

RICHARDSON'S RURAL HANDBOOKS.



THE PIG:

ITS ORIGIN AND VARIETIES.

BY H. D. RICHARDSON,

Author of "The Fossil Deer," "Domestic Fowl," "Dogs," "The Hive
and the Honey-Bee," &c.



A NEW EDITION. MUCH ENLARGED.

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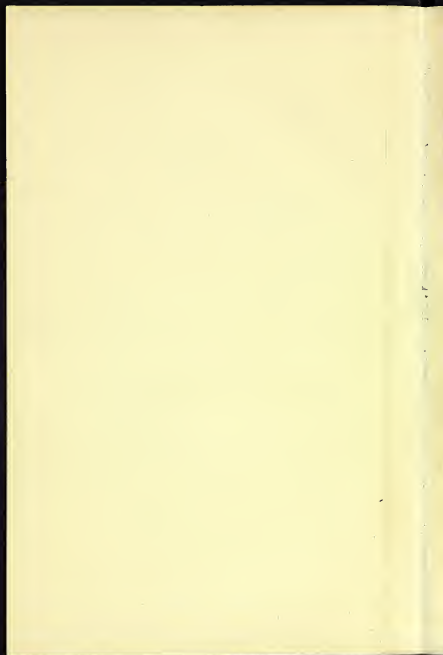
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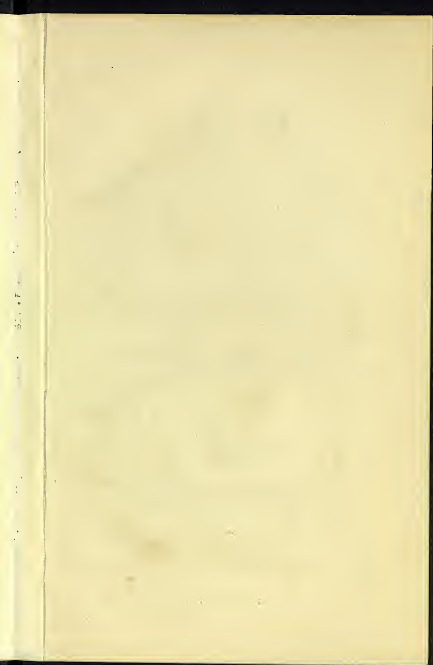
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BERKSHIRE PIGS.

B. C. De Horne Nov. 26. 1855

DOMESTIC PIGS:

THEIR ORIGIN AND VARIETIES,
MANAGEMENT WITH A VIEW TO PROFIT,
AND
GENERAL TREATMENT IN HEALTH AND DISEASE.

WITH PLAIN DIRECTIONS FOR CURING AND PRESERVING
THEIR FLESH.

BY H. D. RICHARDSON,

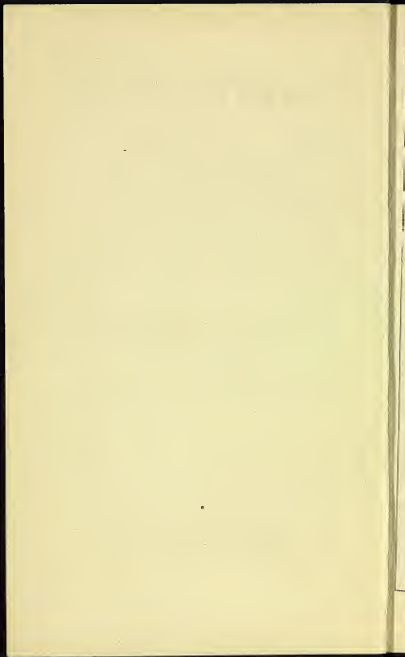
AUTHOR OF "THE FOSSIL DEER," "DOMESTIC FOWL," "DOGS," "THE HIVE
AND THE HONEY-BEE," ETC.

WITH ILLUSTRATIONS ON WOOD, BY W. OLDHAM, AND
MR. HARRISON WEIR.

A NEW EDITION, MUCH ENLARGED.



LONDON:
WM. S. ORR & CO., AMEN CORNER.
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PREFACE.

IN presenting a revised and extended edition of this work to the public, the editor conceives that he shall best perform his duty by giving the author's original preface in his own words, subjoining a few remarks on the matter added to the present. He says:—"Subsequent to the announcement of this volume, and while it was actually in the printer's hands, a work on the same subject, by the able pen of the late Mr. Youatt, has issued from the press. The author has read Mr. Youatt's work, and has felt so much struck with the similarity which, in many of its details, it bears to his own, that he deems it due to himself to make this statement, lest from the trifling priority of the appearance of that work in the literary market, he might, by unreflecting persons, be held guilty of plagiarism. He has only to add, such has not only not occurred, but that circumstances rendered any such attempt, even had he desired in any respect to avail himself of Mr. Youatt's labours, absolutely impossible.

"In reference to another particular, the author would also make a few observations. As far as the natural history, habits, and management of Pigs were concerned, he of course felt himself fully competent to the task, unaided; but, as it was deemed that an account of the best modes of fattening for the market, of killing the pig, and salting and preserving his flesh, would render the volume more perfect, and more generally useful and instructive—the author at once placed himself in communication with persons whose practical knowledge and long experience rendered their opinions at once valuable and authoritative. On these subjects, therefore, the author of this volume has, in no instance, advanced his own opinions, without their having been previously submitted to, and approved of, by the practical persons to whom he alludes. For the kindness which placed such an advantage within his power,

he has to return his sincere thanks, and feels himself particularly called upon to mention by name Messrs. Carroll, Keogh, Kelly, Shields, and Stirling, who so kindly favoured him with their sentiments relative to fattening; and Messrs. Charles Reilly (of Westmoreland Street, Dublin), Kehoe, Farley, Hawkins (of Mr. Alsop's establishment, "Portobello Market"), Saunderson, and Whaley, to whom he is indebted for much valuable information relative to preserving and curing. For the sketch from which the Neapolitan Pig was executed, the author is indebted to Mr. Carroll, editor of the "Farmer's Gazette," who was good enough to have it taken for him, from a specimen kept at Clongowes College, by one of the young gentlemen connected with that establishment. The other illustrations have been taken from the life by Mr. Oldham. That of the Chinese Pig was taken from a very handsome sow of that breed, exhibited at the late Dublin Society's Cattle Show. The *improved* Irish Pig obtained the first prize at the same show, and the "Greyhound Pig" was taken, without the slightest exaggeration, from a living specimen, at Rathgar, in the neighbourhood of Dublin. It will therefore be seen that neither trouble nor expense has been spared in order to render the volume accurate and complete, both as concerns the letterpress and the illustrations."

To these remarks the editor has only to add that he has endeavoured to improve the work by introducing all the information he could gain on the economical management of the pigs, both for the farmer and cottager; and that this new edition has received the further benefit of Mr. Milburn's revision—a gentleman whose practical knowledge of all matters connected with farm management is well known and highly valued.

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THE PIG.

CHAPTER I.

UTILITY OF THE HOG.

THE HOG is an animal whose properties are calculated, in a very remarkable degree, at once to awaken the aversions and command the consideration of mankind: the former sentiment is necessarily excited by the habits and manners displayed by the animal during life; the latter is the natural result of reflection upon the numerous sources of profit derivable from his carcass after death. The hog is, as we usually find him, at once the foulest and the most useful of quadrupeds. In aspect and general form he is not merely uninviting, but absolutely repulsive; every moment of his lifetime is seemingly devoted to the attainment of sensual or disgusting objects, which constitute his enjoyments: and yet, however filthy in his habits, and unsocial, nay, often ferocious in his disposition, though he may perhaps be, he is, beyond question, one of the most valuable of animals, and is esteemed and honoured in every dwelling, from the palace to the meanest cabin.

It is more than probable that the repulsive habits of the hog, as displayed by him in a domesticated state, are attributable, in no small degree, to his domesticators—the human race: nay, we have every reason to imagine such to be altogether the case. The wild boar, the admitted original of the domestic hog, does not present the same disgusting habits, or gross sensuality of disposition, as does his reclaimed descendant. It may be stated, that the domestic hog is bloodthirsty and treacherous. The only proofs of such a disposition that can be adduced rest upon a few solitary occurrences; and we can quite as easily bring forward other instances of a diametrically opposite character. We have, for instance, had many proofs of the amount of sagacity that the hog is actually possessed of, and to elicit which education and judicious management are alone required! Have we

not had several "learned pigs" who were capable of selecting cards from the pack, and of joining letters together so as to form words; and of performing many other amusing tricks, that, were the sagacity of the hog of a very inferior grade, it never could have been taught to perform? There are also on record two well-authenticated instances of this animal having been trained to the sports of the field: one occurred in the establishment of that celebrated sportsman, Colonel Thornton; and a sow was also broken in to set game by Mr. Toomer, gamekeeper of Sir H. P. St. John Mildmay. The latter animal, indeed, turned out a most staunch pointer, and would quarter her ground, point, and even *back the dogs*, as correctly and as brilliantly as any first-rate setter of the canine race. At Toomer's death, this animal was given to Sir Harry by Mrs. Toomer, but was afterwards returned to her, and, having been detected in the act of devouring a lamb, was sold, and finally met the usual fate of her porcine race—the knife of the butcher.

Nor are instances rare of the hog having conceived a warm affection for other animals of a race different from his own; an anecdote is related of a pig that thus attached itself to a bulldog, which he would follow everywhere, and with which he would gambol and play in the most harmless manner possible; if the dog went with his master on a ramble, the pig would also form, if permitted, one of the party; and when a stick, or other substance, was thrown into the water at any time for the dog to fetch, the pig would rival his canine associate in its zeal to secure the prize; would boldly take to the water, and apparently delight in the exercise of swimming; besides which, if, as often occurred, it succeeded in reaching the stick sooner than the dog, it would take it in its mouth, and fetch it safely to land.

I myself recollect observing that such pigs as I have been for any length of time in the habit of visiting, have not only recognized my person, but testified joy on my approach, and satisfaction at my caresses; nor could this recognition have originated in motives of a selfish nature, as I was not their feeder, nor did they ever receive more from me than an occasional morsel of bread or piece of raw turnip.

Though the pig generally loves foul, decayed, and nauseous food, he is far from admiring filthy bedding. That this is true of the wild boar is evident from his cleanly habits, and the dry and clean lair which he forms for himself in the recesses of his native forest; and that it is equally the case with the domestic hog will be admitted by any person who has witnessed the delight the animal manifests on being furnished with fresh straw after his sty has been

cleansed. A quaint old writer says: "A hog is the cleanest of all creatures, and will never dung or stale in his sty, if he can get forth." Hartlieb, in his "Last Legacy," says: "The hog, though he tumble in the dirt in the summer, is not a filthy animal. He doeth it, partlie to cool himselfe, partlie to kill his lice; for when the dirte is drie he rubbeth it off, and thereby destroyeth them." And do not other members of the order Pachydermata, including the *half-reasoning* elephant, practise the same; a resource, after all, no more than parallel with the custom of some savage nations, who anoint their skins with grease for the very same purpose. Nor is the fact to be forgotten or lost sight of, that the hog will thrive better, and fatten more quickly, if kept with proper attention to cleanliness, than he will when a contrary practice is followed. Alas! I greatly fear that we have not improved the character, or ameliorated the condition of this animal by domesticating him,—but that many of those very habits that are most calculated to excite our disgust are, as I have already observed, attributable to our own misconception of his natural propensities, and our consequent mismanagement of him in a state of captivity. Let it, however, be admitted, that the hog, as we generally find him, is, in life, a very disgusting brute; and still, are not all these disagreeable qualities more than amply counterbalanced by his extraordinary utility after death?

The flesh of the hog is remarkable for possessing the property of taking salt more *kindly* than any other description of meat; it consequently retains its sweetness for a much longer period, and is, obviously, on that account particularly calculated for ships' stores and sea provision. It can also be used for a greater length of time, without producing either weariness of its use, or any of those unpleasant effects commonly attendant on the continued use of salt provisions, as *scurvy*, &c., than any other description of salted meat; besides which, it is denser in texture, and *goes farther*. Indeed it seems to acquire absolute value by keeping. Who does not know the difference between an old and a new ham?—while the very pink of epicurism is to have a two-year old ham covered with the beautiful green mould.

The lard of the hog is in high esteem with the apothecary, for forming plasters, ointments, and other similar preparations,—with the hairdresser, for forming pomatum, *bear's grease*, *cold cream*, and a number of other accessories of the toilet. Its bristles are in demand with the brushmakers and the shoemakers; of the skin is made pocket-books, saddles, boot-tops; and even the ears are frequently made into pies. The hog furnishes another article, when properly fed and

managed with a view to its production, namely, *braisen*. This substance is found to require a peculiar mode of treatment for its formation, which is, as might be expected, kept a profound secret. Thirty hundred weight of brawn has been known to be furnished by one animal, and it commonly fetches from eighteen pence to two shillings per pound weight. While enumerating the valuable properties of the hog, we must not omit sausages and black puddings, the former so greatly relished as adjuncts to dishes of a more substantial but less savoury character; nor, in conclusion, is the manure produced from the sty to be overlooked, nor its fertilizing properties forgotten.

I have thus endeavoured to offer an apology for the hog's disagreeable peculiarities, and to show him to be, what he really is, the most useful of quadrupeds.



CHAPTER II.

THE WILD ORIGINAL.

