cutting chaff, but let the wind blow that of their crops away. As to hiring
and

and stocking farms, they manage so as to do without capital; a grazier will re-let to his cottars as much of his land as high as he can; enough to pay his rent or near it, and as to the poor fellow, he manages with very little. 3l. per acre will do for buying the cattle for a grazing farm.

Land sells at 20 years purchase, rack rent. The rents are less than 5 or 6 years ago, but are rather rising at present. Tythes are generally taken in kind; they are let to tythe proctors, who are paid wheat 8s. Barley 6s. Oats 4s. Flax 8s. Potatoes none tythed in Connaught. Hay 3s. Leases 3 lives, or 31 years. Much of it let on leases renewable for ever. Middle men, who occupy none, is a practice declining, but not gone out. Two bolting mills erected, which begin to encrease the crops of wheat, and promise to change the face of the country. The people throughout it increase very fast most undoubtedly. Their circumstances in general are infinitely better than 20 years ago; they are clothed and fed better, are much more industrious; spalpeens going from hence decline much, and will soon be entirely out. Rent of a cabin and garden 20s. The grass of a cow 30s. There were some emigrations to America, but not considerable, and some of them are come back again. The religion in general catholic; but more protestants than in any other county in Connaught. In the baronies of Liny and Corra, there are many Milesian Irish; in Mayo more still, all of the Spanish breed. The food of the poor people is potatoes,

toes, milk, and herrings, with oaten bread in summer; all keep cows, not pigs, and but a few poultry. They have an absolute bellyfull of potatoes, and the children eat them as plentifully as they like. The average price of oatmeal something less than 1d. a pound. All of them have a bit of cabbages. They prefer oat bread both to potatoes and to wheat bread. All afford whiskey. A year's turf will cost a family 30s. The common people are so amazingly addicted to thieving every thing they can lay their hands on, that they will unshoe the horses in the field in the barony of Liny; they are also lyars from their cradle, but wonderfully sagacious, cunning, and artful.

Within 10 miles of this, in Leitrim, is a great country of good coal near the surface; but for want of being well worked, sells at 7s. a ton: and near Ballyfodare is a lead mine, but not worked with success, though very rich. As to the linen manufactory, it has made some progress; there are 6 bleach greens in the county, and there are many weavers. Spinning is universal in all the cabins. A woman will earn two-pence halfpenny at it. The rents are mostly paid by yarn.

Mr. Cooper has reclaimed, and is reclaiming 65 acres of bog, which is 12 feet deep, and was so wet and rotten, that no animal could go on it without being swallowed up: much of it had been so mangled and cut in holes to get turf, that the levelling in order for the plough was put out at 11. 10s. an acre. A great drain

was made round it 9 feet broad at top, 10 deep, and quite narrow at bottom, and repeated these drains, but not so large at the distance of 60 yards from each other. A drain of 9 feet wide at top, and 6 deep, costs 10d. a perch. The above drains were done by the day. In one year after, the bog was dry enough to plough, which he did, and burnt the furrow and sowed rape: the crop middling, eat it with sheep. The second year ploughed and burnt it again, and had a second crop of rape; after which another year of rape and turnips, and it now lies with the grasses that came of themselves after these operations: it is but indifferent, except in one place where some lime-stone gravel was scattered, and there it is good, promising well. Adjoining the bog is a wet springy bank full of rushes, from which Mr. Cooper apprehends the water comes that breaks out in the bog, which it does in a few places, for want of the surrounding drain on that side being completed. To such as have bogs to improve, he would recommend to surround the space to be improved with a drain so deep as to go to the gravel, which is a point he thinks very necessary; as when this is done, if there is any fall at all for the water, the drain will keep open, and not close up, as it will do if not so deep, for want of a hard surface for the water to run off on. A year after this work, plough it, burn the furrow, and sow rape for sheep food, levelling the land by ploughing and burning; and repeat this till level, or if there is any dung, potatoes is much the best crop, and will be a great produce. As soon as the land is level,

sow

sow oats and hay feeds, and when there is a skin of turf gained, then carry on the lime-stone gravel in preference to every thing else, if it is to be had: the effect of which is so strong as to change heath to white clover at once upon drained land. The more soapy the gravel is the better: and Mr. Cooper, from experience, knows that it would then set as meadow at 30s. an acre as long as it was kept from returning to its original state. As to the quantity of draining, cutting it into oblongs of 300 yards by 60, would be fully sufficient: these have laid his bog dry.

Turnips Mr. Cooper has cultivated these 17 years regularly, with great success, for stall-feeding oxen, and has found them of great use. Cabbages he has had these four years, the Scotch fort, borecole, and Reynold's turnip-cabbage; these he has used for fattening sheep, and never had such sheep as by this means. He prefers cabbages to turnips, much for all uses, can get larger crops, and what he gets goes farther, and are much preferred by both cattle and sheep: after them, he has got exceeding fine barley. In the breed of cattle Mr. Cooper has taken pains to improve by means of a Lancashire bull, of Mr. Parker's breed, and this with such success, that his cattle are all very fine, large, and well made; all Lancashire long horns, with a mixture of the Stafford and Warwick. He has also found that this improvement of the breed for fattening has not hurt his dairy, for his cows give 8 quarts of milk at a meal, which is esteemed very well here: for fattening the breed is excellent

cellent. Oxen he has used for tillage, &c. 18 years, instead of horses; works them in common yokes, and bows 4 or 6 in a plough; but he thinks that four horses will do more work in a day than four oxen: yet finds the latter incomparably the most profitable. Mules he finds of the greatest use. They are much longer lived than horses, hardier, easier fed, and more profitable: but this is principally applicable to the small Irish mule, and not the large ones from Spanish asses, which are not so hardy, and more liable to disorders. They are never fed so well as horses, yet go through more labour: and are much superior to them for carrying burdens. One caution, however, should be used in relation to their food. If wheat straw is cut into chaff and given, it will kill them; the late bishop of Elphin lost all his mules by it. Mr. Cooper has fattened many hogs on potatoes, and he has found that raw potatoes will fatten them very well, but the fat will be flabby and greasy: but if the potatoes are parboiled, and well sprinkled with salt, the flesh will be firm, and perfectly good. He once tried fattening a cow on them, and she did admirably, but eat so much, that at the very lowest price it would not answer to give them. He has improved much land by hollow draining, has done it with fods, and found that it answers perfectly.

Sligo is the only sea-port of this country, and the state of its trade may be taken, as no bad explanation of the improvement of the country around it with which it communicates.

A view of the duties on imports and exports in the port of Sligo for twenty years, ending Lady-day, 1775.

Years.	Imports.			Exports.		
1756	£. 1208	11	4	£. 26	11	7
1757	216	12	0	15	13	10
1758	425	10	1	23	11	11
1759	504	11	6	45	1	0
1760	518	9	8	45	6	3
1761	384	19	4	51	13	0
1762	640	6	11	73	17	11
1763	1017	11	7	104	17	7
1764	1187	15	3	131	3	2
1765	1458	9	4	102	17	0
1766	406	12	7	120	1	4
1767	486	7	2	92	17	7
1768	1178	12	3	160	8	6
1769	998	14	6	487	17	2
1770	1122	2	4	523	6	7
1771	1554	19	0	309	2	0
1772	841	16	7	471	9	1
1773	2477	17	11	835	11	10
1774	2418	5	4	730	11	4
1775	2256	8	1	956	0	6

Mr. Cooper has remarked, that the great improvement of this part of Ireland commenced about the year 1748, and that rents now are, to what they were before that period, as fifteen to six. Some farms bought in 1725, at 5s. 6d. an acre, and 20 years purchase, are now let at 18s.

August 26th, left Mercra, and went to Bal-lafadore, when I had great pleasure in viewing the falls; the river breaks over rocks in the most romantic manner, from edge to edge, in many falls, for the space of two hundred yards before it comes to the principal one, which is twelve or fourteen feet perpendicular; the scenery about it is bold, the features of the moun-

mountains are great, and Knocknaree in full relief; if the falls were through a dark wood, the scenery would be among the finest in the world.

To Tanrego, the seat of Lewis Irwin, Esq; (who favoured me with several articles of useful intelligence) situated in the barony of Tyrera, which is twenty-seven miles long, and cultivated from one and an half to three in breadth, by the sea side; lets from 12s. to 17s. an acre, a little for 20s. The soil a light sandy loam, on limestone, one foot to two deep. Farms are in general from 20 to 30 acres; many taken in partnership, four to eight families take 200 acres.

1. Manure with wrack for potatoes. 2. Potatoes. 3. Barley. 4. Barley. 5. Oats.

1. Potatoes. 2. Barley. 3. Oats. 4. Potatoes again.

1. Potatoes. 2. Barley. 3. Oats. 4. Lay out for grass.

No feeds, in one or two years white clover will come if not over cropped. For potatoes, from 100 to 150 horse loads sea weed, mix no dung with it. Plant 12 pecks, each 56lb. and get 12 to 20 fold, that is 144 to 249 pecks. Of barley they get 13 or 14 barrels per acre. Of Oats, 10 barrels. They burn vast quantities of kelp, in the whole barony, 300 tons, all in summer; in winter or spring they manure with it. The brown alga, which is the more luxuriant, and fuller of the saponaceous liquid, they don't manure with, thinking it too strong for the land, burning it up as they call it; but

if they would lay it in heaps till rotten, or made composts, neither of which they ever do at all, this would not be the case. They manure with it every six or seven years. Mr. Irwin spreads it in his pound upon a stratum of potatoe stalks, and over both one of turf and mould, for cattle to tread on to manure, this is a most excellent practice. The mountains nearest to the sea, are chiefly stocked with sheep, and farther in, with young cattle near the bog. Upon a part of these mountains, of three miles in extent, whatever sheep feed, are immediately killed by the staggers, and horses affected; there is a good deal of lime-stone, and the land is dry, and to appearance, and in fact, good; it fattens bullocks; it is attributed to the lead mines, which this part is supposed to be full of. When first affected, if brought down to a salt marsh, it recovers them immediately. Within a few miles of Tanrego, is Glanesk, and Loch Alt, six to ten miles broad, and 20 long, one continued chain of mountain and bog. Three-fourths of Sligo bog, and uncultivated mountain. In the above tract, lime-stone every where, in some, lime-stone gravel, and a good road runs through it; in all this no cultivation or improvements. Mr. Irwin, upon a part of this country, tried about an acre of boggy, moory mountain, to see if paring and burning would do, it answered greatly, and the best potatoes in the country were there next year. Lime he also tried, and with great success; he did this in order to shew the people that their wastes were improveable. Upon the sea-shore are immense beds of oyster shells,

shells, which are burnt into lime for building and plaistering, as they take much less fuel; these hills received no little increase from all the gentlemen of the interior country coming to the sea-coast to eat oysters, where having filled themselves sufficiently in the mornings, they got drunk in the evening; this was in the *uncivilized* times. Most of the gentlemen of this country were Cromwell's soldiers, and many Welch families, Jones's, Morgan's, Wynn's, &c. In the barony of Tyrera flax is universally cultivated; a man with 20 acres will have a rood, which is sown with five gallons of seed; all the females spin, but the number of weavers is inconsiderable. Walked down to the coast of Tanrego, immediately opposite Knocknaree, which rises very boldly; the bay of Ballyfadore comes up under it, and Ylanabaolane island of five or six acres, so rich, that it will fatten 9 sheep an acre; it forms Sligo bay.

To Sortland, the seat of ——— Browne, Esq; to whom I am obliged for the following particulars.

The barony of Tyreragh, black mold on limestone 6 inches to a foot deep, lets at 18s. average. The farms are various, generally taken in partnership, which is found a most mischievous custom, and destructive to all good husbandry. The course;

1. Potatoes manured with sea-weed. 2. Barley produce 15 barrels. 3. Oats 10 barrels. 4. Oats. Very little ever laid out to grass.

1. Pota-

1. Potatoes. 2. Barley. 3. Oats. 4. Flax on spots.

The sea-weed the only manure, and they depend intirely on it, and apt to do that too much neglecting other parts of management. The circumstances of the people are not at all improved in 20 years, they are not better fed or cloathed, or in any respect better off than formerly. Nor are they at all industrious, even of sea-weed they do not make one half the advantage they could, they might get an hundred loads where they get one. They increase in number very greatly, so as to be evidently crowded; this has been the case particularly since inoculation was introduced, which was about ten years ago. They live upon potatoes and milk, and for 3 months in the year, on oatmeal. Mr. Browne is convinced from every observation, that the potatoes are a very wholesome and nourishing food. The linen manufacture consists only in spinning, which is universal in all the cabbins, and it is so much, that they are affected by it, in paying their rents. They earn 3d. a day by spinning: one lb. of flax for 3 hank yarn a woman is 4 days spinning.