SUB.—The hog, or rather perhaps *Suidæ*, the hog family. A genus or group of pachydermatous mammalia, differing much, in most of their characters, from all the rest of that very singular class; they have cloven feet, or only two fully developed toes, the same as the greater part of the ruminating animals, and they are the only pachydermata that are miscellaneous in their feeding, the others being exclusively vegetable feeders, subsisting chiefly upon strong and harsh vegetation, though most of them prefer more delicate food if they can obtain it. The hogs are omnivorous, but chiefly vegetable in their feeding, and they prefer succulent vegetables, especially wild fruits and roots, though, when other food fails, they can subsist upon almost any kind of garbage.

The common characters of the group, which are, of course, most descriptive of the hogs properly so called, as being the typical, and by far the most important division, are as follows:—Four or six cutting teeth in the upper jaw, and always six in the under; two canines in each jaw, and twenty-four or twenty-eight cheek teeth in all; the lower incisors are pointed obliquely upward and forward, and the upper ones are conical, so that this part of the mouth is better adapted for tearing than for cutting; the cheek teeth are different in their character, none of them are grinders, but the ones toward the front are partially trenchant, and those toward the

rear are more tuberculous; the canines, which are large in the male only, continue growing during the whole life of the animal, but they can scarcely be in any way regarded as feeding instruments; they grow outwards and upwards, and in the old animals, in which they acquire much size and strength, they curve backwards at the points, and are very formidable weapons, both on account of their uneven size and form, and of the force and determination with which the animal can use them; the muzzle is lengthened into a snout, which has a slight cartilaginous enlargement at the end, is supported by a peculiar bone, capable of some motion, and very abundantly supplied with nerves, so that it is amongst the most essential parts of the body. The toes are four, of which the two middle ones only are sufficiently developed for being the common points of support to the body in walking, but the other two are more developed than the corresponding ones of the ruminating animals, and are furnished with small and pointed hoofs. The two principal toes have some lateral motion, and can be brought together or separated, and where they are far separated from each other the two small ones come in contact with the ground, and the plant of the foot is considerably enlarged. The structure of the foot is, as we shall see, very well adapted to the surfaces upon which the animals generally range when in a state of nature. But there exists a peculiar breed, in other respects true hogs, having the hoof solid, formed of a single toe. These are found in Sweden, about Upsal, and are spoken of by ancient writers. Mr. Coke of Holkham, afterwards Earl of Leicester, had a breed of these pigs some fifty years ago; and in 1834 Mr. Cross of Leadenhall Market had a specimen of the same variety sent to him by Mr. Revet of Chelmsford. The females have twelve mammae, some pectoral and some ventral, and the litters of the young are numerous. The ears are either smaller and upright, or large and pendulous. This member, indeed, forms the chief characteristic of the domestic hog, and a large and pendant ear will be found the general concomitant of large size.* The skin is thick, but soft and pliable, capable of much extension, but not constricting so tightly as that of many other mammalia. The covering consists of stiff bristles, each of which is formed of several small filaments firmly soldered together, except at the points, where they are often separated. Below this there is sometimes a sort of coarse woolly hair; but both parts of the covering vary much with the climate, and in the domesticated ones with the kind, some being very smooth in the coat, and others almost naked. They have a tendency

* Laurence.

to accumulate under the skin a great quantity of fat, which is popularly called lard, and is sometimes intermediate between the fat of other mammalia and the blubber of the *Cetacea*. In very hot countries this fat does not accumulate in such quantity as in colder climates, and very cold latitudes are not favourable to the animals.

They occur in both continents; but the American ones are so different from those of the eastern continent that they require to be separated as a distinct sub-genus. They are of much smaller size than the eastern ones, but less useful to man, and more limited in their distribution, being met with only in the humid woods of the central parts of South America, to the eastward of the Andes; but in some parts of these woods they are very numerous. In all places of the world they are partial to humid places, fond of wallowing in the mire, and of basking in the sun near the margins of pools and streams.

In the eastern continent they are far more widely distributed than in America; but always more abundant in the damp forests of tropical countries than in higher latitudes. In Europe they occur in a wild state only in a few of the more wooded parts of the centre and the south; but they appear to have once been much more general. For many years there have been no wild hogs in any part of Britain; but there are many traditional accounts of their former abundance. In the forests of south-eastern Asia, and the rich parts of Africa, they are more plentiful; and they are distributed to many remote isles in the Pacific. In many places, however, it is much more difficult to distinguish between wood hogs, which are natives and *aborigines*, and those that have been introduced by the people, and have been turned loose in the woods and multiplied there, than it is in the case of many other animals. Yet in the case of others there are instances in which we should be very apt to regard introduced animals not only as aboriginal natives, but as the most truly natural and characteristic of the country of any animals that are to be met with there. This is remarkably the case with the ox and the horse on the rude plains of South America. We know well from history that there was not a vestige of any animal resembling them previous to their introduction from Europe; and yet they now literally swarm, as if that were the part of the globe most favourable to them. It may be the case with the wild hogs of New Guinea and the Pacific Isles farther to the east; and this appears the more likely from the fact that they are not found except on islands, the shores of which at least are peopled by a race appearing to be of the same climatic variety of mankind as the Malays. Indeed, the tame hogs of the east of Asia appear to be from a different variety

of wild ones from that of which the remnant is still to be met with in the forests of Europe.

Hogs in a wild state are much more numerous and widely distributed than either oxen or sheep; but it is not on this account the less difficult to trace the parentage of the tame ones, or to fix with anything like certainty the locality of any, or at least all, of those that are found wild. From the fact of the hog being possessed by many races of men, who have neither the ox nor the sheep, it is very probable that it was the first animal domesticated by man, and probably the first that he killed for the purposes of food. The hog is much more an animal of the tangled woods than any other of those which are, on account of their size, valuable as animals of the chase. From the concealed situations in which they are found, and their habits of basking in the little openings of the woods, they are more easily approached within the range of an arrow, a javelin, or even a club or other manual weapon, than animals which range in the open places, and set a watch when they feed. They are also much slower in their movements, and retreat to shorter distances, making more noise and bustle in their retreat; and thus they are far more easily followed. The rate at which they breed also conspires to render them very capable of keeping up their numbers with a large surplus in those woods where fallen fruits at one time of the year, and albuminous roots at another, furnish them with an ample and constant supply of food. It is certain that, in former times, very much of the western parts of the eastern continent was covered with thick, damp, and productive woods, much more so than at the present time. Various kinds of oak, beech—chestnut, and other trees, abounding with farinacious and oily fruits, all of them rich, and many of them readily eaten by the rude people of former times, rendered, and, where the deciduous forests remain, still render the fall in the forests a most abundant time for the wild hog. Then in the clumps, by the margins of the pools and the banks of the tangling and intercepted streams, there were many succulent roots; and these roots must have furnished a supply both where the autumnal produce was exhausted, and during the heat of the summer. In all places where the people inhabited the woods, and there were wild hogs in them, these hogs very naturally presented themselves as an abundant and easily acquired article of food.

Canning's keenly satirical account of the origin of cruelty is thus, in all probability, something more than the mere production of poetic fancy.—Man, in a state of perfect innocence, and with hands all-unstained by the blood of a single living creature, ranged the wild

woods, contending with monkeys and maccaws for "fruits in their seasons," and with the wild hogs for fern and other roots, when no fruit was to be found. Whether the rivalry occasioned any jealousy of the hog, and beech mast had any influence in making man more cruel and carnivorous is not said, though it is not impossible, and would add to the truth of the application and the force of the moral. But upon one day of more than ordinary desire, man eyed with complacency the sleek rotundity of a fat hog; and the longer that he gazed, the more ardent waxed his desire of making a mess of the unsuspecting animal. Invention set about to find means of making a meal of the hog. The bow was made and strung, the arrow was pointed; the bow was bent, the arrow set on the string—and

"He twangs the bow, the hissing arrow flies,
And darkness seals the gentle porker's eyes."

Once tasting the luscious flesh of the hog, man could no longer be contented with the beech mast and the acorns, but soon began to "kill and eat" the whole of living nature around him. Nor was he content till he had numbered the flesh of his own race among the dainties of his board. As he became more refined, the disposition to eat his fellow men became weaker; but the killing propensity has continued, and the slaughter of mankind (so that it is carried on upon a scale of sufficient grandeur), is above all others the work for which man is especially "covered with glory."

Such, in part at least, is the outline of the fable. In so far as man is concerned, we leave the propriety of the application to the judgment of the reader; but there seems every reason to believe that the hog was one of the first animals of any size inhabiting the land which formed a regular portion of the food of the human race in a state of nature.

Hogs are conveniently divided into two sub-genera. The first are the true hogs, or members of the genus *Sus*; and the second are the peccaries, or members of the genus *Dicotyles*. We shall briefly notice both of them in their order.

The true hogs have six incisive teeth in each of the jaws, the canines, in the male, long, and projecting out of the mouth, and the cheek-teeth twenty-four or twenty-eight, the anterior compressed, and the posteriors with tuberculated crowns. None of the cheek-teeth have the bone and the enamel alternating with each other, so as to form a grinding surface, as in the ruminantia, and in those pachydermata that are exclusively herbivorous. They have but one case of bone, with the enamel placed upon it as it is in human teeth. The

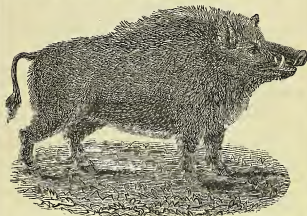
jaws have no lateral or grinding motion; they merely open and shut, and the food is divided by different strokes of the jaws against each other. In consequence of this, hogs are very clumsy feeders, and scatter their food about. Their mouths are not well adapted for eating, any more than they are for grinding; and thus, when their food is in large masses, they hash and mangle at it in a very rude way. If it is tough they use the fore foot for holding on, while they seize with the teeth, and tear it asunder by an upward jerk of the head. The structure of the head, and the great depth and strength of the neck, fits them well for the performance of this kind of labour, which is, in fact, partly the same as that which they have to perform when they root up the ground in quest of the vegetable stores that are below the surface. The hind toes and the hoofs are well developed, and contribute much to bearing the animals up when they range the soft and marshy grounds in quest of the roots of plants.

It appears somewhat singular that the flesh of the hog was prohibited in the ceremonial of the Jewish law; the same prohibition being afterwards borrowed by Mahomet, and introduced into the Koran. Great difference of opinion prevails as to the cause of this prohibition; some alleging that this food was unsuited to the land inhabited by the Jews. As, however, the kinds of food to be eaten and rejected—doubtless to prevent that luxurious epicurism unsuited to a growing and prosperous nation—were to have a limit, this limit was fixed by two distinctive marks: they must "divide the hoof and chew the cud;" that principle of restriction admitting only a limited range to the food permitted. The pig, the horse, and the camel were excluded. It was only in a state of low nationality, or in times of great degeneracy, that the Jew ever tasted pork. This matter, however, being wholly of a ceremonial nature, can form no part of the useful history of the animal. We shall, therefore, proceed to a very brief notice of the species. Of these there are three, besides some apparent varieties, and innumerable varieties or differences of breed among the domesticated ones.

The Wild Hog, or Wild Boar (S. Scrofa). This is generally regarded as the parent stock of all the tame breeds in Europe, the north of Africa and Asia, except the extreme east, and that it is the same species with them hardly admits of a doubt, though there are climatic differences of the wild one, just as there are still greater differences in the domesticated, arising from the influence of climate and treatment jointly. But these very circumstances show the flexibility of the animal, and, consequently, that it can be introduced with advantage

into almost any climate that mankind can inhabit; and the many and variable kinds of food upon which it can subsist render it still more pliable in domestication, and therefore more valuable.

The wild hog is all over of a blackish-brown colour, sometimes brindled by the brown being redder in one part and blacker in another; and when these differences occur, they are generally in cross stripes, which are not strongly marked, but pass into each other. There are



THE WILD HOG.

very long and coarse bristles upon the spine for almost its whole length, which are partially erectile when the animal is excited, and have a formidable appearance. The eyes are very small but expressive when the animal is tranquil, and they are fiery and glaring when it is irritated; the ears are not nearly so large as they are in many of the domesticated breeds, but they admit of a very considerable degree of motion. They come to what may be considered as their most active size in about five or six years, but they live to the age of almost thirty, and increase in size, and in passive strength, and daring hardihood of character during the greater part of that time. They, however, become fertile long before they reach their full size, for they are capable of breeding in their second year. The litters of these immature ones are, however, not numerous. In the wild forests of Europe the rutting time is in January or February, and commences, though more rarely, as early as November. Previous to this time, which is the season of

abundance with them, as the fruits of the trees are on the ground, they assemble in small herds; but when the rutting time comes on they separate. Though they are monogamous, the males, or boars, which are exceedingly fierce at that season, often fight desperate battles of gallantry; and it is said that the largest and most powerful males fight to obtain the largest females, which, on their part, are also more favourable to the powerful and victorious than to the feeble and vanquished. In this way the female which no one courts is left for the male which is not able to obtain another in the strife. There is, however, said to be something like a principle of honour in these battles; for, if a female shows a very strong and determined attachment to one particular male, the rest do not forcibly interfere, but allow him to lead her off quietly to the nuptial bower. We have said that the litters of the ones which have not attained their full size are not so numerous as those of the mature age; this is true, whether both parents, or only one, are immature; and in the case of one it matters not much whether that one is the male or female. Thus, in the case of an unequal match, there is a waste of the productive energy; and as this energy is the grand result to which all the developments of animals lead, nature takes every means for regulating it with proper economy.

When all the hostile encounters, and other parts of the pairing are settled, which have no inconsiderable resemblance to the pairings of some birds, the whole separate, each pair betaking themselves to the deep cover of a thicket, where they remain about thirty days. The period of gestation is four months, and the litter consists of from four to ten pigs, according to the age and vigour of the parents. When they are produced, the female hides them very carefully from the male, as, if he were to find them, he would eat them up. Indeed, when the season is severe, and provision is not easily obtained, the female does not scruple to eat her own offspring. This sometimes happens in the case of the domestic sow; and Shakspeare mentions, among the fitting subjects that go to the composition of a diabolical mess,

“Sow that hath her farrow eaten,”

which he of course borrowed from the then popular notions of what subjects were fit for the purposes of witchcraft. That there should be hostility to the young on the part of the boar is rather in accordance with a somewhat common habit among animals; for in those species, whether mammalia or birds, in which the males fight battles of gallantry, they never take any share in providing for the young,

always treat them harshly, and not unfrequently kill, if they do not eat them.

If the young are protected, and the mother finds the necessary supply of food in the early stage (for it is in the very early stage that there is danger from her), she becomes a most attentive mother. The period of suckling is of the same length with that of gestation; but the protection of the mother is continued for a long time after this; and no parent can be more bold in the defence of an offspring, and no offspring more attached to a parent.

There is something more curious even than this in the economy of the wild hogs, something very closely resembling the founding of a sort of clan; so that those persons who are fond of tracing what they call sagacity or intelligence in animals, may find it here. The litter are not only attached to the mother, but to each other; and this attachment does not cease when they are no longer dependent on the mother's protection, but after another litter has been produced; nay, it is communicated from litter to litter, till the produce of the same mother forms a little colony, the members of which appear capable of recognizing each other, even after they have been separated for a time from physiological causes. It is possible that most herds of social animals are originally formed on this principle, though the attachment has not been so well observed in most of the others as in these.

But this has a limit, and it is easy to see that it should; because, with the great fertility of the animals, and the small disposition that they have to range far from the same place, they would in no very great length of time become so numerous as that no pasture could maintain them, and thus the free and average operation of the principle of reproduction would in time effect the destruction of the race, the more especially when it is considered that the natural period of life in them is thirty years. But nature is never without a resource, exactly adequate to the necessity that there is for it; and though while we, in the exercise of our limited powers, in general see only one part of the case, and see it as though it would in the end lead to destruction, yet there is always another power which comes in at its appointed time, and works for preservation. This holds in every case, although many of the greater changes appear to be connected with wide extending ruin.

In the case of wild hogs the correcting principle that limits the numbers of the individual herd, and enables herd to succeed herd, just as generation succeeds generation, is both simple and easily seen.

The young do not come to their full growth till the age of five or six; but they begin to breed at two. Till they attain their full growth the attachment to the parent herd continues; but after this it ceases, and each pair, as they arrive at this stage, go off to found a new colony in a part of the forest which does not interfere with the pasture of that from which they take their departure, in order to make room for other races. When the young of the year are so far advanced as that they do not greatly need the protection of the mother, the whole of the herd assemble and feed socially together, until the season again comes round, at which they disperse in pairs. When they are in the herd they are always under the leadership of a male that may be looked upon as the patriarch, though he does not exercise the same kind of sway as the patriarch of a polygamous race. After they have assembled in the herds they are apt to sally forth from the forests and do no small damage to the cultivated fields, both by rooting up and by trampling down. There is an allusion to this in the beautiful parable of the vine in the eightieth Psalm: "The boar out of the wood doth waste it, and the wild beast of the field doth devour it." This is finely true to nature, even in the contrast of the mischief done by the two. The wild beast of the field devours—simply eats; but the boar out of the wood wastes—tramples down and destroys.

The leader of the herd is usually at some distance from the rest, but they do not spread far; and, as their vision is neither keen nor extended, they are understood to proceed chiefly by scent; and this is the further necessary that the night is the time at which they commit their depredations. When the herd are attacked, they form in a circle, with the weaker ones in the centre, and make a most formidable resistance, standing boldly out to meet the danger. If wounded by a shot, even when surrounded by the dogs, the boar will instantly turn in vengeance upon the hunter.

The wild boar is very common in all the reedy marshes of Tartary and Siberia, and in the mountainous forests in the vicinity of Lake Baikal, as far as lat. 50°, but is said not to occur in the northern extremity of Siberia.*

The hog was not indigenous to the American continent, but was introduced into it by the Spaniards; and whether or not the original stock was a good one I cannot say, but it either was very superior, or the breed has thriven remarkably in that country, the present South American breed of pigs being remarkable for their qualities of arriving early at maturity, and fattening easily. A black wild pig†

* Pennant's Arctic Zool. p. 40.

† Moubay and Lawrence.

of this breed was exhibited a good many years ago by Mr. Gibbs, seedsman to the Board of Agriculture. The animal was a sow, and had a litter with her. They had been brought from Monte Video. Both sow and litter were very ferocious. One of these fattened, when very young, to twenty-four stone; and although *ripe*, and carrying an average quantity of *fleur*, it had, in the opinion of the butcher, more flesh in proportion than he had ever before witnessed.

The food of the wild hog consists chiefly of roots and vegetables; for facilitating his digging for which his nose is furnished with a peculiar bone, and a powerful muscular and cartilaginous apparatus. "When we look upon the head of the wild boar," says Sir Charles Bell, "we comprehend something of his habits, and see what must be the direction of his strength. He feeds by digging up roots, and the instruments with which he does this are also those of his defence. The position of the tusks defends the eye in rushing through the underwood, and the formation of the skull and the spine, and the mass of muscles in the neck, all show the intention that he shall drive onward with his whole strength, so that he may rend with his tusks." The characteristic form of the wild boar consists in the shortness and thickness of the neck, the wedge shape of the head, the projection of the tusks, and the shortness of the fore legs, which must always be in proportion to the neck. Worms, insects, as well as acorns, beech mast, chestnuts, are also greedily sought after and devoured; and, acting upon a knowledge of the animal's feral habits, some proprietors, a number of years ago, turned out their swine to feed in the English forests, searching for and driving them home when in a fitting condition, or as occasion required.* This experiment was found to answer to admiration, and the pork of hogs, thus suffered for a time, towards the close of their life, to cater for themselves, was found to be peculiarly sweet and delicate. A similar system is still resorted to in many parts of America, and with equal success; for we are not to judge of the true flavour of American pork from such as is at present imported into this country, the coarse taste and extreme hardness of texture presented by the latter article being the result of the curing process adopted, and not of any improper method of feeding prior to slaughter.

The hog is, unless when very hard pressed, by no means so foul a feeder as many suppose. This will be the better understood from an inspection of the following table, representing the comparative graminivorous propensities of the ox, horse, sheep, goat, and hog:—

* Nat. Lib.

The ox eats	276 plants,	and rejects	218
The horse	262	" "	212
The sheep	387	" "	141
The goat	449	" "	129
The hog	72	" "	171

This statement was originally made by the ingenious author of *Pen Siccus*,* and is quoted by Pennant† for the same purpose that now induces me to bring it forward.

The wild boar is, in his wild state, an object of terror, but when reduced to captivity, soon becomes comparatively gentle and manageable. One kept some years ago in the Parisian menagerie, performed several tricks, went through different exercises, and assumed various attitudes ‡,—the stomach was, however, literally the "master of arts", on this occasion, for bread was the reward of obedience. In confinement, also, it must be confessed, that the wild boar soon becomes as inured to filth as the nastiest amongst his domesticated brethren.

The domestic hog is more prolific than his feral original, and even fourteen and fifteen young have been known to be produced by the domestic sow at one litter. At birth, the sow carefully conceals her farrow from their rugged parent, who, with a strange instinct (designed, most probably, to check the too rapid increase of a race so formidable), would otherwise devour them. The colour of the young of the wild sow is a pale yellowish brown, marked with longitudinal black bands. The females live together in herds; several litters, with their dams, joining company, and the young boars remain with the herd until maturity. The habits of the wild boar may be said to be nocturnal, for he lies close during the day, unless aroused from his lair by the clamour of the hunters, and in the evening he goes forth to feed. In harvest time he is no friend to the farmer, doing much mischief to the grain crops, as well as to the vineyards, and trampling beneath his feet more than he consumes as food. The boar has been asserted to be in part carnivorous, and it has been stated that he eats horse-flesh, and that the skins of deer, as well as claws and bones of birds, have been found in his stomach.§ It has even been stated that he will seek for, and devour, the smaller kinds of game,|| as partridges, leverets, and also eggs. Some, in alluding to the propensity for devouring their young, frequently displayed by the domestic sow, as also her occasionally destroying and devouring young children in their cradle, have endeavoured to account for it by attributing to them a violent craving for blood;¶ they will also greedily devour

* Amsen. Acad. ii. 203. † British Zoology, vol. I. ‡ Nat. Lib.

§ Buffon. || Desmarest. ¶ Buffon

newly-dug and unctuous earth.* This may be so; but how, then, are we to account for the habit of eating unctuous earth, displayed by some tribes of Indians in South America.† I do not allude to a similar demonstration occasionally exhibited by the African Negroes, because I regard the latter instance as the result of a morbid appetite, produced by a specific disease, while the former is a national custom.

Professor Lowe very naturally suggests that a sow devouring her young is, in the strictest sense of the word, an *unnatural* act, one that would not take place in a state of nature, and most probably the consequence of the artificial position in which the animal is placed—surrounded by filth and damp, and exposed to the annoyance of being constantly disturbed by visitors; for at this period the sow is particularly irritable.

As to their destroying children, other animals have done so quite as frequently as the swine; and yet these solitary instances have never been carefully recorded against them as a stigma upon their entire race. The fact is, that the poor pig, like many other victims of popular prejudice, has far more than its just share of sin to answer for.

Hunting the wild boar is an exciting and a dangerous amusement, perhaps one of the most so amongst field sports. It is usually followed by mounted huntsmen, armed with spears or rifles, aided by a pack of hounds, and, when pursued by the noble and the great, usually attended by inferior assistants, called on the continent "*piqueurs*," or *prickers*, whose duty it is to find and rouse their savage game from his lurking place. Clumsy as his form may appear, the boar is an animal of no contemptible swiftness, and it is not every horse that is able to keep up with him, when once fairly a-foot. Unless molested, or his lair threatened with invasion, the boar will not attack man; but when once aroused, his ferocity is truly formidable, and his defence of the most resolute description; indeed he displays so much courage and determination, that it is impossible not to regard his character as partaking of the noble, and almost to regret the destruction of so brave a foe. When fairly overtaken and brought to bay, is the time when the affray becomes invested with a genuinely serious character. Woe then to the horse who, obeying the impulses of a rash and inexperienced rider, suffers himself to be seduced or goaded into too close proximity with the infuriated animal! Woe to the dog who, with more zeal than prudence, attempts to seize the grisly monster by the ear or flank, until his strength has been suffi-

* Buffon.

† Humboldt.

ciently reduced by the spears or bullets of his human coadjutors, and woe to the huntsman who, thrown from his affrighted and maddened steed, or whose own foolhardiness has induced him to venture too near, fails in heart or hand, so as to cause the fatal ball to swerve from its true course, or direct the boar-spear with nervelessness or irresolution! In such case death and destruction are dealt around;—with each stroke of the boar's jaw, the long and curved tusk finds a fleshy sheath;—dogs, horses, and men are successively overthrown with reckless ferocity and irresistible force, and form a mangled and gory heap upon the fatal field. The boar inflicts a terrific wound with his tusks; and a horse that has been once wounded by him, can never again be induced to approach him. Most dogs that have been thus served, and have recovered, have proved useless cowards and been abandoned to the halter.

Mr. Drummond Hay, in his work on Western Barbary, relates several boar-hunting adventures in that country. Among others, the story of a combat between a wild Boar and a Lion, as told by an old hunter, who had himself witnessed it. "In the days of my youth," said the *retatu*,—a hunter of the country between Ceuta and Oran,— "when a black moustache curled where you now see the hoary beard of my winter's age, I seldom passed a night within my father's hut; but sallying out with my gun, laid wait for the wild animals which frequented a neighbouring forest. One moonlight night I had taken my position on a high rock which overhung a fountain and a small marsh, a favourable spot with our hunters to watch for boars, who resorted thither to drink and root.

"The moon had traversed half the heavens, and I, tired with waiting, had fallen into a doze, when I was roused by a rustling of the wood, as on the approach of some large animal. I raised myself with caution, and examined the priming of my gun. Ere the animal entered the marsh, he paused, and seemed to be listening, when a half growl half bark announced him to be a boar, and a huge beast he was, and with stately step he entered the marsh.

"I could now see by the bright moon, as he neared my station, that his bristles were white with age, and his tusks gleamed like polished steel among the dark objects around him. I cocked my gun, and waited his approach to the fountain.

"Having wetted his ivory tusks, he began to root; but he appeared to be restless, as if he knew some enemy was at hand; for every now and then, raising his snout, he snuffed the air. I marvelled at these movements, for, as the breeze came from a quarter

opposite my position, I knew I could not be the object of the boar's suspicions.

"Now, however, I distinctly heard a slight noise near the edge of the marsh; the boar became evidently uneasy, and I heard him say with a clear voice, for you must know they were formerly men, 'I hope there is no treachery.' This he repeated once or twice, and began to root.

"Keeping a sharp look-out on the spot whence I heard the strange noise, I fancied I could distinguish the grim and shaggy head of a lion crouching upon his fore-paws; and, with eyes that glared like lighted charcoal through the bushes, he seemed peering at the movements of the boar. I looked again, and now I could perceive a lion creeping cat-like on his belly, as he neared the boar, who was busy rooting, but with bristles erect, and now and then muttering something that I could not understand. The lion had crept within about twenty feet of the boar, but was hidden in part by some rushes. I waited breathless for the result; and, although myself out of danger, I trembled with anxiety at the terrible scene.