Within a mile of Sortland is a vast bog, which stretches 10 miles in length, and 2 or 3 over. It is a black one, 16 spit deep. There are hills in it of lime-stone gravel, but lime-stone is not to be found near it in general, though not searched for with any attention. It is, however, so cheap here that any improvements might be worked; Mr. Browne can burn it at 3d. a barrel

rel roach. He hires 1100 acres of this bog, of Mr. King of Ballina, at 4l. a year, though he has not improved it, has no doubt of its being improveable, and remarks that he never yet saw a bog that had not a fall enough to drain by. In the barony of Tyreragh, there are a few grazing farmers, but not many. Mr. Nesbit is the greatest, he farms above 3000 acres. Not a 3d of the county is bog and mountain, but more than half Mayo is so: average rent of the whole county, exclusive of bog and mountain, 16s. an acre. The shore is a very fruitful one in seaweed, which is burnt into kelp in summer; they pay a rent for it by the ton of what they get.

From the slate quarry to Enniscrone, 9 miles, they make 200 tons of kelp. The men have 17s. to 20s. a ton for serving, making, and burning, and it sells at 2l. 2s. There is not half so much used in manure as in burning. It is made all the way from this country to Galway. Mules, Mr. Browne thinks superior to horses, for carrying back loads, but much inferior in drawing ploughs and cars. They are so long lived, that the age is scarce ever asked when they are bought; they will live in common, in full work, to 30 years. They will also in bog, draw out their legs infinitely better, though they go deeper in. From 100 ewes, Mr. Browne sells 100 three year old wethers, fat, at 18s. to 20s. also 20 old ewes at 13s. 300 fleeces at 4lb. at 1s. or 45l. Buys in yearling bullocks at 40s. and sells out at 7l. gets thereby 5l. for keeping 2 years and a half. No hay given, except in snow. He has improved

improved 20 acres of dry moor from heath, it would not yield any rent, but now would let for 15s. an acre. The moor was one foot deep on lack clay; and under that a loose gravel, not lime-stone. Marled it at the rate of 150 barrels an acre, which cost in labour 5s. white marle from under a bog; spread it, and left it for a year, which killed the heath effectually, then ploughed it twice, and took two successive crops of potatoes, without dung, the first an extraordinary one, the second not bad: then two crops of barley, which were very good: then oats, 2 crops, both very good, and then set it at 15s. an acre. If he had ever such quantities of such land, he would never stop from the improvement of it, being amazingly profitable.

August the 27th to Ballyna, where I experienced the most polite reception from the Right Honourable Mr. King; the views of the distant mountains is very fine; the country is almost encompassed by them. Those of Donnegal to the right, a great ridge, which separates Tyre-ragh to the left, Nephin-noble in the front, and Knockaree behind. Many kilns for drying corn in the road. Passed three miles of pasturage under cattle, before I came to the river leading to Ballyna. The views there are very beautiful, it spreads in different reaches. That of Ballyna is uncommonly pleasing; the river a noble bend to a few rising grounds on which a part of the town is seen; beyond it the bridge, and the whole crowned by the Nephin mountain, which rises

rises with a magnificent regularity from its base, and is one of the finest mountains I have seen.

At Ballyna is a salmon fishery, let for 520l. a year, which is one of the most considerable in the kingdom; generally seventy or eighty tons salted, besides the fresh. Close almost to this fishery is a very pretty, and well-planted farm, belonging to Mr. Jones. Mr. Lindsay, the owner of this fishery, improved 16 acres of moor, covered with heath, in the following manner: he covered it with lime-stone gravel, at the expense of 30s. an acre, left it two years, by which time the heath was all dead; then ploughed it the end of summer, and in a month harrowed it; ploughed it and harrowed it again after Christmas, and in the spring set it to poor people, for potatoes, at 4l. an acre; they got a very good crop; next year ploughed it, and set it for a second crop, reversing the ridges, at three guineas. After this crop, barley, and got a good crop, sowing grass seeds with it.

Mr. Gore of Ballyna, had been mentioned to me as one of the most considerable in cattle of any person in Connaught; he was not at home, but his son-in-law, the Right Hon. Mr. King, was so kind as to procure me the particulars of his domain. Mr. Gore's breed of horned cattle is fine. Some years ago he sold heifers at 50l. a piece, and now from ten to twenty guineas; the breed not declined, but purchasers not quite so mad as they were. Yearling bulls 20 guineas. This breed he got from Yorkshire

30 or 40 years ago. His breed of sheep is also excellent, being much improved by rams from England. He improves much moory land and bog, generally 10 or 15 acres every year, by lime-stone gravel and marle. Average rent of Tyreragh 12s. Walked in the evening to a most noble garden, walled and planted by Mr. King: it is one of the completest I have seen in Ireland.

August 28th, took my departure from Ballina, and waited on the bishop of Killala. I wished to have some information concerning that vast wild and impenetrable tract of mountain and bog, the barony of Erris. His Lordship and Mr. Hutcheson were so kind as to give me every particular in their power. The only cultivated part is the peninsula called the Mullet, where they plant a good deal of potatoes, barley, and flax, by means of sea weed; and there is a rabbit warren, the skins of the rabbits yielding 100l. a year. The rest of it is without cultivation, except in small patches here and there; and it is supposed, generally speaking, to be without lime-stone or lime-stone gravel, but probably no great search has been made in so dreary a region. It is no easy matter to get in or out of it in winter; and very few persons ever attempt it from November to Easter, having impassable bogs in the way. There were 896 families in the barony in 1765, 400 of which are inhabitants of the Mullet: 47 protestant, and 849 popish. The bishop of Killala has built a house in the Mullet for a clergyman,
who

who resides there; the living is between 50l. and 60l. a year, and 40 acres of land, which the bishop has given from the fee lands. This may truly be called a sphere for content, and the philosophic virtues to exert themselves in; there is not a post-house, market-town, or justice of peace, in the whole barony, which is also the case with another barony in this county Costello. A post-house and a market are excellent things, but a justice may very well be dispensed with. There are many herds of small cattle, and some sheep kept, which are sold from thence. There is not a tree in the whole barony of Erris; a man going out of it to pay his rent, &c. his son with him, a lad of near twenty, when he came near Killalla, and saw a tree, "Lord, Father! what is that?" But bare of wood as it is at present, it was, in the sylvan age of Ireland, completely covered: for in no part of the kingdom is there found more or larger in the bogs.

The barony of Tyrawly is among the best parts of the county of Mayo; 800 bullocks, most of them fat, are sold from it annually at Ballynasloe fair, which are kept here from being year olds, and sold at 4l. The quantity of tillage is very inconsiderable, but what there is, is vastly improved by the use of sea weed. Lands near the sea let at 20s. which at two miles, would yield but 14s. merely from being too far, as they reckon, to carry the sea weed. The poor people in this barony are not improved in their circumstances in eighteen years past, that

that the bishop has resided at Killalla. There is some weaving, so that there is scarcely a market at Ballina, or Killalla, without some linens fold. Spinning is universal in all the cabins, but the yarn is only four-hank yarn. They spin and weave wool enough to cloath themselves, with drugget, yard-wide for the women, at 1s. a yard, and frize for the men; at a *slatt*, or measure, four feet two inches long, and 20 to 23 inches wide, which sells from 1s. 1 id. to 2s. 4d. Their food is potatoes, cockles, herrings, and a little meal; and when the potatoes are out, on oatmeal only. They do not all keep cows, but the majority do, and those who do not, buy milk. Beef 1d. per lb. in autumn, twenty years ago, now three halfpence. Fish very plentiful; I partook of three gurnet, two mackarel, and one whiting, at the bishop's table, which his steward bought for sixpence halfpenny, enough to dine six people. Lobsters plentiful. Turbot 3d. a pound. There are 150 boats belonging to the bay of Killalla, or Moy, and to the town, from twenty to twenty-five, five men to a boat, the boat has a fifth, the nets two-fifths, and the crew two-fifths; the two-fifths belonging to the crew, are subdivided into sixths, of which the skipper has two. The herrings are caught near the bar, and in the river Moy; the fishery begins in October, and lasts only two or three weeks. They judge of the shoal being there by the Gant, a bird that pursues the fish; they sometimes get each boat 10,000 herrings, which is a full load, but this is very rare, in general a good night's work is
from

from 3000 to 5000, and the price is from thirteen pence to two and sixpence, the medium 1s. 8d. per hundred, or 16s. 8d. per thousand; consequently a night's work 2l. 10s. The boat is 4 ton, and costs 20l. and the nets 10l. Seven share of nets to each boat; each share sixty yards long, and four fathom deep, eight score mesh. The nets are all made here; the poor people use flax, but others use hemp; they bark them, but none tar and oil. The fishery was once much more considerable than at present. There is no ship belonging to this port, they had one, but that wicked fellow, Thurot took her, and quite unshipped the harbour.

August 29th, took my leave of the good bishop, to whom, and his son, Mr. Hutcheson, I am obliged for the preceding particulars and many civilities. Breakfasted with the Rev. Mr. Garrat, at Foxford; passed over some very fine reddish sandy loams, till I came to a hill, from whence an extensive tract of bog is seen. Rents about Foxford are 12s. for cultivated, arable, and pasture, and thence to Castle-bar the same. From Foxford to Tubbercurry sixteen miles of bad country; the best of the cultivated land 12s. some at 8s. and 10s. but these rents are only the improved spots: they are improving the moors and mountains very fast, particularly the estates of Mr. Rutledge and Lynch. It is done with white marle from under bogs. It must not be imagined that when I speak of mountains and moors in Mayo, or its wild barony Erris, that these lands yield no rent; they are

are let in the lump, and applied to feeding cattle. They put on two year old bullocks, and keep them till full three, when they bring them to the good grounds, and from thence take them to Ballynasloe. These mountains will not do for year olds. Some of them are unhealthy for cattle; for if they are left more than a month or six weeks on them, they are disordered with lumps on their joints, so that they cannot rise from the ground; yet at the same time shall be in good order, it disappears on a change of pasture. Red deer run wild in the mountains of Erris.

To Castle-bar, over an indifferent country, and a vile stoney road; about that town the husbandry is admirable. They have three customs, which I must begin with; first they harrow by the tail, item the fellow who leads the horses of a plough, walks backward before them the whole day long, and in order to make them advance, strikes them in the face: their heads I trow are not apt to turn. Item, they burn the corn in the straw, instead of threshing it. Among their customs it may be worth mentioning, that at the wakes or funeral entertainments, in addition to the circumstances I related at Castle Caldwell, both men and women, particularly the latter, are hired to cry, that is, to howl the corps to the grave, which they do in a most horrid manner: they are not so disagreeable, however, in Munster, as I was told. The quantity of whisky and tobacco consumed upon these occasions is pretty considerable.

derable. In the lake of Castle-bar, near that town, is the char, and the Gillaroo trout with gizzards, and it is remarkable that there are no pike in the lakes of this country. Land lets at 15s. to 20s. cultivated, both grass and arable: town parks 40s. The mountains are reclaiming by lime-stone sand and gravel; it is the common cottars who do it. There are more than 500 affidavits sent to the Dublin Society upon this account, in which I was told they are apt to be deceived, as well as in the corn standings. There are very large farms in this neighbourhood, even up to 2000l. a year: but all the great ones are stock farms, and most of the tillage of the country is performed by little fellows, cottars, and tenants to these large farmers. Eight or nine years ago there were no linens here, but now 300 pieces are sold in a week, 200 looms are employed in the town and neighbourhood, yet great quantities of yarn are sent off. The town, which belongs to Lord Lucan, is greatly rising from manufactures; the houses are well built, yet only 31 years, or 3 lives granted.

In the evening reached Westport, Lord Altamont's, whose house is very beautifully situated, upon a ground rising gently from a fine river, which makes two bold falls within view of his windows, and sheltered on each side by two large hanging woods; behind, it has a very fine view of the bay, with several headlands projecting into it one beyond another, with two or three cultivated islands, and the whole bounded

bounded by the great mountain of Clara Island, and the vast region of Crow-Patrick, on the right; from the hill above the wood, on the right of the house, is a view of the bay, with several islands, bounded by the hummocks, and Clara Island, with Crow-Patrick immediately rising like the superior lord of the whole territory, and looking down on a great region of other mountains that stretch into Joyce's country.

In Lord Altamont I found an improver, whose works deserved the closest attention; he very readily favoured me with the following account: he began to improve mountain land in 1768, and has every year since done some, making it a rule to employ whatever labourers offer for work. All of it covered with heath, (*erica vulgaris*) and the soil on the surface moor; would let for two shillings an acre, for turning young cattle on, the only use to which it was applied.

EXPERIMENT, No. I.

Improved a piece of mountain land, of the above description, by spreading lime-stone sand. (N. B. The marle called here *sand*, is what I have generally found under the denomination of lime-stone *gravel*; the stones in it are of the size of a man's double fist, it is clayey, and very hard bound together in the stratum; the harder to raise, the better it is. It has a strong fermentation with acids.) Spread the sand on the heath, and left it for one year, at the expense

penſe of 1l. 1s. danged it, and planted potatoes; found great difficulty in digging it from the roots of a kind of graſs, like a ruſh, called *keeb don*, in Engliſh, *black keeb*. The crops very bad. Danged it the year following for oats; the crop very fine, and repeated them the next year. Left the oat ſtubble, and it covered itſelf ſo with good natural graſs, that the next year mowed a crop of hay, and the ſame two years more. Finding it not well reclaimed from having ploughed it too ſoon after the ſanding, gave it a new manuring at nearly the ſame expenſe; did not plough it any more, but ſuch of the ſtones as had not funk of themſelves, were beat in with mallets, at the expenſe of 2s. 6d. an acre, in order to ſmooth it for mowing. This was very practicable, having two ſpits of boggy turf on the ſurface. Ever ſince it has been excellent meadow, worth 1l. 2s. 9d. an acre.

EXPERIMENT, No. 2.

In 1764, improved another piece, ſanding it at 40s. an acre, owing to the diſtance; left it two years on the land, and then ſet it at 40s. to the poor people for potatoes; after which took three noble crops of oats. Then left to graſs, and the firſt year mowed a great crop, and ſet it for 16s. an acre.

EXPERIMENT, No. 3.

In 1765, began with fifty acres more of mountain land, but full of heath. Firſt drew off the ſtones, and made a wall round it fix

feet high, and the stones not wanted for this, threw down the river, some of which were so large that it took sixteen bullocks to draw them. Expence 30s. an acre, besides 1s. 6d. a perch for the wall. Dug and burnt it, and spread the ashes, 2l. 2s. an acre; it was before too rough and coarse to plough. Then ploughed it with bullocks, and sowed rape; the crop middling, where the ashes were yellow, good, where white, bad; seeded the rape, and then dug it, and limed it, 160 barrels an acre. Would not use lime had not the hill been too steep to lead gravel up; he had nineteen lime-kilns burning at once. Upon this liming ploughed for oats; the crop tolerably good. A second crop of oats, which were very fine, and then let it run to grass; let it at 15s. an acre. Observed that the burning brought up a great quantity of rushes, which had not appeared before.

EXPERIMENT, No. 4.

Another considerable piece, where turf had been cut, was manured, part with lime-stone sand, and part with mortar rubbish, and another with *graulagh*, or coralline shelly sand; the expence each about 1l. 2s. 9d. an acre. Ploughed it and burnt it, and sowed it with turnips: a very noble crop. Drew the turnips, and fed them in a pasture. The spring following planted it with potatoes without any other manure, and the crop much the greatest he ever saw in his life; from one stalk had 143 potatoes, then took three crops of oats, which all proved exceedingly

ceedingly good. The black Frizeland oat, and the second crop, yielded 26 barrels an acre, each 14 stone. Sowed Dutch clover with the last crop, and could let it at 20s. an acre.

EXPERIMENT, No. 5.

Another piece of heath mountain, not entirely dry, worth 1s. an acre, manured very richly with lime-stone sand, and at the expense of 30s. an acre, and left so without any other improvement. In three years it was worth 5s. in eight years 10s. an acre, and in twelve years 11. 1s. and so has remained.

EXPERIMENT, No. 6.

Another piece, worth five shillings an acre, was sanded at 11. 2s. 9d. which was left three years on it, and then planted with potatoes, by the country people, who paid 3l. 10s. an acre. After which it was sown thrice with oats, the crops very good, left for meadow, and let it at 30s. an acre.

EXPERIMENT, No. 7.

Sanded another piece, at 11. 5s. left it three years, and ploughed it up in dry weather, in May; left it till after wheat sowing, and then cross-ploughed it, and in the spring harrowed it with great ox harrows, and planted it with potatoes; after which two crops of oats, great crops, and then left it for grass. Worth immediately 11. 2s. 9d. an acre.

A curragh of one hundred acres, that is a wet quaking bog, which will not do for turf, with a long fedy grafs on it. Part of a farm at 30l. a year, Lord Altamont took into his hands, with the consent of the tenant; he drained it to the amount of 30l. at 7d. a perch, five feet deep, and ten feet wide; this simple thing improved it so much, that without any other improvement, he set it to the same tenant, at 70l. a year. Made perfectly sound, so that bullocks of 8 cwt. could graze on it.

Upon the whole, Lord Altamont is of opinion, from a variety of experience, that the best method of breaking up heathy mountain land, is by manuring with lime-stone sand, to the thickness of an inch, which at present costs 1l. 11s. 6d. per acre. If sand is not to be had, then the white marle from under moory bottoms; and if there is none of that, then lime. Objects to lime, as it brings the land infallibly to moss, which is so powerful as to choak the grasses, but marle is an excellent manure. To leave it for three years, or till daifies (*bellis*) and white clover (*trifolium repens*) appear, then to plough it in May or June, and again in autumn; and in the spring to plant potatoes, in the common trenching way, and after the potatoes, would sow oats successively, till the chickweed (*alsine media*) appears, which is a sign that the tillage has so enriched the land, that the crops will be too great, and then leave it for grass. This is what he has on experience found to be the best way. If sea weed is plentiful,

tiful, he would manure the potatoes with it, and then would have the first crop barley instead of oats. A large portion of these mountains are wet, owing to the lack clay, but the potatoe trenches break it, and let off the water; after which the land fettles by degrees, and becomes perfectly dry. There are great tracts of many miles extent of heath mountain in this neighbourhood which are capable of the above improvements.

To shew what the advantage would be of doing it on a perfect and extensive scale, I shall calculate a square mile of six hundred and forty acres inclosed in sixty-four divisions, ten acres each, and the walls would amount to

5760 perches, two miles of road at 50l.	100	0	0
Lord Altamont has found that his walls of six feet high, two feet and a half wide at bottom, and sixteen inches at top, built dry, cost him on an average, 5s. a perch running-measure, of 21 feet, including all expenses, 5760 at that rate	-	1412	10 0
Forty gates of Iron, at 50s. Piers, &c. &c. 5l.	200	0	0
Of wood, they cost 2l. complete			
Ten-acre divisions would completely clear the land of stones,			
Standing at 1l. 11s. 6d. an acre	-	984	0 0
		<hr/>	
		£.	2726 10 0

Brought

Brought over	-	£. 2726 10 0
Left for three years interest of 1000l. to begin with for that time, at 6l. per cent.	-	180 0 0
This is an unfair charge; Lord Altamont observed that the improved value would more than pay it.		
Ten farm-houses, with offices, at 50l. each		500 0 0
		<hr/>
Total first improvement	-	£. 3406 10 0
		<hr/>

The potatoes will pay their own expenses, and 40s. an acre profit. The crops of oats, on an average, 40s. an acre profit, after paying all their own expenses. Lord Altamont could have this price as rent, for liberty to sow them.

Profit by potatoes	-	1280 0 0
Ditto on oats, three crops, at 40s.	-	3840 0 0
		<hr/>
		5120 0 0
Deduct seven years interest at 6 per cent. on 3400l.	-	1428 0 0
		<hr/>
	Neat profit	3692 0 0
Original expense	-	3406 10 0
		<hr/>
Profit	-	£. 285 10 0
		<hr/>

Let, on an average, at 15s. an acre, which is what Lord Altamont is clear is the lowest price it can be reckoned at, it is per annum.

	-	£. 480 0 0
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An income of 480l. is created without expenſe. This for a landlord: if hired at 2s. an acre, the account will be the ſame, except the deduction of that for rent. I forgot to obſerve, that when the heath dies, which it does in three years, then daiſies appear, and white clover, which are ſigns that the land is fit for culture. There is ſomething very extraordinary in this circumſtance, that laying on a powerful manure for cultivated vegetables, ſhould prove poiſon to the ſpontaneous growth. * It is only to be accounted for by ſuppoſing that the heath is nourished by an acid in the ſoil, which being neutralized by the alkali, is no longer the food of that plant, after which it dies for want of its uſual ſupport. It is very remarkable, that all the wild mountains in this country have marks, and to a great height of former culture, mounds of fences, and the ridges of the plough. Lord Altamont's great grandfather found the eſtate a continued foreſt; in 1650, thoſe woods were of much more than a century growth, ſo that no cultivation could have been here probably of 300 years. There is a tradition in the country that it was depopulated by the plague, and upon that the wood ſprung up which formed thoſe foreſts. At preſent there is no wood on any of the hills, except immediately about Weſtport.

I obſerved, beſides this great range of mountain improvement, that Lord Altamont proſecutes various parts of huſbandry with much ſpirit. He has been at great expenſes in introducing

ducing the best breed of English cattle. I had no slight pleasure in seeing great composts formed of dung and earth, and sea ore, well mixed together, and then carried into his meadows. Stands were also building for corn stacks, and under them standings for cows or oxen, and vaults for potatoes: they are executed in the most perfect manner. A sort of oat he has introduced into cultivation, a few grains of which he got by accident, cultivated them carefully in drills, and has got a large quantity now. They are of so great a body that he calls them Patagonian oats. He favoured me with a few for seed. In introducing the linen manufacture, his lordship has made great exertions. He found it to consist principally in spinning flax, which was sent out of the country, without any looms in it, except a very few, which worked only for their own use. In order to establish it, he built good houses in the town of Westport, and let them upon very reasonable terms to weavers, gave them looms, and lent them money to buy yarn, and in order to secure them from manufacturing goods, which they should not be able readily to sell, he constantly bought all they could not sell, which for some years was all they made; but by degrees, as the manufacture arose, buyers came in, so that he has for some time not bought any great quantity. The first year, 1772, he bought as much as cost him 200l. the next year, 1773, 700l. the next, 1774, as much as 2000l. and in 1775, above 4000l. worth: and this year, 1776, the number of buyers having much increased, he will not lay out

out more than 4000*l.* the same as last year. This year he has also given such encouragement as to induce a person to build and establish a bleach green and mill. The progress of this manufacture has been prodigious, for at first Lord Altamont was the only buyer, whereas for two years past there has not been less than 10,000*l.* a year laid out at this market in linen; yet with all this increase, they do not yet weave a tenth part of the yarn that is spun in the neighbourhood. The linens made are all coarse, generally 8 to 1100, from 9*d.* to 1*s.* 1*d.* a yard. They are double webs of 42 yards and upwards, and 32 inches wide; and they earn 1*s.* a day by weaving it, on an average of workmen. It is of 2½ to 3½ hank yarn, and the spinners earn two-pence halfpenny to three-pence halfpenny a day by spinning it. The price of it has been in 5 years gradually rising from four-pence to seven-pence a hank. All of it is spun of flax raised in the country.

The poor in general live on potatoes and milk 9 months out of the 12, the other 3 months bread and milk. All of them have one or two cows; fish is exceedingly plentiful, particularly oysters for 1*s.* a cart load, and sand eels, yet they eat none; herrings, however, are an article in their food. In their domestic economy, they reckon that the men feed the family with their labour in the field, and the women pay the rent by spinning. The increase of population is very great. Lord Altamont is of opinion that the numbers have doubled on his estate in 20 years.

The farms around Westport are in general large, from 400 acres to 4 or 5000, all which are stock farms; and the occupiers re-let the cultivated lands, with the cabbins, at a very increased rent, to the oppression of the poor, who have a strong aversion to renting of these tierny begs. The soil in general is a cold spewy stoney clay and loam; the best lands in the country are the improved moors. Rents rise from 2s. for heath, to 16s. for good land. Average 8s. about three-fifths of the country unimproved mountains, bog and lake. Great tracts of mountain, but bogs not very extensive. Clara Island 2,400 acres, at 300l. a year; Achill 24,000 acres, at 200l. a year; Bofin 100l. a year, and is above 1200 acres. It belongs to Lord Clanrickard. The course of this country, 1. Potatoes, manured with sea-weed: this is so strong that they depend entirely on it, and will not be at the trouble to carry out their own dunghills. On the shore, towards Joyce's country, they actually *let their dunghills accumulate, till they become such a nuisance, that they move their cabbins in order to get from them.* A load of wrack is worth, at least, six loads of dung. They do not take half what is thrown in. On the shore, open to the Atlantic, there is a leather fort of Alga, which comes in in the spring. The kelp weed grows only where it is sheltered. The coast of Lord Altamont's domain and islands let for 100l. a year for making kelp.

1. Potatoes. 2. Barley. 3. Oats. 4. Oats.

1. Pota-

1. Potatoes. 2. Barley. 3. Oats. 4. Flax.

1. Potatoes. 2. Barley. 3. Oats.

Potatoes they measure by the barrel of 12 cwt. and in each barrel 16 pecks of three quarters each. They plant 10 bushels, of 3 cwt. each, at the average price of 12s. a barrel, or 1s. per cwt.

Expense of an acre.

Manuring with sea weed	-	-	1	1	0
Rent	-	-	0	8	0
County cefs and parish charges	-	-	0	1	0
Seed	-	-	1	10	0
Planting, 30 men a day	-	-	0	15	0
Shovelling 10 ditto	-	-	0	5	0
Weeding 3 ditto	-	-	0	1	6
Taking up, and carrying home, 60 men			1	10	0
Sorting, &c. 3 men	-	-	0	1	6
			<hr/>		
			£.	5	13 0
			<hr/>		

They will not carry sea weed above a mile; if dung is used, the expense will be

-	-	2	2	0	
			<hr/>		

P R O D U C E .