"The boar again raised his snout, and half turned his side to the lion; and I fancied I could see his twinkling eye watching the enemy. Another moment and the lion made a spring, and was received by the boar, who reared upon his hind legs. I thought I could hear the blow of his tusks as the combatants rolled on the ground. Leaning over the rock, I strained my eyes to see the result. To my surprise the boar was again on his legs, and going back a few paces, rushed at his fallen foe; a loud yell was given by the lion, and was answered by the distant howlings of the jackals. Again, the ferocious boar charged till he buried his very snout in the body of the lion, who was kicking in the agony of death. Blood indeed flowed from the sides of the boar, but his bristles still stood erect, as he triumphed over the sultan of the forest; and now he seemed to be getting bigger and bigger. 'God is great!' said I, as I trembled with dread. 'He will soon reach me on the rock.' I threw myself flat on my face, and cried out, 'There is no other God but God, and Mohammed is his prophet!' I soon recovered my courage and looked again. The boar had returned to his natural size, and was slaking his thirst in the fountain. I seized my gun, but reflecting, said within myself, 'Why should I kill him? He will not be of any use to me; he has fought bravely and left me the skin of a lion, and perhaps he may be a Jin (evil spirit).' So I laid the gun down, contenting myself with the thought of the morrow.

"The boar had left the fountain, and was again busied rooting in the marsh, when another slight noise, as of a rustling in the wood, attracted my notice, and I could perceive the smooth head of a lioness looking with horror at the body of her dead mate.

"What! treachery again?" said the boar in a low tone.

"God is great!" said the lioness; "but he shall pay for it. What! a pig—an infidel—to kill a lion! One spring and I will do for him!" Having said these words she advanced boldly. The boar stood prepared, grinding his teeth with rage. She paused, and again retreated to the wood, and I could hear her say, 'O God! all-merciful Creator! What an immense boar! what an infidel! what a Christian of a pig!'

"May God burn your great-great-grandmother!" said the boar.

"On hearing the creature curse her parent she again stopped, and lashing her tail, roared with a voice that the whole wood re-echoed, and she said, 'There is no conqueror but God!'

"The boar stamped his hoofs and gnashed his tusks again with rage; his grizzly bristles, red with the blood of her mate, stood on end; then, lowering his snout, he rushed headlong against the lioness who, springing aside, avoided the dread blow. A cloud came over the moon; but I heard every blow of the paw and every rip of the tusk. There was a dead silence; again the cloud had passed and the heavens were clear, and I saw the lioness with her fore-paws on the body of the boar. I seized my gun, aimed at her head—that was her last moment.

"The morning dawned. I descended from the rock. The claw of the lioness still grasped in death the body of the boar. Many severe wounds showed that the boar had again fought bravely.

"The lions were the finest I ever saw, and I made good profit by that night's work."

We were still applauding the old hunter's story, when a gaunt Arab, thrusting forward his bare and sinewy leg, exclaimed, "Look at these scars, and keep in mind, O ye faithful, and thou, O son of the English, that it is not only dogs that are wounded or killed in the chase of the boar!"

"Let us hear how you got them," said the young mountaineer, the owner of the dog that had been killed (in a recent boar-chase).

"It is soon told," said the man of scars. "Some eight years past, during harvest time, I was watching at night for a boar in a field of ripe barley near *Ras Ashacâr* (Cape Spartel), and fired at a large boar, who reeled and fell, but got up again and made away.

"At dawn of day I went to the spot where the animal had fallen, and finding marks of blood, I traced them to some brushwood in the centre of the field, which spot I ranged, and perceiving the animal had not gone away, I was thinking what might be best to do, my gun cocked in my hand, when I heard a rush, and before I could get my gun to my shoulder, the boar was upon me; the gun was dashed out of my hand, and I expected every rip I received that my doom had been written. God knows how long this encounter lasted; the time seemed to be as an age.

"Finding no manner of escape, I slipped my arms from the gelab, and escaped out, leaving the animal to vent his rage on my garment. I crawled off, but fainted from loss of blood.

"I did not recover my senses till I was found by my family, who carried me home to Mesnàna (a village near Tangier) half dead. I told my story there, and a party of hunters went out directly to revenge my wounds. They found the beast had again retreated to his lair, having cut my dress into shreds. He attacked them as he had attacked myself, but they were prepared and soon killed him. I was not able to stand on my legs for many months after."

"The son of the English," said Sharkey, pointing to me (*i. e.* Mr. Hay, "had just such a narrow escape four years ago, when he and the son of America attacked a boar at bay."

"Let us hear," said they all, "O Nazarene!"

I complied with their request, and suiting my style to my audience, told my tale much after the following fashion:—

"It was in the month of October, O ye faithful children of the prophet, and early in the morning, that I received a message from the son of America, who had passed the night in the hills watching for boars, begging me to join him at the marshes of Boobàna as soon as possible, and to bring my hunter Sharkey, with his two dogs and an *extra* gun. The messenger told me that my friend had wounded a large boar, and that while tracking him, the animal had rushed from the thicket, that his rifle had missed fire, and that had it not been for a ruined wall, on which he had taken refuge, he would have fared badly.

"I soon joined my friend, whom I found still perched on the top-most point of the wall waiting my arrival.

"The boar had moved off to some distance in the thicket. We soon got on the track of the beast, and found by the print of his hoofs that he was wounded in the right hind leg.

"At him, *Merkis!*" said Sharkey, as he slipped his dogs. "Get

out, you Jew; there is only one God!' which the old hound *Zeitsoon* answered by *bow*; and the little cur *Merkis*, whose hide was striped like a zebra's from the ribs of boars, yelped with joy as he got on the scent.

" 'That's he,' shouted Sharkey; 'none but the one God!'

"The dogs had now headed us by some hundred yards, when we heard *Zeitsoon* give tongue as when the boar is at bay; and it was quite certain that this was a large one, for both dogs seemed to be keeping at a respectful distance.

"I had scrambled through the thicket within some yards of the place where the dogs were giving tongue, and was calling to my companions to know where they were in case I fired; but the only answer I received, O ye faithful! was given me by the boar, who was nearer than I imagined. Luckily I had kept clear of his path, so he dashed by within a few paces of me without my being able to get a shot or he a rip. The dogs followed in full cry, and had reached an open space when we heard a piteous howl. Poor *Zeitsoon* had been almost severed in half. The boar, we supposed, had lain in wait for him in the open space.

"Sharkey, when he saw the frightful state of his brave and faithful hound, sat down without saying a word, and taking his turban began to bind up the wound, whilst he offered up a prayer for the life of the poor dog.* The boar had now managed to make his way up the opposite bank, and little *Merkis*, heedless of his companion's fate, yelped on the track; when again a howl grated on our ears. Sharkey started up on his feet, and brandishing his bill-hook, shouted to the full extent of his lungs, 'Hide yourself, *Merkis*! Do not trust him; he is an infidel!'

* The affection of the Mogrebbin sportsmen for their dogs is remarkable, and during the chase of the boar, "they express their feelings in the most endearing terms; such as, 'My children, my dearest, take care, he sees you; he is an infidel, a Nazarene. He will have his revenge. None but the one God!'" On the occasion to which this passage refers, three dogs were wounded, one, belonging to a young mountaineer, mortally.

"The poor animal had just life enough to wag his tail and raise up his head, as his owner, a fine young mountaineer, came up and took him in his lap. 'Alas! my poor dog,' he said, 'did I not warn you not to go near the infidel! but God's will be done.' The tears started in his eyes as his dog expired. The bill-hooks were set to work, and a grave was dug to bury the poor animal; each man put a stone upon it as a tribute of his affectionate regret, and I, on my part, added one to the number. The wounds of the other two dogs were now sewn up, the thorn or point of the aloe-leaf and its fibres being substituted for a surgeon's needle and silk thread."—*Hay's Western Barbary*.

"The dog showed he was not much hurt by still giving tongue, though in such a manner as told that the boar had again come to bay. Having called a council of war, my friend and I determined to go in to the boar by ourselves, as more than two persons would only create confusion.

"The enraged beast had come to bay in a jungle of gum-cistus, entangled with briars, a very unfavourable place for our attack; however, having thrown off our sporting-jackets and examined the priming of our guns, we entered the wood, agreeing to keep some few paces from each other.

"At first we made against the wind, and kept clear of the boar-paths, which is the best method of avoiding an unexpected attack. Having advanced some way through the thicket, I was obliged to return to a boar-path, for I found it was impossible to make way through the brambles, having already left most of my covering among the thorns.

"I moved slowly onward in a stooping position, keeping my gun as a battery in front; behind me walked an English setter, who being useless for partridge shooting, I was training for the nobler sport. The light hardly penetrated the dense jungle, so that I could not distinguish my companion through the gloom, although I heard him advancing as cautiously as myself.

"At length I got within about fifteen paces of the spot where the dog was giving tongue. I knew I was in an exposed position, but could not avoid it, being unable to move to the right or left, the brambles were so thickly matted together. Merkis, encouraged by my presence, ran to and fro yelping bravely; but searched in vain to get a sight of the enemy.

"'Can you see him?' said the son of America, who was some yards to my left.—'Hush!' I replied, for at that moment I fancied I could hear the beast move. My setter now pricked up his ears, and rushed forward. It was the affair of an instant; for hardly had I fixed my gun to my shoulder, when I saw Cato pushed forward by the boar, howling with fright.

"It was useless to fire; for such was their position that I should have killed the dog without hurting the boar. But the difficulty was soon removed; for the boar, throwing the dog behind him, was at once on the muzzle of my gun. I pulled both triggers, but the very instant that I fired my gun was dashed from my hand, and I and the enraged animal rolled together on the ground. I was undermost, and managed to keep my face downwards to the earth, lying as flat and

still as possible; the path of the boar being happily for me a small water-course which had been worn away, so that the shallow trench somewhat protected me from his tusks. Having recovered from the shots, the monster began to belabour me with his snout; but being a little flurried, I suppose, could not manage to get a rip. I was in a terrible fright, and hollowed for assistance, expecting every moment to be in the same plight as poor Zeitsoon, whose dreadful wound flashed across my mind.

"My companion had now come up boldly to the rescue. 'Take care,' cried I, 'you don't put a ball into me.' Bang, bang, went both barrels. The boar left me and made at his new assailant, who, keeping his gun steady, and having the advantage of being in the thicket, was preserved from the awkward accident which had happened to myself. Merkis, seeing him in danger, boldly laid hold of the boar behind, and Cato was mustering courage, like myself, to assist him, when the boar, worried by Merkis, shook him from his hold, and turned after the dogs. Cato was again wounded. Having recovered my gun, which by the blow of his (the boar's) snout had been thrown from my hand, I requested my companion to examine me, and see whether I was injured, for I was covered with blood, and whether it was the boar's or mine I could not say, so completely had fear taken away all sense of pain. 'Load your gun,' was his cool reply, 'and then we will see what is the matter.'

"We now heard the hunters shouting to us from outside the wood to abandon the boar; they were certain he was a *Jin*, and that we should both of us be killed, or receive some dreadful wound. The dogs were giving tongue at some distance ahead of us, and again Sharkey shouted, 'God is great!—get out, you black *Jin*!'

"'Come,' said my cool friend, having examined me, and found I was only marked by the snout and hoofs of the pig, 'I calculate we will fix him this time. Let us keep together, however, and it is my turn to go first.' Finding that I was not quite killed, and roused by the tongue of the dogs, I again dashed onward with him into the thicket.

"'Do you see him?' said I, as we approached the dogs. 'Yes,' he whispered; 'make yourself easy, he is coming towards us.' I grasped my gun, and stooping abreast with him in the path, we awaited our foe's assault. He was white with age. Blood was streaming down his side. He did not appear to see us, but was watching the dogs. 'Now,' cried I, 'four barrels at once, and I think we can kill even a *Jin*.' We fired: the boar fell, got up, staggered, and

again rushed gallantly towards us. The branches, which we clung to for safety, barely sustained our weight; my companion, who is a larger man than myself, sometimes swung as low as the snout of the boar.

"Merkis again called off the animal's attention, giving a sly snap and then retreating. The boar moved from us a few paces, and we ventured to quit our trees. I had no balls left; my companion had but one, which he now fired, having put the muzzle of his gun almost to the animal's head; who, though much weakened from loss of blood, was standing gallantly. As the son of America fired, the beast sank on his hind legs.

"We drew our knives, and, assassin-like, stole behind him. Fierce even in death, he tore with his teeth the bushes near him. Foam and blood gushed from his mouth; as we advanced he made a fresh effort, but at the same moment our hunting knives were plunged in his heart.

"'Who-op—who-op!' we cried; 'the devil is dead!' Merkis said something to the same purpose. Poor fellow, he had received an ugly rip in the neck. We found every shot that had been fired had entered the body of the boar. The carcass bore eleven marks of our balls. We had great trouble to drag the bulky brute into the open field. He measured six feet four inches from snout to tail, and three feet three inches from shoulder to hoof, and though not fat, weighed above twenty stone. However, lean as he was, he yielded us some capital chops.

"Poor Zeitsoon was carried home, but never recovered his wounds, though he lingered many days.

"'There is no strength nor power but in God!' cried my audience."

Mr. Hay gives the details of other boar-hunts in Barbary; and from his account it would appear that this animal is very common, and commits great havoc in grain-fields and melon-grounds adjacent to dense woods or jungles, in which he secretes himself during the day. The result of one day's sport, near the hills of Shreewa, is noticed as having amounted to ten boars and six jackals.

I apprehend that the wild boar of Europe is now, however, by no means the formidable quarry he once was; and, indeed, in penning the foregoing brief description, it was the pursuit of his Indian congener that I had more particularly in view. In evidence of the justice of my suspicion, I shall quote an account of boar-hunting in Germany, published in a recent number of a popular sporting periodical.*

* The Sportsman, vol. iv., No. 13.

"About four miles from Coburg, and a little to the westward of Rosenan, rise several abrupt hills, clothed to the summits with pine woods, altogether occupying a space of a thousand acres. These are the boar preserves of his Serene Highness, and having been honoured by a visit from her most gracious Majesty Queen Victoria, they had earned for themselves a *prestige* beyond the common. We were directed to be in attendance on the chamberlain of the hogs at five o'clock precisely; and exactly at that hour, as we made across certain fields of flax lying between the woods and the high road, that functionary appeared, emerging from his pig *penetratia*. He went about the ceremonial in which he was engaged quite according to the craft or etiquette of his order. We were requested to approach the preserve with gravity and decorous legerity of foot. Onwards we went, treading lightly, till we arrived at a sort of park-paling inclosure, some six feet high, and closely boarded. Entering there by a gate, which closed behind us, we were shown by an ancient forester, with a mortal blunderbuss on his shoulder and a rapier by his side, into a thing like a cockney summer-house upon stilts. Within this we were shut up among much musty hay, a party of ten in a room suited to two. On each of the four sides of the square box were peep-holes, through which we anxiously watched the process of strewing around provisions of corn and potatoes, that savoured very much of the board frugal housewives at home spread for their domestic circle of bacon. Long and fearfully we waited for the guests. Sometimes the master of the ceremonies hinted that perhaps they might not come at all; and when some of the musty hay dust elicited a sneeze from one of the party, he said he almost despaired of an arrival. But we were not destined to be so disappointed. At the end of an hour, spent about as agreeably as the time was consumed in the black hole of Calcutta, a *vidette* at the peep-holes cautiously gave the words 'here they come.' And sure enough there they did come, as orderly and well behaved as they had been borne in, in rashers, and ornamented with poached eggs.

"First marched a matron of the sty, accompanied by a very numerous family—quaint little roasters—like nothing in zoology so much as hedgehogs upon a large scale. Anon, through all the loop-holes opened for their admission, trooped boars, singly and in parties; but save an occasional poke in the spare ribs, given by the snake-like snout of some bully to a more gently-disposed sow (the ladies were the most quarrelsome), all went off very tamely. Thus did the feast proceed till the potatoes and corn were consumed, or so much of them

as these ravenous creatures were disposed to discuss, for all went about their afternoon meal as gingerly as a Paris *elegante* flirts with an ice and imaginary biscuits.

"The wild boars of this district have, indeed, the characteristics of a race not exactly bred to pass from their nurses into sausages. They give you the idea of a cross between the wolf and domestic swine, but retain apparently no trace of their savage origin, except a look of cunning, and an apparent instinct of misanthropy. The least move we made was instantly detected and acknowledged; but that was all. The herd made no manifestation of fight. They are as unpoetic and unvalorous a race as those that frequent the trough of the English farmer—at least, those we saw—and their hunting offers no features of enterprise beyond the slaying of pigeons at the Red House. When a boar is to be shot, the herd is enticed to dinner in the inclosure already spoken of. Then, all but the devoted one being scared away, the trap-door of the loop-holes are closed, and the sportsman, ascending a sort of box—like the distance chair of our race courses—quietly administers a leaden pill to his patient. The reigning Duke kills a vast number this way every season; he keeps up a herd of nearly two thousand." Such is the degeneracy of the European wild hog.

An old French newspaper* gives an account of an extraordinary boar killed near Cognac, in Angoumois. This was a beast of most formidable dimensions, and of no slight notoriety. He had been frequently hunted, but unavailingly, his prodigious strength and powers of endurance bringing him off on all occasions safe, if not scatheless; he had killed many valuable horses and dogs, and had maimed and killed several men; when at last slain, several bullets, received during previous conflicts from the rifles of his pursuers, were found between the skin and the flesh. Sonnini describes this boar: he states his size to have been prodigious, but does not give his exact measurement. He had a very lengthened head, an elongated and sharp snout, and a terrific mouth, garnished with formidable tusks of unusual magnitude and singular shape. The hair on the body was white, that on the head yellowish, and on the neck was a black band; the ears were very large and straight. Notwithstanding the prodigious bulk of this creature, it is further stated that he displayed great swiftness.

In India, boar-hunting is still deemed a favourite diversion, and is eagerly pursued. The chase is usually followed on Arabian horses,

* Journal de Santogne. Avril, 1787.

which are preferable on account of their superior speed and tractability: the boar goes off at first in a slow trot, which soon, on being pressed, merges into a sort of shambling gallop; the pace of the animal is then so swift that he can only be taken by running down. In a run of three miles the boar has often escaped altogether,* and instances frequently occur of the chase extending over seven miles of country.† Colonel Williamson also states the ordinary height of the Indian boar to be three feet, but further states that he saw one three feet six inches in height. The young of the Indian animal are of a pale yellow colour, irregularly brindled with yellowish brown.

Much more might be said of the wild original of our domesticated hog than space can be afforded for, in a work necessarily limited in bulk; we might otherwise enrich our pages with the glowing descriptions of boar-hunting from the days of glorious Homer to the more modern times of Colonel Williamson; but, as it cannot be, we must rest satisfied with expressing our regret at the necessity which coerces us.

The researches and investigations of the geologist and comparative anatomist establish, beyond any doubt, the great antiquity of the wild hog. Their fossil remains have been found in the earlier deposits, associated with those of the mastodon and dinotherium; and MM. Croizet and Jobert, in their account of the fossils of Auvergne, figure the remains of a species of hog which they assert must have co-existed on the same locality with extinct elephants and mastodons. The eminent comparative anatomist, Professor Owen, thus writes on the *sus scrofa*, in his report of the British Association for 1843:—"When Cuvier communicated his memoir on the fossil bones of the hog to the French Academy in 1809, we had met with no specimens from formations less recent than the mosses, or turbaries and peat-bogs, and knew not that they have been found in the drift associated with the bones of the elephant. He repeats this observation in the edition of the *Osséments Fossiles*, in 1822; but in the additions to the last volume published in 1825, Cuvier cites the discovery by M. Bourdes de la Nièvre of a fossil jaw of a *sus*, on the east bank of the lake of Neufchatel, and of a fragment of the upper jaw from the cavern at Sandwich discovered by Professor Goldfuss." "Dr. Buckland," he continues, "includes the molar teeth and a large tusk of a boar found in the cave of Hutton in the Mendip hills with the true fossils of that receptacle, such as the remains of the mammoth, spelæan bear, &c.

* Colonel Williamson's Oriental Field Sports.

† Ibid.

With respect to cave bones, however, it is sometimes difficult to produce conviction as to the contemporaneity of existing and recent species." In another place the Professor informs us that the oldest fossil remains of the hog he examined were from fissures in the red crag. "They were," he says, "associated with teeth of an extinct *felis* about the size of a leopard, with those of a bear, and with the remains of a large *cervus*. These mammalian remains were found with the ordinary fossils of the red crag; they had undergone the same process of trituration, and were impregnated with the same colouring matter as the associated bones and teeth of fishes acknowledged to be derived from the regular strata of the red crag. The beds have been proved by Mr. Lyell to be older than the fluvio-marine or Norwich crag, in which remains of the mastodon, rhinoceros, and horse, have been discovered; and still older than the fresh water *pleistocene* deposits, from which the remains of the mammoth, &c., are obtained in such abundance." He adds, "I have met with some satisfactory instances of the association of fossil remains of a species of hog with those of the mammoth, in the purer *pliocene* fresh water formations of England."

In more recent times, the wild boar roamed the glades of our forests, and, as one of the noblest beasts of chase, had the honour of enjoying, with his compeers, the express protection of royalty. Of its existence various records remain, and these consisting chiefly of edicts or proclamations that had been issued, announcing sundry pains and penalties as the consequence of its illegal destruction.

Howel Dha,* (Howel the Good) permitted his grand huntsman to chase the boar from the middle of November to the beginning of December.

William I.,† sometimes called William the Conqueror, punished those who illegally killed the boar with the loss of their eyes. In the old forest laws the season laid down when the boar might be hunted was from Christmas to Candlemas.

Sharon Turner, in his History of the Anglo-Saxons, informs us that "Among the drawings in the Saxon Calendar in the Cottonian Library (table vi., 4), the month of September represents a boar-hunt. A wood appears containing boars, a man is on foot with a spear; another appears with a horn slung and applied to his mouth; he also has a spear, and dogs are following." Again, in the Saxon Decalogue, we have this conversation on hunting:—"I am a hunter to one of our kings!" "How do you exercise your art?" "I spread my

* Leges Wallie, 41.

† Leges Saxon., 292.

nets and set them in a fit place, and instruct my hounds to pursue the wild deer till they come to the nets and are entangled, and I slay them in the nets." "Cannot you hunt without nets?" "Yes; with swift hounds I follow the wild deer." "What wild deer do you chiefly take?" "Harts, boars, and fallow deer." "Did you hunt to-day?" "No, because it was Sunday; but yesterday I did. I took two harts and a wild boar." "How?" "The harts in the nets, and the boar I slew." "How dared you slay him?" "The hounds drew him to me, and I, standing opposite him, slew him."

The following notice of the wild boar in the time of Edward the Second, is from *Strutt's Anglo-Saxons*.—"Master John Gyfford and William Twety, that were with King Edward the Second, composed a book on the craft of hunting, the which book is now preserved in the Cottonian Library. Part of it is in verse: it runs thus, with no inapt admonition against a life of idleness:—

"All such dysport as voydeth ydlenesse
It syttyth every gentleman to knowe,
For myrth annexed is to gentlenessse.

• • • •

And for to sette yonge huntiers in the way
Of Venerie, I cast me fyrste to goe
Of which foure bestes be—that is to say,
The Hare, the Herte, the Wulf, the Boor also.
And thare ben other bestis fyve of chase;
The Buck the first, the seconde the Do,
The Fox the thyrde, which oft has harde graace,
The forthe the Martyn, and the last the Roe."

These authors afterwards descend to prose, and describe "The boor;—first, he is a *pig* as long as he is with his damme; and when the damme levyeth him, then he is a *gorgeant*; and in the thirde yeare he is called an *hoggast*; and when they be foure yeares of age, they shall depart from the *sounds* for aye; and when he *goeth soole*, then he is called a boor."

Of the precise date of the extinction of the wild boar in the British Islands, we have no available record; but it is known, that so recently as the date of Charles I., that monarch endeavoured to introduce these animals to the New Forest, Hampshire: * these were, however, all destroyed during the time of the civil wars.

Fitzstephen, who wrote in the latter part of the twelfth century,

* Pennant.

states, that boars, wolves, wild bulls, and other game, abounded in the great forests surrounding London; and Scottish writers have not failed to mention those of

"Caledonia, stern and wild."

Many districts still retain names evidently originally derived from the circumstance of their having been, in olden time, the haunt of the wild boar. Amongst others, I may mention, "Wild Boar's Fell," in Cumberland; "Barlow," or "Boar's Field;" Byro Hills, formerly "Boar's Hills," near St. Andrew's, in Scotland; Mucros, near Killarney, in the county of Kerry, in Ireland; and Mucross, in Fife-shire, in Scotland, meaning literally, "Boar's Promontory." The last-named place is stated by Sibbald to have been so called, in commemoration of the slaughter of an enormous boar, which had previously committed terrible ravages throughout the surrounding country. In many parts of the country, the wild boar was not only sheltered and protected by the lords of the soil, but, in many instances, he became the cognizance of distinguished families both in England and Scotland, fluttering bravely over many a stricken field, and, in some cases, giving his name to localities. "The village of Brancepeth," says Mr. Bell, in his History of British Quadrupeds, "and the adjoining hill of Brandon, in the county of Durham, took their names from a wild boar or *brason*, which is recorded to have been a terrific beast, and the dread of the whole neighbourhood; and his den being on Brandon (brawnsden) hill, and his usual path or tract leading through the woods of Brancepeth (Brawn's path); tradition states, that one Roger Hodge, or Hoodge, valiantly slew the monster, and delivered the district from his ravages. The seal of this illustrious Roger still remains, and represents a boar *passant*."

The boar's head was formerly a trophy of high and chivalrous estimation, when it became the prize of victory, which must be tried in single combat between the hunter and the enraged beast. Woe to the former if either from want of skill or faint-heartedness he misses his aim, for the attack of the roused animal would be both sudden and impetuous, ripping up with his formidable tusks whatever came in their way, whether man or horse!

"On his bow-back he hath a battle set,
Of bristly pikes that ever threat his foes;
His eyes like glowworms shine when he doth fret;
His snout digs sepulchres where'er he goes.
Being moved, he strikes whate'er is in his way,
And whom he strikes his cruel tusks slay."

SHAKESPEARE.