Twenty barrels, or twelve tons, at 12s.	-	12	0	0	
Expenses	-	-	5	13 0	
			<hr/>		
Profit	-	£.	6	7 0	
			<hr/>		

A man,

A man, his wife, and four children, will eat a bushel of 3 cwt. every week : in 39 weeks, therefore, they eat 117 cwt. or 5 ton, 17 cwt. this is just half an acre for a family. Of oatmeal, the common allowance is a quart of oatmeal a day for a labourer. A mower that is fed is allowed that quantity, and 6 quarts of butter milk a day, or as much *bonny clobber*. To explain what this is I must observe, that they set the milk three days for the cream to rise, and having then skimmed it, the milk that remains is as thick as blamange, and as sour as vinegar, and this is *bonny clobber*.

Of barley they sow 6 pecks, each 21 quarts, and the crop is generally from 20 to 30 fold, or at 25 it is 150 pecks. Of oats they sow a barrel of 24 stone per acre, and they get 6 such barrels. Of flax they sow 40 gallons, and it will sell in common *on the foot* at 8l. they find that it enriches the land. No wheat sown but by gentlemen for their own consumption. *They burn their corn, instead of threshing it.* The grazing system is generally the succession, buying in at year olds, or if the lands are very bad, two year olds; keep them till four year olds, and then sell them lean at Ballinasloe. They give 10s. 6d. to 3l. 10s. for yearlings; average 40s. For two-year olds, they give 3l. They sell for 6l. what they gave 2l. and for those they gave 3l. they will sell at four-year olds for 6l. They keep but few sheep, but generally buy year-old wethers; *boggerils* in May, at 8s. to 10s. each, shear them and turn to the mountains;

mountains; bring them on to their arable lands in winter, shear them again the following year, and send them to the mountain again, and in the following summer shear again, putting them on their best pastures, and selling fat at Ballinasloe, at 15s. or 16s. their fleeces 5 lb. at 1s. a pound. There are some dairies, as far as ten or twelve cows, which are employed for butter. Twenty years ago cows were let for 1 cwt. of butter for the year, and rearing the calf. Very few swine kept, and of a bad kind. They plough all with horses, four in a plough, directed by a man, walking backwards, who to make them move forward, strikes the beasts in the face. Young colts they harrow with by the tail. Twelve horses are necessary for one hundred acres in tillage. They winnow their corn in the road, and let the wind blow away the chaff.

Lord Altamont mentioned descriptive of Mayo husbandry, acts of parliament to prevent their pulling the wool off their sheep by hand; burning their corn; ploughing by the tail; in hiring and stocking farms, the common computation is, three rents for a grazing one. Land sells at twenty-one and twenty-two years purchase, at rack rent. Rents have fallen within five years, 1s. in the pound; they are at present on a balance, with a tendency to rise. Tythes are compounded in the lump. Leases, three lives, or thirty-one years, also twenty-one years. Much land let to those who re-let. The rents in Mayo are trebled in forty years. No

emigrations. Farms are generally let in partnership, but the term *Kundale* not known. Labour generally done by cottars, who have land let to them, or grafs for cows, under agreement to work for the landlord. Provisions, which the poor eat, not risen, but butchers meat doubled. They pluck their geese alive every year. All carriage done by horses with baskets: the bottoms of which fasten with sticks, and let out the load. The industry of the people very much increased; an astonishing change in industry, sobriety, &c. and are in much better circumstances in every respect, than twenty years ago. They have a practice common among them, which shews an increasing civility in the change from Irish names to English ones. Even surnames, for instances *Stranaghan*, Irish for *birds*, which they call themselves. *Markabau*, Irish for a *rider*, which name they take; *Cullane*, Irish for a *whelp*, which name they assume; others call themselves *Collins*. *Conree*, Irish for a *king*, which they call themselves; *Ruddery*, a *knight*, and many others. Among Lord Altamont's labourers, is one Mowbray Seymour; his great grandfather was master-worker of the mint at London. There are many Mortimers, Piercys, &c. and within a few years, a Plantagenet, in the county of Sligo. Eagles abound very much in this country, and do great mischief, by carrying away lambs, poultry, &c. they also watch the salmon jumping, and seize them even out of the water, by darting with that celerity, of which they are such masters; this is so common,

mon, that men with guns are set to kill and frighten them.

August 30th, rode to Roshill, four miles off, a headland that projects into the bay of Newport, from which there is a most beautiful view of the bay on both sides; I counted thirty islands very distinctly, all of them cultivated under corn and potatoes, or pastured by cattle. At a distance, Clara rises in a very bold and picturesque stile; on the left, Crow Patrick, and to the right, other mountains. It is a view that wants nothing but wood.

August 31st, to Newbrook, over a various country, part waste, and much cultivated. About Castle-Burk, the road crossed a most remarkable stoney natural pavement, regularly furrounded with grass trenches, all on a flat. Passed the ruins of a very fine abbey; reached Holymount, Mr. Lindfay's, a very considerable grazier; about which place, the soil is in general, a stoney clay, from six inches to two feet deep, on lime-stone gravel; it is quite dry found land, and the stones are lime-stone. Lets from 12s. to 15s. an acre. Farms are very extensive, up to three or four thousand acres, all stock ones, with portions re-let to cottars, who are the principal arable men here. They are in the succession way, buying in year-olds at 40s. keep them till three or four year olds, sometimes only keep them two years, they pay about 20s. per annum, on a medium. They are sold, at whatever age, for stores to the graziers in
the

the rich countries. Another system is, to buy in cows in May, at 2l. 12s. 6d. to 3l. and make about 1l. 10s. profit. A cow will take an acre, but there will be an after-grass, worth 5s. an acre, for sheep. The sheep system is breeding and selling three-year old wethers fat, the wool, and the culled ewes. Above half the county bog, mountain, and lake. Folding sheep, I suppose, will come in here, for they have got very near it. They drive their sheep to a spot of grass, which they let for grass potatoes, at 3l. 10s. to 5l. an acre, doing this at night, till the land is well dunged. The crops are eight tons on an average:

1. Potatoes. 2. Bere, if sanded, 8 to 10 barrels. 3. Bere. 4. Oats, 8 to 10 barrels. 5. Oats, 8 barrels. 6. Oats, 8 barrels. 7. Flax. 8. Wheat. 9. Sand for the bere, if for potatoes the sand does hurt, unless it lies two or three years on the grass. 3 cwt. the barrel of bere, the same, which is surprising. 4 cwt. of wheat.

September 1st. to Tuam; dined with the Archbishop. All this country is a good found lime-stone land, and famous for sheep; but upon enquiry, I found it did not materially vary from the neighbourhood of Holymount, or Moniva, whither I was going in the evening. Reached Mr. French's, at that place, to whose very obliging attention I am indebted for the following interesting particulars: he has improved 60 acres of bog, and 290 of moor, which he
began

began in the year 1744, with a great red bog, from 20 to 30 feet deep, so wet and spongy, that no turf, fit for burning, could be found to cut in it, so very wet and loose, that a man could not go on it without jumping from tuft to tuft; no heath on it, except at the verge; the only spontaneous growth red and white moss.

The following account of this great improvement, Mr. French sent to the Dublin Society. It was never published. I insert it therefore with the utmost satisfaction.

B O G R E C L A I M E D.

Copy of a letter to the Dublin Society, for which they granted him a gold medal.

DEAR SIR,

Moniva, Jan. 24th, 1769.

ALTHOUGH I have not hitherto applied for a medal or premium, yet for above 20 years past, during which time the works I describe have been carrying on, I have observed the useful hints of the Dublin Society, tried many experiments recommended by them, and have followed their instructions, which have turned to my pleasure, profit, and advantage. I observe, that it is necessary to lay before the Society the quality of the bog, and the method pursued in reducing it, but fear their patience may be tried upon the present occasion.

The castle of Moniva, now part of my dwelling-house, is very ancient, and was built for a place of defence; it stands upon a dry gravelly soil, which, like a peninsula of five acres, run between two very high, red, deep, wet bogs, impassable for any beast of burden, very difficult even for men to pass. The bog, on the north side, contained above 13 acres; the other, on the south, is of a great extent. The east side of the castle was defended by a deep winding river, a few perch beyond which was a large extent of extreme wet red impassable bog, so high as to prevent from the lower rooms of my house, a view of the country beyond it, and of a great part of an high island of land of about 15 acres, which lay towards the middle of the bog. A large old wood, which stands on 111 acres, in a semicircular form, partly round a lawn of 70 acres, upon a gentle rising dry ground, defended the west of the castle. The river, on every heavy rain, overflowed to the verges of the bogs, and very near to the castle. That I may not assume too much of the following improvements to myself, I must let you know, that my father formed a scheme to turn the course of the river through the great east bog, which was from 26 to 28 feet above its level, and made a considerable drain through the bog for the purpose. He also made a deep mearing drain, near a mile in length from the river, through the large south bog, and divided about 90 acres thereof, by cross wide and deep drains, into 5 divisions, and by two drains
through

through the north bog, laid out an approach, 7 perch wide, to his house, but his life proved too short to execute his extensive scheme.

Upon his decease, in the year 1744, I first pursued his plan to turn the course of the river, widened the drain made by him to 27 and 30 feet, according to the height of the bog, and sunk the drain to the gravel, where I could do so, and in some parts two and three feet deep into the gravel, which proved excessive hard. In other parts of the drain, the bottom of the bog was much lower than the level of the river, in which parts, as the water could not be drained off, there was no digging to the gravel. The sides of the drain were so high, that I was obliged to cut them in some parts into benches, in the form of stairs, to prevent the men at the bottom from being overwhelmed, which would once have happened, only that a man standing on the surface, observing the bog to burst, gave the alarm, by which he saved the lives of several men; for in a few moments many perches in length of the drain were filled up to the top, more difficult to be again shovelled out, than if it had not been cut before; it required sometimes four or five men standing upon different benches to convey what the lowest shovel took up to the top, besides the necessity of removing the stuff from the edge of the drain, to prevent the frequent burstings in of the bog. The greatest difficulty was to draw up prodigious large roots of fir trees, which lay firmly fixed

and very found, juſt over the gravel, at the bottom of the bog all along the drain. This I effected, by laying two large beams from the top, ſo as to form an inclined plain to the bottom: then drove down into the bog above, a ſtrong beam perpendicular, and made it firm by ſtones; to this, I fixed a great pulley, and another pulley to the root below, firſt ſeparating it by hatches and iron crows from its large arms, which run under the bog: then by running a cable through the pulleys, the united ſtrength of 16 or 20 men drew up the largeſt roots along the ſliding plain. The men as they drew up the roots, uſually ſtood upon the firm gravel at the bottom of the drain, the top being in many places too ſoft for footing.

Having completed the drain or water-courſe, which is above ninety perches in length, through the great eaſt bog, I ſet about making a ſtrong bank, from the eaſt to the ſouth bog, 20 perches in length, and from 15 to 50 feet broad acroſs the old river, which was 16 feet deep. For this purpoſe I drove down a row of long wooden piles, and a ſecond row acroſs the river, and made the bank by filling up the intermediate ſpace with ſods well rammed and preſſed down.

I had the ſatisfaction to obſerve, when I had made a ſecond bank, at the lower or north end of the new drain, to prevent the water from returning back into the channel of the old river, but at much leſs expenſe than the former
coſt,

cost, that the river run its new channel, that I immediately gained about 10 acres of fine bottoms for meadows upon each side of the old river, and as the new river was three or four feet higher than the old, I obtained a fall for a mill, which I observed might be increased, by running a deep drain through the north bog for a tail race, which would also contribute to reclaim that bog: this I perfected, run it 11 feet wide down to the gravel, 94 perch in length, and in some parts into the gravel, to preserve the level. I built a bleach mill, the first built in the province where the fall lay, and the bog since reclaimed about it, is part of the green for bleaching linen.