We now conclude this chapter, with a few brief observations as to the estimation in which the hog has been held in different ages and in various lands. Moses, the inspired law-giver of the Jews, prohibited the use of swine's flesh to his followers: "Because it divideth the hoof, yet cheweth not the cud."* The Egyptians could eat pork only once a-year, viz., on the feast-day of the Moon, on which occasion they sacrificed to that luminary as a goddess. At all other times the hog was held to be unclean; and if any one only touched one of these animals, he could not enter a temple, nor hold intercourse with his fellow-men, until he had dipped, clothes and all, in the waters of the far-famed Nile. Those employed as swineherds belonged to a class or *caste*, degraded, despised, and, like their charge, held in utter abomination. This aversion to the hog became transmitted to Northern Egypt, and the Copts altogether avoided rearing or keeping any of the race. The causes for these prohibitory enactments have been variously explained, but perhaps the most probable is that adduced by a celebrated traveller and naturalist,† viz., that in Egypt, Syria, and even the southern parts of Greece, the flesh of the hog, though in appearance white and delicate, is destitute of firmness, and is so overloaded with fat as to be calculated to disagree with the strongest stomach. An indulgence in such pork, therefore, under a burning sun, would possibly be attended with fatal consequences. Tacitus states, as the cause of swine's flesh being rejected by the Jews, the liability of that animal to be afflicted with leprosy; and certainly the use of sow's milk is mentioned by Plutarch as productive of that loathsome disease.

It has been affirmed that the chief cause of the rejection of Mohammedism by the Chinese was their partiality for the flesh of the hog, denounced by that religion as an abomination.‡

During the luxurious days of the Roman empire, when epicurism had probably attained a greater height than it has ever since been permitted to reach, one of the most favourite dishes of the time, as well as the most fashionable, was a pig roasted entire, stuffed with various delicate birds and spices, steeped in choice gravies and costly wines. This was called *Porcus Trojanus*, in allusion to the celebrated *Trojan Horse*, the wooden image, the interior of which was filled with armed men, who, being thus by stratagem introduced into Troy, opened the gates of that far-famed city to the invading Greeks, and produced its memorable sack, after a tedious siege of ten years.

* Leviticus, xi. 7, 8; Deut., xiii. 8. See also, on this subject, Isaiah, lxxv. 4; lxxvi. 3.

† Sonnini

‡ Quarterly Journal of Agriculture, vol. ii, p. 877.

The expense attendant upon the due preparation of this celebrated dish was so enormous, that it became the subject of a sumptuary law ; and the celebrated orator, Cincius, adopts it in his oration, as a proof of excess of banqueting—

“In opponendo mensis Porcum Trojanum.”

“Placing on his table the Trojan hog.”

Another great Roman dish was an entire hog, one half roast and the other boiled, and so carefully and curiously prepared, that the most accurate eye could not discover the process by which the animal had been put to death, or the stuffing introduced. It is not impossible that the practice of roasting the hog in an entire state, gave rise to the well-known proverb, “*to go the whole hog* ;” and we believe that the love of a dish similarly prepared is not yet altogether lost, nor the dish itself yet wholly discontinued at a British table.



CHAPTER III.

VARIETIES OF THE DOMESTICATED HOG.

DOMESTICATION has the effect of multiplying *varieties* of any given species of animals over which it has been enabled to obtain full and complete influence. These variations from the original stock, obviously spring from three principal circumstances:—Variety in the feeding and management—the gratification of individual taste or caprice in



CROSS FROM THE WILD HOG.

breeding, with a view to the production of a particular form or size— or the crossing with other and sufficiently allied stock. It is possible

that all these circumstances have operated in the case of the hog; and it is certain that we have now, in the breeding of that animal, arrived as nearly at perfection as we could reasonably hope. It were well that breeders always knew where to stop, for even improvement has a limit; and crossing, when carried beyond a certain point, will almost inevitably result in deterioration. This fact will, perhaps, be more clearly understood by attention to our observations relative to the several varieties of the domesticated hog.

The Domesticated Hog is an animal of very great importance in an economical point of view; but it is one of which, on account of the almost endless variety of breeds, it is difficult to give many details in so brief a sketch. All the varieties that have been tried breed freely with each other, and the progeny is fertile in every race. In a highly improved state of a country, the hog is certainly not entitled to take precedence either of the ox or sheep in point of utility, its uses not being so many or so general; but still it is a very useful animal; and there are some states of a country, or at least of particular districts, in which it is more valuable than either of the others. The milk of the hog is not, we believe, used as an article of food in any place, though there is not the least doubt of its being wholesome. It can, however, be much more advantageously applied to the purpose for which nature intended it, as the young are of some value at a very early age; and they grow much faster than any domestic animals of equal size.

Upon an arable farm, where hogs are only a subordinate article with the farmer, the estimate is, that with two females and one male, managing them so that they may be always in the highest state of fertility, the succession may be kept up, and forty fed ones sold every year, besides some of the young, at an expense of about twenty pounds, being partly fed by the waste about the farm which could not be profitably applied to the keep of any other animal. The trouble which they give is not great, and thus, at the very lowest estimate, there would be a profit of between 300 and 400 per cent. upon the absolute cost, which is far more than can be obtained from any other animal that can be kept on a farm. No doubt, the breed must be skilfully chosen, and the treatment must be judicious; but these are essential to success in everything that is cultivated. The average estimate is, that twice the same weight of food may be obtained from hogs than can be obtained, from the same cost of food, by means of any other animals; this, too, on the supposition that the flesh of the hogs is all of good quality. The tendency that hogs have to fatten in the autumn and early winter, even of the first year, and the superiority of young pork, are greatly in

favour of this. During the time that intervenes between the calf and the bullock, and the lamb and the sheep, neither of these animals can be "forced" into fat, except at great expense; and as this is working in opposition to the natural tendency of the animals, the flesh when fattened is of inferior quality. Not so with the hog; for with it art merely seconds nature, and consequently the quality is good.

To the cottager who has a garden, as every cottager ought to have, not merely for its direct advantage as supplying many necessaries which could not otherwise be had, but because it attaches the man to his home, and prevents him from spending his leisure hours in an improper manner—to the cottager the hog is a very valuable animal, and will always pay the rent of the cottage, if properly managed and of the right breed. The breed is a very important matter, because the same food that will fatten one sort for the market will barely suffice to keep another alive.

It has been asserted, that there exist only THREE actual varieties of the domesticated hog—the Berkshire, Chinese, and Highland, or Irish; and that all other breeds, described as separate varieties, are nothing more than off-shoots from one or other of these three main stocks.* That such, to a certain extent, is the case, we must necessarily admit; but if we concede this principle, and only carry it out a very little farther, we must inevitably arrive at the conclusion, that not only are the dozen breeds, usually regarded as varieties, merely off-shoots from the Berkshire, Chinese, and Highland, or Irish, but that these three chief varieties are themselves not a whit more entitled to the distinction of being recognized as *primitive*, being merely off-shoots from the great original wild stock. The fact is, that we are indebted for our numerous varieties of the hog, as at present known to us, not only to these three well known varieties, but also to the African hog, the Spanish and Portuguese, and the Italian,—chiefly, however, to the wild boar of the European forests.

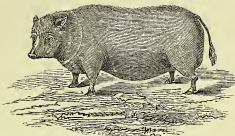
The Chinese hog is to be met with in the south-eastern countries of Asia, as Siam, Cochin China, the territories of the Birman empire, the kingdom of Cambodia, Malacca, Sumatra, where it is called the BABEE; † and in Batavia, and other of the eastern islands. ‡ There are *varieties* of the hog, however, in India and China, as well as amongst us, and hence the occasional confusion of nomenclature to be met with in books of natural history, where we at one time find this animal called by many different names, and at another several very opposite varieties of Asiatic hogs described under the one name of CHINESE.

* Cully on Live Stock.

† Marsden.

‡ Hawkworth.

There are generally admitted to be well-marked varieties of the Chinese hog—that from Siam, and that from China proper. The chief, if not the only, point of difference subsisting between them is, however, in colour—the Siamese variety being usually black and the Chinese of a white colour. Neither of these hogs, however, present constant uniformity in this respect, their colour frequently varying, and black hogs coming from China, while white ones are brought from Siam. Even in the same litter, too, have pigs of different colours frequently been



THE CHINESE HOG.

seen, and instances are not uncommon even of the occurrence of *pieb* individuals. From this variety of colour some have deduced no fewer than seven varieties of the Chinese pig. In the case of all animals that have submitted to the influence of domestication, colour alone is by no means a safe criterion by which to be guided in the enumeration of varieties.

The Chinese hog is of small size. His body is very nearly a perfect cylinder in form; the back slopes from the head, and is hollow, while the belly, on the other hand, is pendulous, and in a fat specimen almost touches the ground. The ear is small and short, inclines to be semi-erect, and usually lies rather backward. The bone is small, the legs fine and short, and often too weak to sustain the body, which causes the animal to lay on its belly half its days. The bristles are scarcely deserving of the name, being so soft as rather to resemble hair. The skin itself is, in the Siamese variety, of a rich copper colour, and the hair black, a circumstance which gives to the general colour of the animal somewhat the effect of bronzing. In the Chinese variety, the colour is usually, as I have already stated, white, sometimes black, and occasionally *pieb*. The white sort are deemed pre-

ferable, from the superior delicacy of their flesh. The head and face of the Chinese pig are unlike those of any other description of swine, somewhat resembling a calf; hence, this animal, if once seen, will not easily be forgotten.

Both the Siamese and Chinese hogs are very good feeders, arrive early at maturity (a most important particular in the consideration of any description of live stock), and feed fat, so to speak, on less food, and become, so circumstanced, fatter and heavier within a given time than any of our European varieties.* Those kept in the temples of their native country become, from age and feeding, truly enormous masses of moving fat. As has been shown in a former chapter, the Chinese value the hog very highly; indeed, they live more upon pork than on any other description of animal food; and it is said by travellers † that they even use the milk of the sow. Whether this be a fact or not, we know that they have been discovered giving it to their European visitors as the milk of the cow. As long as the deception remained unknown, it was of no material consequence, for the nutritious properties of sow's milk hold a high position in the lacteal scale; but when discovered, of course early prejudice asserted her sway, and the nutritious beverage was rejected with the shudder of loathing and disgust.

The Chinese take great care of their swine, and pay particular attention to the quality and quantity of their food, feeding them also at regular and stated intervals. They do not permit them to walk, but, when necessary, have them carried from one place to another. It is to this attention that we are possibly to attribute the excellent qualities of Chinese pork; and when it is added, that the Chinese keep the beds and sties of their hogs scrupulously dry and clean, I think that no doubt can longer rest upon the matter. The Chinese hogs that we generally see in this country come from China, principally from the vicinity of Canton, having been brought thence as sea stock. It is most valuable for improving the larger kinds of our English pigs, crossing most advantageously with our own coarser domestic breeds. For this purpose it is invaluable; and the improved race, thus produced, is infinitely superior even to its Chinese progenitor, the latter, in a pure state, being smaller, and hence answering rather for pork than bacon, besides fattening even *too easily*. Both these objections are amply obviated in the cross, which has further the effect of restoring diminished fecundity.

The most profitable cross to be resorted to was, in the first instance,

* Low.

† Account of Embassy.

found to be between the old English breed and the black Chinese. This cross at once produced a most capital breed, and a little judicious intermixture afterwards, with proper selection of boar and sow, has eventuated in the desired improvement. We should, however, reflect, that by too constant crossing with the Chinese, we may possibly diminish both the size and fecundity of our own hog. The knowledge of this circumstance should induce breeders, at all events, to use caution and judgment, that they may be aware of the precise moment when they have arrived at the highest attainable degree of perfection; at that point, in short, when it is time to pause, and call to mind the old admonitory proverb, "*Let well alone.*" I am, however, sorry to say, that these observations will apply only to a very limited per centage of breeders; the majority, far from requiring to be warned against extending their experiments, or carrying their attempts at improvement to a dangerous pitch, requiring rather to be aroused from the lethargic indolence which induces them to abstain from all endeavours towards bettering the condition or character of their stock—men who require incitement instead of caution, the words of encouragement rather than of warning, the spur rather than the rein.

The Chinese breed is not so well known in Ireland as it is in England, or even in Scotland, although the climate of the last-named country would appear so unsuitable to its Asiatic temperament and constitution. It would appear, from the length of time since it was first known in France,* that our Continental neighbours cultivated this breed earlier than we did, and the hog usually described as the *Portuguese*, is so extremely like the Chinese breed, that it has been made a question whether or not these varieties are identical,† the former being but the latter naturalized in that of Portugal. Of the Continental breeds or varieties of hog I shall not, however, treat until after I have described our own. In cases where the reader has reason to suspect that he has crossed too long from the Chinese breed, he will find a dash from the wild boar, or Westphalian, which is little more than that animal domesticated, most valuable; this cross will, to a certain extent, aid in restoring size, but has a still greater effect on the quality of the meat, causing the fat and lean to be more regularly mixed, and imparting to them a delicacy of flavour that will be duly appreciated by the lover of good pork or sound sweet bacon. The imperfections in shape, and excess of bone and offal which characterize the wild boar, will not more than act as a counterpoise, and altogether disappear in the finer form of the *de-*

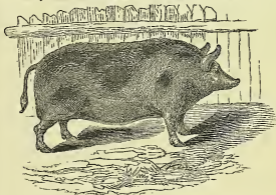
* Buffon.

† Laurence on Cattle.

generated stock with which you cross him. This cross will further supply a suitable THICKNESS of skin—a most essential quality, especially in *pork*—for in thin-skinned pork the *cracklin* becomes so hard and *metallic*, that no teeth can master it, whereas in a thick-skinned animal it is merely gelatinous, may be easily masticated, and is a part of the animal too much valued by epicures, and consequently too valuable in the *shambles*, to admit of being neglected by the judicious and calculating breeder or producer. I need scarcely add, that this *thinness* of skin, which I have shown to be so objectionable in a *pork* pig, becomes the reverse when the animal is designed for *bacon*. The small size, however, of the eastern hog, renders him only suitable for *pork*, and hence one reason why too long crossing from him alone would be imprudent, and should be avoided. Let it be also remembered that the thinness or thickness of the skin must not of itself alone be deemed a recommendation, or the reverse. The *thick* skin must not be *coarse*, for a *coarse thick* skin denotes a bad stock, and pork encased in such a cuticle, is *shrunk* in the *cooking*; hence, I believe, a practice with some cooks to *score* the skin even of *boiled* pork, in order to allow to the otherwise incarcerated flesh, room sufficient for swelling.

THE BERKSHIRE BREED.

This county has had the honour of being the first to avail itself



THE BERKSHIRE HOG.

of the opportunity of improvement afforded by the introduction of

foreign stock, nor have its breeders paused where they began, or omitted following up with judgment and perseverance, and consequently success, the advantage they thus, in the first instance, obtained.

The Berkshire hog is of large size, and is usually, nay, almost invariably, of a reddish brown colour, with black spots or patches. The old breed of Berkshire is now, I believe, extinct, and has been so for many years; it had maintained a high reputation, nay, I may almost style it a high degree of celebrity, for centuries, and the new, or still further improved stock, more than equals the promise of its forefathers. Laurence* makes honourable mention of this breed of hog, and furnishes a description of the old breed as he had received it in the year 1790. It was long and crooked snouted, the muzzle turning upwards; the ears large, heavy, and inclined to be pendulous; the body long and thick, but not deep; the legs short, the bone large, and the size very great. This, of course, was not anything like perfection; the want of depth of body, and the weight of bone, were highly objectionable, but it was altogether a material improvement upon the gaunt and rugged old English pig, whom it speedily superseded.

The modern and improved Berkshire was, in Laurence's time, † lighter both in head and ear, shorter and more compactly formed, with less bone, and higher on the leg. This breed has been since still further improved by judicious crossing; it still has large ears, inclining forward, but erect, is deep in the body, with short legs, small boned, arrives early at maturity, and fattens easily, and with remarkable rapidity. In these improvements we recognize the results of intermixture with the Chinese, but also with another variety yet to be described. The colours and marking of the Berkshire hog show him also to owe a portion of his blood to the wild boar. The true and improved breed of Berkshire is of large size. One of the greatest improvers of modern times was Richard Astley, Esq., of Oldstone Hall. A Berkshire hog, fed by Mr. Lawton, of Cheshire, ‡ measured, from the point of the snout to the tail, three yards, or nine feet, and eight inches; its height at the shoulder was four feet five inches and a half. When living, this huge animal weighed twelve hundred weight, two quarters, and ten pounds; and when slaughtered, cleaned, and otherwise dressed by the butcher, ten hundred weight, three quarters, and eleven pounds, or eighty-six stone, eleven pounds;

* Laurence on Cattle.

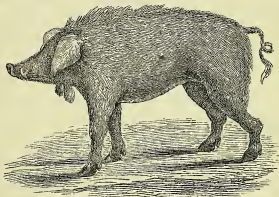
† About forty years ago.

‡ Cully on Live Stock, page 173.

over half a ton! An Irish gentleman, Mr. Sherrard, has also brought the Berkshire swine to great perfection; they are of a white colour, long-bodied, with very handsome heads, are well skinned, and rapid growers. I understand that Mr. Sherrard has employed in their breeding a cross with the Neapolitan, or what is much the same, the improved Essex.

THE OLD IRISH "GREYHOUND FIG."

These are tall, long-legged, bony, heavy-eared, coarse-haired animals, their throats furnished with pendulous wattles, called in Irish *shuiddean*, and by no means possessing half so much of the appearance of domesticated swine as they do of the wild boar, the great original of the race. In Ireland, the old, gaunt race of hogs, has, for many years past, been gradually wearing away, and is now, perhaps, wholly confined to the western parts of that country, especially Gal-



THE OLD IRISH "GREYHOUND FIG."

way. These swine are remarkably active, and will clear a five-barred gate as well as any hunter; on this account they should, if it be desirable to keep them, be kept in well-fenced inclosures. The breed of pigs in Ireland has improved greatly of late years, and thus the old unprofitable stock is rapidly disappearing. The form of the Irish pig is now so nearly approximated to that of the English, that the two animals are not readily distinguished from each other. Now, indeed, I regret to have to state, that there can be little danger of mistake, the

failure of the potato crop having not merely deprived the wretched people of their staple, nay, in many instances, probably in a great majority of such, their only sustenance, but deprived them also of the means of feeding swine. When the people *could* keep these animals, they found them very profitable stock. The hog was, indeed, regarded by the Irish peasant with a peculiar degree of affection and kindness; he shared with his owner not merely the shelter of his cabin and the provisions of the children, but the warmest place at the fireside. "The pig, the cratur," was second in importance and consideration to no inmate of the tenement he honoured with his presence, and richly, too, he merited the high degree of estimation in which he was held, for he did that which, in many cases, his poverty-stricken proprietor could not have done without his aid—*he paid the rent*. The pig can now no longer find a home in the Irish cabin; the means of feeding him are no longer to be had; hopeless hunger and perishing want now occupy his post at what was once the fireside; the potato and the pig have disappeared, and their loss has increased the poverty of an already penury-stricken people a hundredfold. Nor is it the pauper peasant alone who can no longer speculate in swine; the evil day has not been partial, for all classes have proportionably felt its blighting influence; the more extensive breeders find that their stocks will not pay their keep, and they are accordingly shipped off for England in multitudes, while the gaunt forms and drawn-up bellies of the half-famished animals, with their semi-wolfish eye, tell too plainly of the failure of their wonted nourishment. It is not many weeks since I read in *Saunders's News Letter*, that in parts of Ireland sucking-pigs had been sold for sixpence each, and that many who had brought their swine to market, and had failed in selling them, left them there, as not being worth the trouble of taking home again. For the last twenty years, England has received a large proportion of the bacon, pork, and live pigs, whether fat, or as stores necessary to her consumption, from Ireland. Moubray relates, that in the spring of 1830, a drove of Irish pigs, amounting to upwards of fourteen thousand in number, passed through a turnpike in the west of England. The number now exported from this country is supposed to be at least tenfold greater than it has ever been. These circumstances have, of course, produced a corresponding rise in the Irish bacon market; but, in my opinion, trifling when compared with what the price of that article will yet be.

Notwithstanding the rather unpromising exterior presented by the original old Irish pig, it would be unfair were we to omit recording

his peculiar susceptibility of improvement; and, as a fit illustration thereof, we would remind our readers of the one which was recently the successful competitor at the Cattle Show of the Royal Dublin Society. The improvement appears to have been due to a cross with the Hampshire. This pig weighed over forty-one stone, was the property of an humble cottier, by name Peter Flood, who expatiated to us, with no small pride and apparent pleasure, upon the facility with which the animal had put up flesh, and the *very small proportion of feeding* that had sufficed to render him the truly respectable-looking fellow he was. It may be well to add, that the Irish swine possesses flesh of a peculiarly good flavour, which is not *lost in improvement*, and that his hams closely resemble, in form and quality, those of Westphalia. I would suggest to breeders to take a hint from this well-ascertained *fact*.

The subjoined wood-cut represents the skull of a variety of pig found in an excavation in an island on Loch Gâr, a lake in the neighbourhood of Limerick. This pig is now extinct; but it bears in its appearance, as far as my opinion is concerned, sufficient evidence of having been the great ancestor of our well-known, long-



FOSSIL SKULL OF AN EXTINCT RACE.

faced pig, once so plentiful in Galway, and known usually, from its long limbs and gaunt appearance, by the name of the "Greyhound Pig."

Several of these skulls were found at Loch Gâr, in company with those of oxen, goats, sheep, red deer, reindeer, and our extinct gigantic deer, sometimes erroneously styled the "Irish Elk." They were

found several feet below the surface, resting on layers of a calcareous tuffa, and covered with black bogstuff, the result of the decomposition of vegetable substances. The skulls of the deer were those of the female. All the skulls appear to have belonged to animals which had been slaughtered, for the frontals of all were broken in, as if by the blow of a poleaxe, or other heavy instrument. In our cut the fractures have been restored. It would be difficult to affix a precise date to the period at which these animals were thus slaughtered; but from the circumstance of their being cotemporary with the gigantic deer, an animal that, from the absence of historical record respecting it, must have existed at a very remote period—and from the circumstance of the name Loch Gûr signifying, according to my friend T. Crofton Croker, an eminent authority in archæological matters, "The Lake of the Great Assemblage," coupled with the general aspect of the locality, I should be disposed to suggest it as possible that the date is to be referred to Druidical times, that Loch Gûr was the scene of one of their vast congregations, and these osseous fragments the long-buried remnants of a stupendous sacrifice to their sanguinary gods. Such being possible, it is gratifying to know that these were unaccompanied by the remains of human victims.

The three varieties already described being, according to most authorities, the most remarkable and important, I shall content myself with a briefer description of the remaining English and continental breeds. Laurence, in his very excellent work on cattle, was the first to enumerate all these breeds; and, if I be not in error, no subsequent writer has described so many.* Laurence, however, would appear to have drawn, in some instances, too nice distinctions between breeds, which, if not identical, are, at the very least, too closely allied to be separated from each other; and the march of improvement has by no means ceased since his time.

CHAPTER IV.

IMPROVED ENGLISH BREEDS.

It was formerly the practice with breeders of pigs to produce large over-grown animals of almost incredible size. Mr. Cully, in his *Book*

* I, of course except the late Mr. Youatt, whose work on swine had not appeared when this volume went to press.

on *Sow Stock*, describes some of these porcine monsters; but I rejoice to say, a better taste rules these matters in the present day. "Among the earliest improvers of the domestic swine," says Mr. Martin, "must be named Mr. Bakewell, the great founder of the new Leicester sheep. Before his time the Leicestershire hogs were of the same coarse, ungainly kind, which prevailed generally throughout the Midland Counties. He commenced, as he had done with the sheep, by a judicious selection of stock destined for breeding, and by persevering in this course he greatly modified the characters of the old races. This was imitated in Yorkshire. The old breed, by crossings with the new Leicester stock, were greatly improved. The cross breed lost in size, but gained in every other good quality. It became deep-sexed, short-limbed, small-boned, and fattened readily. The coarse ugly bristles were exchanged for fine thin hair, and the whole aspect of the animal underwent a transformation; the hogs at about two years old averaged from thirty to fifty, and even sixty stones, of 14 lbs., the younger animals weighing in proportion."

Some of the Yorkshire breeders preferred the pure new Leicesters, and these are still reared by judicious farmers, who esteem them superior to most others, and certainly more profitable than the larger kinds. These breeds have also found advocates in Yorkshire, and among these are the Berkshire crosses with the old Yorkshire, and with Lord Western's improved Essex breed. The improved Berkshire hog belongs to the tribe of large swine; but the effect of crossing with various smaller breeds, has been to moderate the size and improve the shape, so that the present Berkshires are roundly made, short of limb, with arched neck, heavy cheeks, sharp ears, and abruptly rising forehead, short snout, well-barrelled, broad back, and clean-limbed; and in colour they are usually of a mixture of half white half black, indicative of a mixture of the Berkshire, Neapolitan, and Chinese strain.

THE SUFFOLK BREED

Is said by most writers to be the most nearly related to the CHINESE; and in my opinion it is so; my reasons for espousing this opinion will be found in the description of the animal, * that of the Chinese being at the same time duly borne in mind. The Suffolk breed of swine are not now exactly what they once were: when in their best days, they were a small, delicate pig, thin-skinned, soft-haired, small pricked ear; colour white. The resemblance to the CHINESE original, if

* Penny Cyclopaedia.—Art. *Hog*.

original it were, ceased here, for the Suffolk pigs were chiefly remarkable for a long carcass, combined with a full, broad shoulder and ham, and though not so early matured as some, would feed very fast in the earlier stages of fattening. Dickson says it is the best bred race in England; but of this there may be some doubt. Half-fed, as pork, the Suffolk pig was not to be despised. The present breed of Suffolk, or at least that which existed in that county within the last few years, is a long, straight-backed pig, with a broad forehead, and short, bristly hair; appearing large and heavy from their extreme length. Of course it will be unnecessary for me to add that this description of pig is not altogether such as the judicious buyer would fancy for store; but Prince Albert has been very successful with a cross of the Suffolk and Bedford.

THE CHESHIRE BREED

Is chiefly remarkable for its vast size, which may indeed be almost stated as being gigantic. He has a very large and heavy head, long but narrow body, long legs, large bone, great heavy ears, and loose, ungainly skin; colour, large patches of black and white, or blue and white, or white. This breed is susceptible of much improvement by crossing with the Chinese or the Neapolitan—a breed hereafter to be described.

THE HAMPSHIRE BREED.

This breed is not unfrequently confounded with the Berkshire, but its body is longer, and its sides flatter; the head is long, and the snout sharp. The colour of this breed is usually dark spotted, but it is sometimes black altogether, and more frequently white. It makes a kind of bacon which always commands the best price in London, and sometimes attains so large a weight as forty stones. In many parts of Hampshire, more especially in the neighbourhood of the New Forest, it is usual to give swine a great deal of liberty, to permit them indeed to pass a considerable portion of their existence in the woods; the result is superior quality of flesh, exhibiting much resemblance to that of the Westphalian hog, but still more deliciously flavoured.