From my new river, to a lake which lay about 230 perch to the east in the great bog, I cut a large drain of that length, to supply my mill with water from the lake, when the river should prove low in summer. This work was thought to be impracticable, the bog between being many feet higher than either the lake or the river, but I know that the lake was higher than the river; indeed, for the first and second year, it proved impracticable, the drain, though laid out above ten feet wide, still filling up as it was made: but by perseverance, and still opening the drain at the end where the fall lay, at length the lake, to the surprise of many, run into the river, and gave me a new command of water. The whole bog, in ten years time, sunk amazingly, and disclosed to me, from the windows of my house, the prospect of a country

try which could not be seen from them before; but works of this kind require patience and perseverance: for at the end of three years, when curiosity led me to see the effects of a great flood after a very heavy fall of rain, I had the mortification to see the great bank, which I made across the river, float away, like a boat before me. The neighbours, who for years past had insisted that my father and I had undertaken an impracticable work, applauded their own judgment upon the occasion, and endeavoured to dissuade me from any further pursuit; but instead of following their advice, I immediately provided a boat, (for horses and cars could not, without great difficulty, be brought to the place) and with its assistance conveyed stones sufficient to fill up the channel of the old river, the breadth of the bank, and afterwards, by bog stuff brought by boat, and sunk in the front of the bank, I made it staunch; then raised it by sod work, and planted trees on the top of it, by which means it has remained firm, and answered my whole design for these nineteen years past. When I erected my mill, and made sluices to keep up the water for it, I observed that my new river thereby became navigable for a boat, as well as the old river, and that it might prove very advantageous for the conveyance of manures, if a communication was made from one to the other; but this was difficult, as the new river, in time of flood, was four or five feet higher in its level than the old river. yet I overcame the difficulty, by cutting a navigable line 16 perch in length, where was
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firm gravel at the bottom, from river to river, and built a water lock at the edge of the new river, where I found a firm foundation at the bottom of the bog. It answered my purpose, gave me a great command of water; for by opening the sluices of the lock, I can at any time overflow my meadows, which lie on each side of the old river: it has stood now for about 18 years. When I observed the advantages which arose from being able to convey manures by boat, I proceeded, and cut a navigable line 30 perch long, 20 feet wide from the new river, above the great bank into the south great bog, and cut another navigable line 32 perch long, 12 feet wide, from the old river northward into the north bog, and another navigable line through the same bog westward, in a winding direction, for the sake of beauty, 50 perch long, and 20 feet wide; and cut another line 21 perch long, and 14 feet wide southward, from the western line, which brings my boat into my farm-yard, and enables it to proceed through all the navigable lines which communicate with each other. Several springs of water rose from the uplands, which lye west of the north bog, and probably were the cause of that bog in the before-mentioned navigable line, which run towards these springs. I built a second water-lock, and turned an arch over it, as it stands in one of the approaches to my house; by shutting the gates of this lock, the springs which run into the river, being intercepted, a sheet of water overspreads near two acres in my lawn, which lies between the wood and my house, and
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the boats are thereby enabled to go to the highlands, where there is plenty of gravel to manure the bogs. I made my navigable lines by banking out the water, and keeping the drains empty by screw pumps of about 13 feet long, which were worked by two men relieving each other day and night, which my own carpenter made, and also built my locks before he had seen any thing of the kind, until he admired his own works. Whilst I was executing the works which I have described, I proceeded to reclaim the bogs adjacent to them. The lines I have mentioned divided the north bog into 4 parts, which I inclosed by smaller drains into so many little parks; it is entirely reclaimed, and has been for several years past under tillage and meadow, and yet, now, though it has subsided considerably, an iron borer of 18 feet, does not in several parts thereof reach the bottom of the bog: it was full of holes, out of which turf for fuel had been formerly cut, the levelling of which added much to the expence of reclaiming. The east bog, from the island to the old river, is all reclaimed, except two or three acres towards the south, and has likewise been under tillage and meadow for some years past. I reclaimed these two bogs, by covering the surface with lime-stone gravel, then laid a coat of dung over it, and planted potatoes upon the dung; the next year sowed oats, or rye and grass seeds, and the following year mowed the produce: the bog was so wet, that I cut several small drains, which I since filled up, when they had

had performed their office. To lay the gravel on, I was obliged to make roads with hurdles, to bear up small horses, which carried the gravel in baskets upon their backs, and to remove the hurdles from place to place, as occasion required; the boats laid the gravel and manures upon the sides of the rivers and the drains, from whence the horses conveyed them. The subsiding of this bog is remarkable; if I should say from fifteen to twenty feet, I think that I should not exceed: when I first cut the new river, the bog rose in a hill between it and the old river; there is now a fall the whole way, except where the hill stood, which is the lowest part. The bog is now so firm as to bear a loaded cart. I sloped the sides of the hollows, where for some years I had cut turfs; being advised to cut the bog away, but that would be the work of ages; and where the surface was cut off proved most barren, and required most manure: these hollows are now little green vales; and posterity will puzzle, as some do at present, to find the cause of them. After the first crops were taken off, and mowed for two or three years, I observed little tufts of heath began to appear in the meadows; where these appeared, some parts I tilled again; put dung upon others; but lime effectually banished them; and so did a mixture of kelp and ashes, the refuse of the bleach-green, which proved the richest manure. I spread river-mud upon one or two acres, which had little effect, only produced a sedgey spirey grass, until dung was laid over it; marle had somewhat a better effect than the river-mud,

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but marle, mixed with dung, proved very good; lime, dung, or kelp, broke fine into powder, proved the best. I reclaimed above one acre, by gravelling, and laying a coat of fresh lime over the gravel, and planted potatoes upon the lime, without any dung; the potatoes were small, and lay thin when dug out, but the corn, which succeeded them, proved very good, and the bog was thereby well-reclaimed. It should be observed, that all the stone and gravel of this country is lime-stone. I tried to reclaim part by burning, but the red bogs, which mine were, proved too wet and spongy; the ashes were white, and so light that they had little effect. In the manner I have described, I reclaimed about five acres of the south bog, which lay within the navigable line; but not being able to pursue my navigation into this bog, the gravel at the bottom of the bog rising above the level of my upper river, without considerable expense, and the addition of another water-lock, I made a firm gravel road into the bog, first dividing one of the large divisions, made by my father; by two cross drains ten feet wide, into four divisions, which made the bog pretty dry; I then laid dung, two or three inches thick, upon the surface of the bog, without any gravel or other manures under: I observe, that the crops of potatoes, corn, and meadow following, were full as good as those where the gravel was first laid on, which in wet bogs sink too suddenly; I would therefore advise, and intend to pursue, the laying on of gravel after the bog has been mowed for two or three years: the
expense

expense of gravelling an acre at the first, is, at the least, from four to six pounds; and as you proceed further into the bog, the expense must increase; therefore where dung is to be had in plenty, it is the best material for reclaiming a bog; but I think that composts made with lime and earth mixed, or lime and moor, may answer the end of dung, which I have not yet sufficiently tried, but intend so to do.

To enumerate several other drains which I made in the east and south bogs, to prepare them for reclaiming, would prove too tedious. I usually cut them ten feet wide; but it is difficult in a wet bog to ascertain the depth of a drain until the bog has subsided for years. In making the drain, which I have mentioned from the lake to the river, 30 or 40 men working in the same part of the drain for four or five days without intermission, except at night, could not bring the drain, in the evenings, to be deeper than from one to two feet deep, and both the overseer and men were all so out of patience, that they were with difficulty persuaded to continue the work; but as I rode round the bog, I observed that the bog was subsiding, and that they were gaining the level, though they did not perceive it; for the slush flung by the shovels out of the drain pressed down the bog and squeezed out the water into the drain which ran off, as I begun where the fall lay; the bog was so soft that the men were obliged to stand upon boards as they worked, to prevent them from sinking: the bogs which I first reclaimed
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are still subsiding. I had, the last summer, 32 acres of the bogs, which I have described all under tillage and meadow; I also mowed ten acres of the bottoms on the river sides, between the reclaimed bogs; and other ten acres of bottoms by the same river, made meadow by banks cast up round them, to guard against floods, planted with alder and fallows: I have six acres more of the east bog reclaimed by a coat of gravel only, never tilled, but reserved for pasture; but they are far inferior to the tilled bogs, and will not be meadow until covered with other manure, and tilled. I cannot ascertain the depth of several parts of my reclaimed bogs, as my borer of 18 feet long does not reach the bottom of the north and east bogs; the south bog is all 12 and 13 feet deep: but towards the verge they are shallower. The navigable lines which I have described, encompass 31 acres, except on part of the west side, where my house stands; these I call my garden or small farm, through which the old river winds; clumps of spruce fir, beech and alder, grow well on the sides of the new river, where gravel was thrown on the banks from the bottom when it was first made; the broad-leaved elm interspersed through the meadows reclaimed from the bog, also thrive; I have two small groves on each side of the water lock, of a spontaneous growth, from the deep reclaimed bog, consisting of quicken or mountain ash, birch, holly, and fallow, some of which are from 17 to above 20 feet high. In making my navigable line, which runs west to
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the edge of my lawn, I discovered by my borer that a bed of white marle, at the depth of 16 feet, lay under the north bog; the bed of marle proved to be five feet thick, under which lay a stratum of gravel, from six to nine inches thick, under which stratum of gravel lay another bed of marle, four feet thick. In the last dry summer, by the aid of my screw-pumps, I raised a great quantity of this marle, which leads me to claim a medal for reclaiming dry heathy mountain, upon which, after ploughing, I spread the marle. But I fear that I have tired you, as I have myself, and shall for the present, only present my respects to the Society, and assure you that I am,

Dear Sir,

Your most obedient Servant,

ROBERT FRENCH.

It may be objected that the works were begun previous to the publication of the premiums; I doubt whether it be possible to reclaim such bogs in less than eight or ten years; the water must have time to ouze from sponges, which such bogs are: to reclaim them very expeditiously would exceed the expense of a private fortune.

To the Rev. Peter Chaigneau, assistant
secretary to the Dublin Society.

Mr.

Mr. French remarks, that the expence of improving bogs, equally spongy and wet, with this, is very considerable, for the drains will for some time fill up almost as fast as made. When the draining is finished, the main drains should be left five feet deep, and the breadth just sufficient to keep the banks up: cross drains, of a smaller dimension, must be made, which, when the bog is perfectly drained, may be filled up again. As to the expence, he observes, that it must necessarily vary greatly: but the very worst sort may be completely done for 6l. an acre. Manuring with gravel, lime, or clay, may in general be estimated at 6l. Then Mr. French would by all means plant potatoes, in the trenching manner, for the sake of mixing the manure, which is laid on with the surface of the bog, and also for the use of the trenches, as surface drains. The crop of potatoes, if a moderate quantity of dung is spread for them, will be equal to any in the country, that is, worth 10l. an acre; but if no dung, they will not more than pay the expence of seed, planting, and taking up. In the spring after, dig it slightly, level the trenches, and sow oats; the digging will not cost more than 10s. an acre. The crop of oats will be 12 barrels, or rye, will be a great produce. With this corn, the grass seeds should be sown; rye grass (*lolium perenne*) and white grass (*holcus lanatus*) do well; common hay seeds good. The first year a car must not go on, but the hay brought off by men. The second year it will bear cars, and would then let for 10s. an acre, for three years only;

21s. an acre for hay. After that, a fresh manuring, with a compost of lime and earth, or lime and gravel, and then would let at 15s. If the land for potatoes is well dunged, the poor will pay 4l. an acre for it; and the hay, instead of 21s. will let at 3l.

In relation to his mountain-moor improvement, the state of the soil before improving was that of continued heath, (*erica vulgaris*) with great quantities of lime-stones on the surface. Mr. French, in the first place, ploughed it with six bullocks, which did not do more than one-fourth of an acre a day, as the roots of the heath made it strong work. As they turned up the stones, or were impeded by them, they were drawn away in cars to make the walls. Left it after the ploughing from half a year to a year, and then broke it, cross-ploughed, and harrowed it; in all four ploughings; after the last, harrowed it smooth, and limed. Began with 60 barrels an acre, but increased it to one hundred, and to two hundred, and found the crops better and better, in proportion to the quantity. Upon the liming sowed the wheat, and harrowed it in. The crop has been generally from five to seven barrels an acre. The following year either barley or oats: of barley, the crops have been middling, about eight barrels. If oats, twelve barrels. After either the barley or oats, another crop of oats, equally good, and with that sowed hay seeds, or rye grass and clover. Before the improvement it let at 4s. 9d. twenty-five years ago, and if the same

same heath was to be set out now, it would be worth eight shillings. After the oats above-mentioned, has set it readily at 14s. Dividing the lands into divisions of from fifteen to twenty-acred pieces, clears them of stones, and the expense of the walls, is

		s.	d.
Drawing the stones	-	2	6 per perch.
Building dry	- -	1	1
		<hr style="width: 50%; margin: 0 auto;"/>	
		3	7
If coped and dished, the additional expense will be	- -	2	6
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		6	1
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They are all lime-stone lands, and make very fine sheep-walks. Before the improvement very many sheep died on these grounds, of the red-water, but since the liming this has not happened; nor would it before give flax, but now very fine.

Mr. French burns the lime in perpetual kilns with turf, laying in the turf and stone in layers, the same as culm, and all expenses included, amount to 4d. a barrel roach, of 32 gallons. Two cubical yards of turf will burn one cubical yard of stone. If the turf is very good, one and an half will do. He tried French kilns, in which he burned 1500 and 2000 barrels, but found it very uncertain, frequently having the stone come out unburnt. A kiln of 1500 barrels, comes to 25l. but often it ran to 40l. he has upon the whole, found it far better

to use the other sort, which are cheaper, and more certain. Another sort of mountain land, is the wet, boggy sort, one to four feet deep, which he improved by digging off almost all the bog for lime; then ploughed it with six bullocks, and let it to the poor from a guinea to thirty shillings an acre, for them to burn, harrow, and plant potatoes; after which they pay as much more for a crop of oats. Then limes it, takes another crop of oats, and sows grasses with it; after this improvement, lets as well as the other. White marle, from under a bog, Mr. French tried, for improving fourteen acres of dry mountain land; the effect was much the same as that of lime, but more expensive, from the difficulty of getting it. In the year 1744, when Mr. French came to his estate, there was no other linen manufacture than a little *bundle* linen, merely for their own consumption, with no other spinning than for that, and even for this, there was not more than one loom in 100 cabbins. In 1746, he undertook to establish a better fabric, and with more extensive views. He first began by erecting spinning schools, and sowing flax, twenty-one acres of which he sowed on his own account. The linen board gave at that time one penny a day to all children that went to any spinning schools, which was of use; but the providing flax Mr. French found of the greatest use. In 1749, he established eight weavers and their families, and the same year built a bleach mill, and formed a green, and to carry it on to advantage, sent a lad into the north, and

bound him apprentice there, in order to learn the whole business. Upon his return, he managed the manufactory for Mr. French, buying the yarn, paying weavers for weaving it by the yard, bleaching and felling it. In this manner it went on for fifteen years; but as in this state it was dependent on Mr. French's life, he enabled this manager to take the whole upon his own account, binding him to keep every weaver on the estate employed, whatever might be the number. The progress of this undertaking, united with the agricultural improvements, will be seen by the following returns of the Moniva estate, at different periods.

In 1744. There were three farmers, and six or eight shepherds and cow-herds.

In 1771. There were two hundred and forty-eight houses, ninety looms, and two hundred sixty-eight wheels.

In 1772. Two hundred and fifty-seven houses, ninety-three looms, and two hundred eighty-eight wheels.

In 1776. Two hundred seventy-six houses, ninety-six looms, and three hundred and seventy wheels.

Here, in a few words, is the progress of a most noble undertaking; and I should observe, that it is doubly beneficial from one circumstance. All these weavers are mere cottagers in a town without any land, except a cabbage-garden, by which means they have nothing to do with farming, but become a market to the farmers
that

that surround them, which is what all manufacturers ought to be, instead of spreading over the country, to the destruction of agriculture. Another circumstance in which Mr. French has given a new face to Moniva, and its environs, is by planting; he found a considerable wood of birch, which being a shabby tree, and not improving, he cut them gradually down, and planted oak, elm, and beach, with various other sorts; he began this thirty years ago, and no year passes without his making some new plantation. By properly managing this wood of 111 acres, he has made it pay him 150l. a year, ever since, and there is now more than thrice the value of timber in it, to what there was when he began. Whatever he has planted has answered well, but the growth of the beach is the greatest. That of the oak is very great, and more flourishing than ever Mr. French expected to see them at the time of planting. The broad-leaved elm thrives very well upon the bogs, after they are cultivated. Mr. French has tried most sorts of trees in rows along the hedges, but none of them have succeeded, the west winds cut them in pieces; since which he makes inclosures, and plants them thick.

I ought not to forget observing that Mr. French supports a charter-school at his own expense, wherein are from twenty to forty children, constantly supported, clothed, and taught to read and write, and to spin and weave.

Farms around Moniva consist, principally, of large stock ones, from 200 to 500 acres, with very few cabbins upon them; the tillage of the country is principally carried on by villagers, who take farms in partnership. Mr. French's are generally from 20 to 130 acres. There will sometimes be from ten to thirty families on a farm of 200 acres; but Mr. French finds that they do not thrive well if there are more than six families to one farm. The soil to the west of Moniva, is a lime-stone gravel, mixed with a clay, some of it upon clay: to the east it is a deeper and richer clay, and lime-stone all the way to the Shannon. The whole county lime-stone, except the mountainous tracts on the west, beyond Loch Carril, and the mountains to the south of Loch Rea. Rents in this neighbourhood rise generally from 12s. to 16s. except old leases, which are 6s. or 7s. The richest part of the county is between Lochrea and Portumne, thence to Eyre-court, Clonfert, and Aghrim. The third of the county is bog, lake, and unimproved mountain; but most of the latter yields some trifling rent, the whole third, perhaps three-pence an acre; the other two-thirds, 12s. at an average. The isles of Arran contain 7000 acres, belong to John Digby, Esq; and let at about 2000l. a year. The great tract of mountain is the three Baronies of Eyre Connaught, Ross, Ballynahinch and Moycullen; they are forty miles long, and fifteen broad, and are in general uncultivated. The principal proprietors are, Robert Martin, Esq; Thomas French, of Moycullen,

cullen, Esq; and Patrick Blake, Esq; of Drum; —Lynch, of Barna; —— Geohagen, Esq; of Bowown; ——— Lynch, Esq; Drumrong; Sir John O'Flaharty, &c. Mr. Martin has the largest tract; he has let to Mr. Popham, 14,000 Irish acres, for three lives, at no rent at all; then three lives more at 150l. a year; and after them for sixty-one years, at the same rent; and Mr. Popham has some men at work upon improving, from England and Leinster. There is lime-stone gravel upon a part of the land, but not generally in Eyre Connaught, any more than lime-stone; at least according to common report.

Courses of Crops about Moniva.

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|--------------|----------|----------|----------|
| 1. Potatoes. | 2. Bere. | 3. Oats. | 4. Oats. |
| 1. Potatoes. | 2. Flax. | 3. Oats. | 4. Oats. |

There are some good tillage farmers towards the Shannon, who sow grass feeds. They also sow successive crops till the land is exhausted, and leave it for some time to graze itself. No ploughing or harrowing by the tail, nor any burning the corn instead of threshing, but these practices were very common 30 years ago. The measure of potatoes is the barrel of 42 stone; five plant an acre, the average price 6s. or 8s. at the beginning of the season; to 10s. or 12s. at the latter end. The average produce 25 barrels, or 10l. Oats yield about 8 barrels. Of flax, a hoghead sows 2 acres. It is but lately that they have saved their seed, but it is now coming in; a good common crop

is 4 cwt. of scutched flax, and the medium price 40s. a cwt. There are considerable improvements of mountain, and some of bog, that have been carried on by the poor villagers. They dig and burn the mountain, and get by that means very fine potatoes without dung, paying 20s. an acre for it. If they have the land to themselves, they will, after the potatoes, get good wheat, and after that, several crops of oats, till the land is exhausted. These village farmers, I remarked, as I went through the country, were industrious in forming composts of boggy moor, turf, and lime-stone, with what dung they can raise. They were now making ready against the winter's dung; these are for potatoes the following spring, and they find it answers so well that the practice increased very fast. Such of them as are near the bogs, Mr. French gives the bog to them for 10 years rent free, and then they pay him 10s. an acre for it. They drain them, manure with lime-stone gravel and a little dung, and plant potatoes, getting fine crops, and good corn afterwards. In one of the bogs which a village was cutting away, the men called Mr. French to it, to shew him the old ridge and furrow at the bottom, and he found them perfect. It was 4 feet deep: that this country was once generally cultivated, there are other signs. There are vast numbers of lime-stone gravel pits among the mountain heathy lands, though there is not the least tradition when they were used.

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The principal stock in this country is sheep for breeding, the sale being wethers, which they sell fat at Ballinasloe; and wool, of which they clip from the ewes 4lb. and from the wethers 5lb. sells now at above 1s. a lb. Mr. French remembers the price of wool, 50 years ago, at 6s. and 7s. a stone; 1744 was reckoned a very high year, and he sold 27 bags, at 10s. 6d. a stone: but as he got out of stock, he has not since had more than two bags. In 1745, &c. it fell to 8s. a stone. The great rise of the price of wool, Mr. French attributes to the low price of spinning and the increase of tillage. The stock farmers who are good managers, all have two farms, one as a dry one, in this neighbourhood for winter, and another in the deeper richer lands in the eastern part of the county, for summer feeding and fattening. Three year old wethers, from the light soils here, sell at from 15s. to 25s. each. It is reckoned good land here that will support three sheep per acre the whole year round. The system of grazing is to buy yearlings, at from 35s. to 3l. 3s. and sell out at four year old, at from 4l. 4s. to 6l. 6s. They sometimes sell them at three year old.

They plough with horses, but the gentlemen mostly with oxen; they have not the Mayo custom, of walking backwards before them, nor do they harness them all abreast, but two and two. They winnow all their corn in the field to blow away the chaff. They will take a grazing farm, with three years rent, for
stock.

stock. Land sells at 21 years' purchase. The rents have fallen since 1772, but are now rising from the greater price of wool, black cattle, and linen. Tythes are compounded by the proctors with gentlemen, but they screw up the poor people to the utmost. There are still many men who make it their business to hire large tracts of land in order to re-let at advanced rents. Population increases greatly, yet many of them live very poorly upon potatoes and water, with some oatmeal. There are many that have no cows, only a house and a garden. The grass of a cow is 30s. This is not the case, however, at Moniva; there they have all cows, and are very rarely without milk. Rent of a cabin and an acre, 20s. building the cabin for themselves; and 30s. if it is built for them. There were many emigrants from Galway to America, but only of the loose idle people. The general religion is roman catholic, but about Moniva chiefly protestant.

Mr. Andrew French, of Rathone Galway, who I met at Moniva, favoured me with the following particulars. At Galway there is a salmon fishery, which lets at 200l. a year; and in the bay of Galway they have a considerable herring fishery. There are belonging to the town 200 to 250 boats, 40 or 50 of which are employed in the spring fishery, for cod, hake, mackarel, &c. &c. These boats are from 4 to 6 tons, some 9 tons. They cost building, 20l. a boat, and the nets and tackle, 15l. the nets

nets are of hemp, tanned with bark. There are five or six men to a boat; they fish by shares, dividing into sixty: they have had this fishery time immemorial. The plenty of fish has decreased these 15 years. A middling night's take is 5000 fish; all they get is sold into the country, and the demand is so far from being answered, that many cargoes are brought in from the north. The fish sell at 1s. 4d. to 2s. 2d. a hundred; but the men are far from being industrious in the business: some weeks they do not go out twice.

On the coast of Conna Marra there is, from the 10th of April to the 10th of May, a fishery of sun-fish, which is done by the herring boats. It is not by shares, but the owners of the boats hire the men for the fishery. One fish is reckoned worth 5l. and if a boat takes three fish in the month, it is reckoned good luck. There are 40 or 50 boats employed on this. Along the whole bay there is a great quantity of kelp burnt; 3000 tons are annually exported from Galway: the present price is 40s. to 50s. a ton. The shore is let with the land against it, and is what the people pay their rent by. They use a great quantity of sea weed, drove in by storms for manuring land. In November they carry it on, the field being ready marked out in beds for potatoes, and leaving it on them, it rots against the planting season, and gives them great crops. They also do this with fern, cutting it in autumn, and laying it on to the beds, get good crops.

crops. The poor people near Galway are very industrious in buying the fullage of the streets of that town; they give 3d. for a horse load of two baskets, and carry it three miles.

One circumstance, relative to the progress of the linen manufacture in this country, the town of Galway can instance. Mr. Andrew French of that place, sixteen years ago, imported the first cargo of flax seed of 300 hogsheads, and could only sell 100 of them, whereas now the annual importation rises from 1,500 to 2,300. Twenty years ago there were only 20 looms in Galway, now there are 180. They make coarse sheetings seven-eighths wide, at 9½d. to 11d. a yard; dowias, 28 inches wide, at 7d. Osnaburgs at 7d. also. There are eight or nine bleach greens in the county, but they bleach, generally speaking, only for the country consumption: the great bulk of the linens are sent green to Dublin. In the town and neighbourhood of Loch-rea, there are 300 looms employed on linens that are called *Lochreas*, of 28 inches in width, which sell at 7d. a yard. All the flax worked in the county is, generally speaking, raised in it. The yarn spun is pound yarn, not done into hanks at all. Very many weavers are in the towns, without having any land more than a cabbage garden. The linen and yarn of the whole county has been calculated at 40,000l. a year.

September 3d, left Moniva, and took the road to Woodlawn, the seat of Frederick Trench, Esq; passed many bogs of considerable size, perfectly improveable, and without the uncommon exertions I have just described, none could be more anxious for my information than Mr. Trench.

Woodlawn is a seat improved entirely in the modern English taste, and is as advantageous a copy of it as I have any where seen. The house stands on the brow of a rising ground, which looks over a lawn swelling into gentle inequalities; through these a small stream is converted into a large river, in a manner that does honour to the taste of the owner; it comes from behind a hill, at the foot of which is a pretty cottage hid by plantation, and flows into a large mass of wood in front of the house: the grounds, which form the banks of this water, are pleasing, and are prettily scattered with clumps and single trees, and surrounded by a margin of wood. The house is an excellent one, so well contrived, that the same disposition of apartments would be agreeable upon almost any scale of building.

Mr. Trench's improvements of bog made me solicitous to view them; he was so obliging as to give me a full account, which is as follow. The first method of improving he took was with a bog of 12 acres, exceedingly wet, at the bottom of hills 16 feet deep to his knowledge, but he never yet was able to measure

sure it to the bottom. A red bog, of a light fuzzy substance, like a bed of tow, which would not burn in turf; no other product than bog berries. Part of it so very wet, that could not cut the drains at first wider than four feet and two spits deep; repeated this before the hard frost of 1765; had yet made no progress, it being almost as wet as ever: but took advantage of that frost, to cover the ice two inches thick with clayey gravel; when the thaw came, the gravel sunk, and pressed out the water. The expense of this manuring was 3l. 10s. an acre. This gravelling had such an effect, that in the May following about half of it bore horses with baskets, for carrying on dung, and where it would not bear them, it was carried on by men. The quantity six bushels to the square perch, and immediately planted with potatoes in the common trenching manner. The crop, per acre, 40 barrels each; 44 stone, at 8s. each. Levelled the potatoe trenches in digging for barley, in doing which attended minutely to not burying the manure; this digging cost 30s. an acre, and the barley covered with the spade, which they do very fast, and the expense included in the 30s. The crop of barley 10 barrels an acre, at 8s. After this crop, took no more trouble with it; very rich and luxuriant grass sprang up directly, and would let readily in meadow, at 25s. but part of it in a few years would let at 2l. Two acres of it were not perfectly reclaimed; it was of the moory nature; dug and burnt it, and put in turnips,
the

the crop very good : then dug it for barley, the produce 14 barrels an acre, and the meadow very good ever since. I was over it, and found it a perfect improvement ; the hay was fine, the herbage good, and carried the complete appearance of a meadow, except in the drains, where the heath still appears.

N U M B E R 2.

Twenty-five acres of spongy fungous bog, from 8 to 16 feet deep, had been cut into very great turf holes, which holes, though they held water, and had drowned many a cow, yet had so far drained the bog as to make the less draining necessary ; effected it, and then levelled the holes ; but as they sunk much, levelled them a second time. Upon this, took the advantage of a frost to manure it with clay and gravel, at 2l. 10s. an acre ; then dunged a part with the quantity mentioned already, and the rest of it manured with the ashes of moor, which burnt yellow. Upon this manuring, planted potatoes ; the crop 10l. an acre, pretty equal being, as good after the ashes as after the dung. After the potatoes, levelled the trenches, and dug it and sowed wheat ; the crop 6 barrels an acre ; barley 10 barrels, oats 9 barrels : then left it for meadow, the value 2l. an acre.

N U M B E R 3.

Another piece of bog the same sort, light and spongy ; drained, and then manured with clayey

clayey lime-stone gravel, mixed with ditch earth. In the summer planted potatoes; the crop 15 barrels an acre; then dug for oats 6 barrels an acre, meadow ever since, and perfectly good, would let at 11. 10s. an acre.

N U M B E R 4.

Another bog of the same sort perfectly well drained, manured with lime, 80 barrels an acre, at 4d. a barrel; planted potatoes; the crop not worth digging; dug it for oats, the crop not worth reaping: then left it in grass, which was indifferent, not worth more than 5s. an acre.

N U M B E R 5.

Another experiment was on the same sort of bog, which, when well drained, was manured in spring with lime-stone gravel, and then with marle instead of dung, and planted with potatoes; the crop 41. an acre: then dug it for oats; the crop 6 barrels, and then left to grass; worth 11. 5s. an acre.

N U M B E R 6.

Another experiment, the same as the preceding, except lime laid instead of marle: the effect in every respect on a par with the marle. Neither of them yielded half the produce which dung or ashes would have done.

N U M B E R 7.

Another bog of the same sort was, after draining, manured with lime-stone gravel, and then with the scowering of ditches and earth, to the amount of $3\frac{1}{2}$ inches deep on the surface: expense in all 4l. an acre. Then left, and nothing more done to it; very good grass came the next season, worth for grazing 18s. an acre.

N U M B E R 8.

Another spongy bog drained, and then well gravelled, at 2l. 10s. Left so for three years; scarce any grass came, the heath still remaining: planted potatoes on it without any dung or other additional manure; the crop 4l. an acre; then dug it smooth, and nothing sown in it, but came immediately to very good pasture, worth 15s. an acre.

Mr. French recommends, from his experience, the following mode of improving bogs: first, the great object is draining; main drains should be made on each side the bog, near the firm land; these cuts should be six feet deep and eight wide, and will cost 1s. a perch. Then cross drains from main drain to main drain, at from 5 to 10 perch from one to the other, at three feet deep and four wide, at the expense of three pence a perch. Here is the first year's work. The next year go into all the drains and sink them, which will cost 1d. a

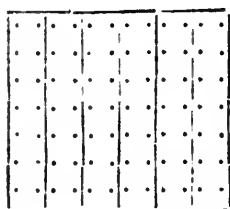
perch: if a frost comes, carry on the limestone gravel, let it be a coat of two inches thick; if three it will be better; two inches will cost 3l. if not carried farther than half a quarter of a mile; if carried a quarter of a mile, it will cost 4l. 10s. if half a mile, 6l. 15s. if a mile 9l. Prefers the clayey limestone gravel to every other manure: if that is not to be had, clay; and if not clay, other gravel; if no gravel or clay, then lime; if nothing else, then the light marle under bogs. Upon this manuring spread a compost, one-third dung, one-third ditch earth, and one-third limestone gravel, nine bushels to the square perch; if dung only, six; and upon that plant potatoes in the common manner. The crop will, on an average, be 30 barrels, at 8s. or 12l. an acre. The poor people will readily give three or four guineas an acre for liberty to plant them. Upon this crop of potatoes spread two bushels of dung more to the perch, and plant a second crop of potatoes, making the furrows where the ridges were, and make the ridges of both crops nine feet wide, and the trenches four. This crop of potatoes will be full as good as the first. Then dig it, levelling the trenches, scooping the sides, to fill up with, and the manured part on the surface; sow barley; the crop will be 12 barrels on an average; with this barley sow grass seeds, and it will immediately be worth for meadow 1l. 10s. Let this go on for seven years; then give it a light gravelling, at 1l. 10s. an acre; dung it four bushels per perch; plant potatoes, 12l.

an acre; then barley 14 barrels; and then meadow worth 40s. In this circumstance of letting meadow it should be remarked, that they will hire it at great prices, such as minuted, but the same lands would not let at more than 18s. upon a lease; for in one case you stand the chance of keeping the land to its present heart, and in the other the tenant has that chance.

There is a circumstance which should be mentioned, the skin of the turf should not be broken for some years by heavy cattle; for wherever they make a hole, the rushes grow at once, which cannot be easily destroyed. Mr. French does not think it at all necessary to keep an improved bog under grafs, as he has found by experience, that the more they are cultivated the better they grow. In the winter he feeds his reclaimed bogs with sheep; they have a perpetual spring of grafs all through that season, and are of a nature so contrary to that of rotting sheep, that they will recover those which are threatened with that distemper.

He has planted several large clumps in his reclaimed bogs, and has found that almost every kind of tree thrives well in them: I thought the spruce fir seemed to get up the quickest, but all of them appeared perfectly healthy.

Calculation of improving a square mile upon the preceding plan.



9 miles of main drains.
64 miles cross ditto.

2881 perches of main drains, at 2s.	-	288	0	0
20480 perches of cross drains, at 6d.	-	511	19	9
Two miles of road, 10 feet wide, at 75l.		150	0	0
Gravelling, on an average of the distance, 6l. per acre	-	3840	0	0
Labour on the dunging, 40s. per acre	-	1280	0	0
			<hr/>	<hr/>
		6069	19	9
Deduct rent of the land for potatoes, at 3l.		1920	0	0
			<hr/>	<hr/>
		4149	19	9
Manuring second crop of potatoes, labour 20s. an acre	-	640	0	0
			<hr/>	<hr/>
		4789	19	9
Deduct rent for potatoes, as before	-	1920	0	0
			<hr/>	<hr/>
		2869	19	9
Levelling and digging for the barley, 30s. an acre	-	960	0	0
			<hr/>	<hr/>
		3829	19	9
A barrel an acre of barley feed, 8s. an acre	-	256	0	0
Reaping, harvesting, and threshing, 20s. an acre	-	640	0	0
			<hr/>	<hr/>
		4725	19	9
				Brought

W O O D L A W N. 403

Brought over	4725 19 9
Deduct the value of the crop, 9 barrels, at 8s.—3l. 12s. an acre	- - 2304 0 0
Remain total expences of the improvement	£.2421 19 9

Rent of 640 acres, at 16s. an acre, 512l. which income is 21l. per cent. for the expenditure of 2421l.

Several very great deductions are made in this account, because the bog is supposed to be a very large one.

Mr. Trench buys in year-old bullocks and some spayed heifers, at 1l. 15s. each; sells them out at three-years old, good stores, but not fat, at 6l. 3s. on an average. He has 930 sheep, consisting of 300 ewes, 180 lambs, 270 yearlings and two-year olds, and 180 fat sheep. The annual slaughter and sale is 180 fat wethers, at 1l. 3s.—60 culled ewes, at 15s. In order to save dung for his bog improvement, he has cut a large drain from his yards and stables through the garden, paved it, and keeps it filled with bog earth, and all the urine of the cattle, &c. running into it, makes an excellent compost for the gardener.

Average rent of the improved part of the county of Galway, 14s. an acre. About Woodlawn 14s. to 18s. The soil all lime-stone gravel, or lime-stone fine found land. The size of farms varies; there are many small ones of from 30 to 100 acres, part grazing and part tillage; also many stock ones, up to 1000 and

1500 acres; and these graziers re-let to the cabbins part of it at a very high rent, by whom are carried on most of the tillage of the country. Mr. Trench remarks, that if good land is let to the poor people, they are sure to destroy it; but give them heath, or what is bad, and they will make it good.

1. Potatoes on the grafs. 2. Summer fallow.
3. Wheat. 4. Oats. 5. Oats. 6. Lay out.
--- No feeds.

1. Potatoes. 2. Barley. 3. Wheat. 4.
Oats. 5. Oats. 6. Oats.

1. Potatoes on grafs. 2. Gravel and fallow.
3. Wheat. 4. Barley. 5. Oats. 6.
Leave it for grafs.

1. Potatoes. 2. Flax. 3. Wheat. 4. Oats.
5. Oats. 6. Lay out.

Average produce of potatoes, 30 barrels, at 42 stone, at 8s. or 12l. Of wheat, 8 barrels, at 20 stone. Of barley, 12 barrels, at 16 stone. Of oats, 12 barrels, at 14 stone.

Every poor man sows some flax, but still they do not raise enough for their spinning, for that is universal. Lime-stone gravel is the general manure. No lime, though it is every where to be had; the price to burn is 4d. a barrel of 3 bushels roach. Every cabin has eight or nine acres, and two or three cows, or
two

two cows and one horse; and about half have horses, two or three pigs, and many poultry; half a rood of flax, one acre potatoes, or half at a medium. They live on potatoes, oats, or barley bread, or butter; like oats much better. Their circumstances are much improved in 20 years. They pay rent 12s. to 14s. an acre for their lands.

September 4th, to Kiltartan, the seat of Robert Gregory, Esq. who is engaged in pursuits which, if well imitated, will improve the face of the country not a little. He has built a large house with numerous offices, and taken 5 or 600 acres of land into his own hands, which I found him improving with great spirit. Walling was his first object, of which he has executed many miles in the most perfect manner: his dry ones, 6 feet high, 3 feet and a half thick at bottom, and 20 inches at top, cost 2s. 6d. the perch, running measure. Piers in mortar, with a gate and irons complete, 1l. 14s. Walls in mortar, five feet high, cost 6s. a perch. He has fixed two English bailiffs on his farm, one for accounts and overlooking his walling and other business; and another from Norfolk, for introducing the turnip husbandry; he has 12 acres this year; and what particularly pleased me, I saw some Irishmen hoeing them; the Norfolk man had taught them; and I was convinced in a moment, that these people would by practice soon attain a sufficient degree of perfection in it. The soil around is all a dry sound good lime-stone land, and lets

from 10s. to 12s. an acre, some at more. It is in general applied to sheep. Mr. Gregory has a very noble nursery, from which he is making plantations, which will soon be a great ornament to the country,

September 5th, to Drummoland, the seat of Sir Lucius O'Brien, in the county of Clare, a gentleman who had been repeatedly assiduous to procure me every sort of information. I should remark, as I have now left Galway, that that county, from entering it in the road to Tuam till leaving it to-day, has been, upon the whole, inferior to most of the parts I have travelled in Ireland in point of beauty: there are not mountains of a magnitude to make the view striking. It is perfectly free from woods, and even trees, except about gentlemen's houses, nor has it a variety in its face. I do not, however, speak without exception; I passed some tracts which are cheerful, Drummoland has a pleasing variety of grounds about the house; it stands on a hill gently rising from a lake of 24 acres, in the middle of a noble wood of oak, ash, poplar, &c. three beautiful hills rise above it, over which the plantations spread in a varied manner; and these hills command very fine views of the great rivers Fergus and Shannon at their junction, being each of them a league wide. For the following particulars I am indebted to Sir Lucius O'Brien.

Average

Average rent of the county of Clare, 5s. The bad tracts of land in the county, are the east mountains, part of the barony of Burrin, and the great peninsula, which forms the north shore of the Shannon. Great tracts are let at nothing at all, but there are 20,000 acres from Paradise hill, along the Fergus and Shannon to Limerick, which is let at 20s. an acre. These lands are called the *Corcaffes*. The soil of them is either a rich black loam, or a deep rich blue clay; and all the higher lands are lime-stone, or lime-stone gravel. The mountains are generally grit-stone. The size of farms is various, Captain Tim. Macnamara farms 7000 acres, but part in other counties. Mr. Singleton, 4000 acres. A farm of 300l. a year is a very small one; 500l. a year middle; this is speaking of stock-farms. The tillage of the country is carried on by little farmers, from 20l. to 100l. a year; but most of it by the poor labourers, who are generally under-tenants, not holding of the landlords. The courses of crops are,

1. Potatoes. 2. Bere. 3. Wheat. 4. Oats.
5. Oats. 6. Oats. 7. Lay it out to grass.

1. Beans. 2. Bere. 3. Barley. 4. Wheat.
5. Oats. 6. Oats. 7. Oats. 8. Lay it out, or beans again.

Of wheat they sow 10 to 15 stone an acre; the crop, in the corcafs grounds, 8 barrels, in the other lands 5 or 6: 20 stone to the barrel.

Potatoes

Potatoes they measure by the barrel of 48 stone: they plant 6 to the acre, and the average produce 50 barrels. They never plant them on the corcafs lands, for they will not grow there. Mr. Fitzgerald, of Shepperton, has had 100 barrels per acre; the favourite sorts are the apple, the Castania, the Buck, being a species of the Howard. They fat pigs on them; but what much amazed me, was fattening hogs on grafs, which they do very generally, and make them as fat as a bullock, but put them up to beans for three weeks to harden the fat. Of barley they sow 14 stone an acre, and get six barrels, at 32 stone each. Bere, two rowed barley, called *English* here, and four rowed, called *Dutch*, and of these the bere yields best. Mr. Singleton has had 40 barrels of bere per acre, each 16 stone on the corcafs land. Of oats they sow 21 stone to the acre, and get 12 barrels, on an average 14 stone each; and on the corcafs land 16. Of beans they sow 35 stone to the acre, sow them on the green sod soon after christmas, and plough them in; never hand-hoe or weed them: the average crop 20 barrels, at 20 stone; 30 the greatest; they are used for home consumption in dear years, and for exportation in cheap. The poor people make bread of them, and eat them boiled, and they prefer a bushel of them to a bushel of wheat; but they will not eat them, except in a scarcity. No pease sown, but rape in considerable quantities in mountain grounds, or boggy, both of which are burnt for it. They plough the
furrow

furrow very shallow, and burn it: they never feed it. The crop of seed 8 barrels, at 16 ft. at from 7s. 6d. to 18s. a barrel, generally from 14s. to 17s. It is pressed into oil at the mills of six mile bridge and Scariff, near Killaloe; but the greatest part is bought up by the merchants of Limerick for exportation for Holland, and last year some part of it has been sent to Great Britain, in consequence of the act which passed last sessions. The rape cakes are all exported to England for manure: the price of them at 45s. or 42s. per ton. The rape and the bean straw are burnt to ashes for the soap boilers; and Mr. Singleton has a kiln contrived on purpose for burning lime with it, collecting the ashes at the same time that the lime is burnt. No clover is sown, except by Sir Lucius O'Brien. Flax is sown in small quantities by the poor people for their own consumption; and some yarn sold, but not much from the whole county. Spinning is by no means general; not half the women spin. Some linens, bandle cloths, and Clare dowlas, for exportation in small quantities, and other sorts, enough for home consumption. Wool is spun for cloathing for the people, into worsted yarn for serges, and into yarn for stockings. Great quantities of frizes are sold out of the country.

Much heath waste land, many hundreds of acres every year are brought in by paring and burning for rape, but use no manure for it; after that wheat, and get good crops, and then

then two, three, or four crops of oats, good ones; then left for grass, and comes tolerable herbage, worth 5s. an acre.

The principal grazing system consists in a union of both rearing and fattening; the rearing farms generally at a considerable distance from the rich lands on the Fergus and Shannon. The most profitable management of grazing, is to buy in year-olds upon this system, but it can only be done, by hewing a variety of land, commonly at a distance. It is found much more beneficial than buying in bullocks in autumn, and cows in May, as the Meath graziers do.

The average price of the year-olds, is from 2l. 2s. to 2l. 10s. and the price sold at four and a half year-olds, weighing $4\frac{1}{2}$ cwt. $4\frac{1}{2}$, to $5\frac{1}{4}$ cwt. is on an average at 8l. For cows bought in in May, 3l. 3s. to 3l. 12s. and sell at 5l. 10s. An acre of the corcal's land will fatten one of these bullocks, but then it must not be winter-fed at all. Sheep, on an average, shear three to a stone of 16lb. and sell at 1s. per lb. Mr. Macnamara sold this year 55 bags, besides his lambs wool; the weight is from six hundred, to seven and a half, fifty stone, and this year's price 17s. 6d. a stone. Upon the lime-stone sheep-walks of this county, they keep from one and a half to five; on an average, three. The loss on stock-sheep, bullocks, &c. will not amount to more than one per cent. on the value. For hiring and stock-
ing

ing a grazing farm, three rents are reckoned to do. Those bullocks that are to be fattened the summer following, they give hay most part of the winter, for four or five months, as much as they will eat, which will be half an acre of good meadow.

There are 4000 bullocks fattened annually in the county of Clare; bought in at 6l. and sold out at 10l. and 3000 cows, bought in at 3l. and sold fat at 5l. also 6000 fat wethers, sold out of the county annually at 20s. each.

This country is famous for cyder-orchards, the cakagee especially, which is incomparably fine. An acre of trees yields from four to ten hogsheds per annum, average six, and what is very uncommon in the cyder counties of England, yield a crop every year. I never beheld trees so loaden with apples as in Sir Lucius O'Brien's orchard; it amazed me that they did not break under the immense load which bowed down the branches. He expected a hogshed a tree from several.

Land sells at twenty years purchase. Rents fell in the rearing lands 5s. or 6s. in the pound, but rich lands fell very little. Tythes are compounded by a composition made every year by the piece. Fat bullocks nothing. Sheep, 20s per hundred. Wheat, 5s. Barley 3s. Oats, 2s. Potatoes, 10s. Middle men, not common, but much land re-let, arising from the long tenures which are given of three lives, &c.
The

The poor live upon potatoes ten months of the year; but if a mild winter, and a good crop, all the year on them. They keep cows very generally, but not so many as in the list of Sir Lucius's tenants. Labour is usually paid for with land. Working-days of roman catholics may be reckoned 250 in a year, which are paid for with as much land as amounts to about six pounds, and the good and bad master is distinguished by this land being reckoned at an high or a low rent. The state of the poor, on comparison with what they were twenty years ago, is that they are much increased in numbers, and better clad than they were, and more regularly fed, in being freed from those scarcities which were felt before the laws for the increase of tillage. Relative to religion, there was a return to the committee of religion, in the house of Commons, in 1765, when the return of Clare was as follows, in five divisions:

No. 1.	896 protestants,	16831 catholics
2.	1089	12156
3.	291	2694
4.	99	786
5.	101	4677
	<hr/>	<hr/>
	2476	37144
		2476
		<hr/>
	Total	3962
		<hr/>

15 to 1, and 404 over.

Lucerne,

Lucerne, Sir Lucius cultivated for some years, and found while it was attended to, and kept clean, that it was of great use for horses, but his absence and neglect destroyed it. Relative to smuggling wool from Clare, he gave me several strong reasons for believing that there had not been any for some years; that county is well situated for it, and some ships smuggled brandy and tobacco, and could carry it away with great ease, yet 'not one goes. Sir Lucius was executor to a man who made a fortune by it twenty-five years ago, but he would never smuggle when above 10s. a stone; I had the same account in Galway. The cause of the high price of wool, is the admission of woollen yarn in all the ports of England, and the increased demand in the Manchester fabric for that yarn, which demand would have operated in England as in Ireland, had the cheapness of spinning been equal. Another cause, the increase of population, and the people being better clad. Sending a pound of wool to France, smugglers compute to be six-pence, which is fifty per cent. on the present prime cost. Thus the French could get wool much cheaper from England, where the prime cost is lower. There is none from Cork, for being a manufacturing town, the people would not allow it. A duty of 4d. per stone of 18lb. on woollen and worsted yarn exported, marks the quantity which Ireland grows beyond its own consumption. Raw wool, two thousand to 10,000 stone, the rest yarn, which is nearly doubled in value by the manufacture. The

quantity of broad-cloth and ferges, that is, old and new drapery, imported from England, equals the export of woollen yarn. It is remarkable that upon the corcais lands in this county, there are several tools in use, which are called *Dutch*, a *Dutch* spade, a *Dutch* plough, &c.

Particulars of some of Sir Lucius O'Brien's labourers.

Men.	Souls per cabin.	Cows	Horfes	Sheep	Pota toes, acres.	Corn, acres	Men	Souls per cabin	Cows	Horfes	Sheep	Pota toes, acres	Corn, acres
No. 1.	7	3	1	6	$\frac{1}{2}$	$\frac{1}{2}$	No. 25	5	4	1	6	1	3
2	5	1	2	8	1	4	26	5	0	0	5	1	2
3	3	2	0	10	1	1	27	6	0	0	0	0	0
4	6	2	1	9	1	3	28	7	1	0	6	3	2
5	7	2	0	20	1	3	29	4	1	0	6	1 $\frac{1}{2}$	0
6	8	3	0	5	2	2 $\frac{1}{2}$	30	4	1	1	6	3	1 $\frac{1}{2}$
7	7	1	0	3	1	1 $\frac{1}{2}$	31	8	3	1	6	2	2
8	7	3	1	12	1	1 $\frac{1}{2}$	32	9	5	1	10	1	3
9	6	0	1	6	1	1	33	6	6	1	16	1	4 $\frac{1}{2}$
10	5	1	1	6	1	1	34	4	2	0	6	1	3 $\frac{1}{2}$
11	5	1	0	4	1	1	35	7	2	1	6	1	2
12	5	0	0	6	0	0	36	2	2	1	6	1	2
13	5	0	0	0	0	0	37	7	3	1	11	1	2
14	3	1	0	0	0	0	38	8	3	1	11	1	2
15	6	1	0	4	1	1	39	4	3	1	10	1	2
16	3	0	0	4	1	1	40	10	0	1	20	2	2
17	3	0	0	6	1	1	41	12	8	2	12	1	3
18	9	3	0	0	0	0	42	7	5	2	40	4	4
19	3	0	0	0	0	0	43	8	5	2	20	3	3
20	5	5	1	12	1	4	—	267	109	31	381	45 $\frac{1}{2}$	89
21	8	5	1	10	2	2	Average	6	3	1 $\frac{1}{2}$	9 $\frac{1}{2}$	1	2 $\frac{1}{2}$
22	4	4	0	6	1	4	—	—	—	—	—	—	—
23	7	3	1	18	1	4	—	—	—	—	—	—	—
24	8	2	0	6	1	2	—	—	—	—	—	—	—

Sir Lucius O'Brien introduced me to two of the most considerable graziers in the county, Mr. Singleton, and Mr. Fitzgerald, and rode through a part of their farms. Mr. Singleton's corks' meadows were one continued bed of rushes, till he destroyed them by a method which alone proved effectual, which is digging up the rush, and turning it topsy-turvy into the hole again, this he finds effectually destroys them, and the expense is not so great as might be imagined. This gentleman has more tillage-land than common upon grazing farms; he shewed me a *baggard*, well filled with wheat stacks; seventeen acres of that grain yielded him 196 barrels. Mr. Fitzgerald is a very attentive farmer, and in several particulars, conducts his business upon principles different from those which are common in Ireland. He has built excellent farming-offices; particularly a barn, exceedingly well contrived; the corn may be thrown at once from the part of the barn where it is stowed on to two threshing floors, the one over another, and from the stacks through a window into the barn. His hay is also thrown in the same manner, down into the cow-house, and his potatoes into a vault. These conveniencies, which are a great saving of labour, are gained by the buildings being raised on the side of a steep hill, cut away for the purpose. His cows he keeps in the house all winter, by which means they are better wintered, and he raises a great quantity
of

of manure. The chaff of his corn crops he saves carefully, which is directly contrary to the country; and what is much more, cuts much hay and straw into chaff, with an engine, which he finds to answer perfectly well; the man works it with one hand, and supplies it with the other, being fixed against the wall.

The End of the First Volume.





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