The Rev. Mr. Gilpin, in his *Remarks on Forest Scenery*, thus describes the mode of feeding swine in the New Forest in his day:—
“These woods (of the New Forest) afford excellent feeding for hogs, which are led in the autumn season into many parts of the forest, but especially among the oaks and beeches of Boldre-wood, to fatten on mast. It is one of the rights of the forest borderers to feed their hogs in the forest during the *paoning month*, as it is termed, which com-

mences about the end of September, and lasts six weeks. For this privilege they pay a trifling acknowledgment at the steward's court at Lyndhurst. The word *pawnage* was the old term for the money thus collected.

"The method of treating hogs at this season of migration, and of reducing a large herd of those unmanageable brutes to perfect obedience and good government, is curious:—

"The first step the swineherd takes is to investigate some close-sheltered part of the forest, where there is a conveniency of water, and plenty of oak or beech mast, the former of which he prefers when he can have it in abundance.* He fixes next on some spreading tree, round the bowl of which he wattles a slight circular fence of the dimensions he wants, and covering it roughly with boughs and sods, he fills it plentifully with straw or fern.

"Having made this preparation, he collects his colony among the farmers, with whom he commonly agrees for a shilling a-head, and will get together perhaps a herd of five or six hundred hogs. Having driven them to their destined habitation, he gives them a plentiful supper of acorns or beech-mast, which he had already provided; sounding his horn during the repast. He then turns them into the litter, where, after a long journey and a hearty meal, they sleep deliciously.

"The next morning he lets them look a little around them, shows them the pool or stream where they may occasionally drink, leaves them to pick the offal of the last night's meal, and, as evening draws on, gives them another plentiful repast, scattering acorns among them for an hour together, to the sound of his horn. He sends them again to sleep.

"The following day he is perhaps at the pains of procuring them another meal, with music playing as usual. He then leaves them a little more to themselves, having an eye, however, to their evening hours. But as their bellies are full they seldom wander far from home, retiring commonly very early to bed.

"After this he throws his sty open, and leaves them to cater for themselves, and from henceforward has little more trouble with them during the whole time of their migration. Now and then, in calm weather, when acorns fall sparingly, he calls them perhaps together by the music of his horn to a gratuitous meal; but in general they need little attention, returning regularly home at night, though they often wander in the day two or three miles from their sty. There are expe-

* Pliny seems to be of a different opinion—"Glans fagea suam hilarem facit, carnem coquibilem ac levem, et utilem stomacho. Tradit Nigidius fungosam carnem fieri, esculo robore, subere."—Liber xvi. 6.

rienced leaders in all herds, which have spent the roving life before, and can instruct their juniors in the method of it. By this management the herd is carried home to their respective owners in such condition that a little dry meal will soon fatten them.

"I would not, however, have it supposed that all the swineherds in the forest manage their colonies with this exactness. Bad governments and bad governors will everywhere exist; but I mention this as an example of sound policy—not a mere Platonic or Utopian scheme, but such as has often been realized, and has as often been found to be productive of good order and public utility. The hog is commonly supposed to be an obstinate, headstrong, unmanageable brute. He may, perhaps, have a degree of positiveness in his temper; in general, however, if he be properly managed, he is an orderly docile animal. The only difficulty is to make your meanings, when they are fair and friendly, intelligible to him. Effect this, and you may lead him with a straw.

"Nor is he without his social feelings, when he is at liberty to indulge them. In these forest migrations it is commonly observed that of whatever number the herd consists, they generally separate, in their daily excursions, into such little knots and societies as have formerly had habits of intimacy together, and in these friendly groups they range the forest, returning home at night in different parties, some earlier and some later, as they have been more or less fortunate in the pursuits of the day. It sounds oddly to affirm the life of a hog to be enviable, and yet there is something uncommonly pleasing in the lives of these emigrants—something at least more desirable than is to be found in a hog, *Epicuri de grege*. They seem themselves also to enjoy their mode of life. The hog has a greater variety of language than perhaps any other quadruped. He signifies his want of food with great energy; when affronted, his note is very significant; and his cries of distress are truly lamentable. But here you see him perfectly happy, going about at his ease, and conversing with his friends in short, pithy, interrupted sentences, which are, no doubt, expressive of his enjoyments and of his social feelings.

"Besides the hogs thus led out in the mast season to fatten, there are others, the property of forest-keepers, which spend the whole year in such societies. After the mast season is over the indigenous forest-hog depends chiefly for his livelihood on the roots of fern, and he would find this food very nourishing if he could have it in abundance. But he is obliged to procure it by so laborious an operation that his meals are rarely accompanied with satiety. He continues, however,

by great industry to obtain a tolerable subsistence through the winter, except in frosty weather, when the ground resists his delving snout; he must then perish if he do not in some degree experience his master's care. As spring advances fresh grasses and salads of different kinds, add a variety to his bill of fare, and as summer comes on he finds juicy berries and grateful seeds, on which he lives plentifully till autumn returns and brings with it the extreme of abundance.

"Besides these stationary hogs there are others in some of the more desolate parts of the forest which are bred wild and left to themselves without any settled habitation, and as their owners are at no expense either in feeding or attending them, they are content with the precarious profit of such as they are able to reclaim."

The following picture of the woodland swine occurs in another place:—"We well remember (he writes) an occasion when we had thrown ourselves down at the foot of a great beech tree, whence we looked abroad, from under its wide canopy of foliage, on a small track of sunshine, which, penetrating an opening in the wood, and falling athwart the ground beyond, gave a broader and deeper effect to the surrounding shadows. There was not a breath of air, and not a sound was audible. Calmly we lay in that listlessness of a dreamy musing, which to an idle mind might seem like idleness, but which the philosopher, student, or moralist, knows better how to appreciate.

"Suddenly a sound like that of warlike music, mellowed by distance, came upon our ears. We started so far up from our recumbent position as to lean upon one arm and listen intently, and not without some degree of awe, being almost persuaded that some wondrous fairy pageant was about to gratify our sight.

"The sound increased and grew harsher as it advanced, and as it drew nearer—yet nearer—the tramp of what might have been imagined to be elfin chivalry accompanied it. At length, while we were yet listening in mute expectation, the leading boar of a large herd of forest pigs came grunting into view, followed by all the musical members of his harmonious detachment.

"Whether it was the cheering invigorating effects of the sunshine, or whether there was something particularly savoury in the herbage of that spot, we know not, but the grunting swelled into a loud chorus, their snouts became more and more busy, their ears and tails kept up one continuous and joyous motion, and their small eyes seemed to flash back the sun's rays with unwonted eagerness of expression. It was really an interesting sight, and were it not that swine were the subject of it, we should, and truly, say, it was as beautiful and interest-

ing. The creatures were in fine condition, their bristles glittered like silver, their bodies were as clean as if they were as regularly washed and combed as a lady's lap-dog, and they seemed so full of freedom and happiness that, while looking upon them, we felt all the romance of forest life, and recollections of the merry greenwood.

"Wishing to observe and admire them more closely, we sprang up, but, in doing so, alarmed them, and off they galloped, helter-skelter, *sauve qui peut*, with a speed that none of the porcine race, not forest born and bred, could equal; and long after every one was out of sight, vanished in the mazes of the woodland, we still heard their retreating trumpets, gradually dying away until lost in the distance."

Few such truly independent herds now exist, but the forest breed has not lost its original characters.

These circumstances render the Hampshire bacon in much demand, so that it fetches a higher price than that of Westphalia. This is of course partly attributable to the mode of curing, hereafter to be explained. The original breed of Hampshire was not, however, exactly such as I have described,* though generally of a white colour, they were coarse, raw-boned, and flat-sided. The present race owes its origin to the introduction of the Berkshire, Suffolk, and Chinese breeds, and latterly of a cross from the Leicester, or Dishley Stock;† the effect of the last-mentioned cross has been increase of size, the original race seldom exceeding twenty stones.‡

THE YORKSHIRE BREED.

There are few counties in England where so much improvement has taken place as in the breeds of pigs in this county. The original breed, some of which still exist, with more or less improvement, in the grass valleys of the county, was a large, long, coarse-haired, heavy-headed, drooping-eared animal, producing an excellent quality of bacon, a very large lean ham, and which could, with plenty of time, and milk, and a little bere or higg barley, be made to weigh from 30 to 35 stones. A vast change, however, has taken place. Smaller, finer haired animals were sought for—principally the Leicestershire breed. These were carefully and attentively bred from until they attained a degree of early maturity, beautiful symmetry, and a constant fatness, even from birth, which makes them almost invaluable. The difficulty is to keep them poor, or the sows lean enough to breed and suckle their offspring. This class of pigs is called the *small breed*. The spinners and artizans of the large towns, especially Leeds and

* Vancouver's Hampshire.

† Ibid.

‡ British Husbandry.

Bradford, have selected some very fine specimens, and show great skill in breeding from them; and to show the extent of this, it need only be mentioned that at the Leeds meeting of the Yorkshire Agricultural Society, as many as fifty-three pigs were entered in one class for competition. The pig and poultry shows of Leeds and Bradford have done much to stimulate this taste, and this, with the vast numbers of almost perfect specimens which are exhibited there, shows the skill and proficiency attained by these amateurs. One of the oldest Yorkshire improvers was Mr. Wiley of Brandsby, and his books will show that he has more than once sold pigs for seventy guineas each. Ten to twenty guineas was a common price. Mr. Nutt of York, Mr. Jolley, Lord Wenlock, Mr. Addison of Leeds, whose "Jenny Lind" was perhaps one of the most beautiful animals ever looked upon, Dr. Hobson, Mr. Heaton and Mr. Taylor, of Leeds, have all contributed vastly to improve the small breed of pigs in the county; and such is the smallness of head and ears, the roundness of sides, the breadth and squareness of frame, that the small breed of Yorkshire pig may be taken as a model.

The peculiarities are small bone, head, and face, and have light offals, deep, capacious chest and throat, and neck rising roundly behind the ears, so as to correspond with the rump; shoulders thick and round, and hams square down to the elbow. Hence, the small-bred Yorkshire pig may be said to have four hams, and these all flesh and fat, so small are the bones which sustain the animal.

An almost equal improvement has taken place in the native or *large breed*. Careful selections,—for crosses of a large with a small-headed animal does not produce a middle size, but varied litters and mongrels of all kinds,—have shortened the heads and ears, reduced the stiff and thickly-set hair to a scattered, soft, pliable material, widened the animal's back, thickened and deepened its hands and shoulders, so that you have a long, tall animal, capable of weighing as much as a small kind, and with nearly all the fineness of quality of the Leicester. It is in the grass valleys that this improvement has mostly taken place, and, amongst the improvers, the Earl Fitzwilliam may be ranked as one of the foremost.

Recently, by again selecting, a *middle-sized* animal has obtained great favour—a link between these two varieties. It is a distinct sub-variety, not a cross between the two, but either a selection and breed from the largest size of the small breed, or of the smallest of the large. These will weigh twenty-five stones at fifteen months old, and combine size with very early maturity, and great disposition to lie in fat. Mr. Tuley, of Axley, has the best specimens of this breed.

THE CUMBERLAND BREED.

This is one of the older breeds which, though less has been done by improvements and crossing, seems to retain original good qualities which few other aboriginal breeds can boast of. They have length, and a mixture of fat and lean bacon, with considerable feeding tendencies, and are generally of a good size, owing to the great care bestowed upon them in their infancy, being generally assisted by milk, and even oatmeal. The Cumberland bacon is justly celebrated in the North of England, and whether the animal is taken at one year old, it is ripe and fat, or kept six or eight, or even twelve months longer, it has a mixture and softness which renders it a favourite. They are somewhat too large for porkers, but as small dried bacon pigs, they merit high estimation.

THE BEDFORD BREED

Is one which ought not to be lost sight of, because they are of good blood, and retain the necessary elements of a good breeder and a good grower. They get enormously fat, sometimes so much so as to lose the power of locomotion, and instances have even occurred of their being blinded with fat. They sometimes attain a weight of twenty-nine stones. The late Duke of Bedford, who was the introducer of the improved breed, was the means of introducing them into East Lothian, where they carried off all the agricultural prizes. They have the peculiarity of growing very rapidly, and at the same time, when mature, feeding is very fast in proportion to the food given.

THE SHROPSHIRE BREED.

The original pigs of this county were of a white or brindled colour, the head was long and coarse, the ear large and flabby, and the hair wiry—the leg also was too long, and the weight of bone great. A cross with the Berkshire and original Chinese has greatly improved this stock. The same may be said of

THE WILTSHIRE BREED,

Originally, it is believed, from Wales. They were long-bodied, low and hollow about the shoulder, high on the rump, of middling size, round-limbed, large, but pointed ear, of a light colour. Of itself of comparatively little value, but, like the preceding breed, an excellent cross with the improved Berkshire stock. This county is as deservedly celebrated for its bacon as Yorkshire is for its hams. By judicious crossing with the Chinese, Neapolitan, and other improved

breeds, they are now smaller in stature, more compact in form, and fatten much more quickly, while the meat retains its excellent quality.

THE HEREFORDSHIRE BREED

Is generally supposed to be the result of a cross with the Shropshire. It is shorter in the body, carries less bone than that breed, has also a lighter head, a smaller ear, a less rugged coat, and is altogether a far more valuable animal. This pig is little inferior to the Berkshire breed, and it is to the adoption of crosses from the boars of Herefordshire and Berkshire that we are to attribute the major part of the improvement which has of late years exhibited itself among the Irish breeds.

THE GLOUCESTERSHIRE BREED.

The Gloucestershire hogs are somewhat less in size than the preceding, and are also shorter in the body, rounder both in frame and limb, and altogether more compactly built. They are white, and have wattles hanging from each jaw; large and especially tall. It is hardy in its constitution, and very prolific, and is a profitable pig for pork—more so than for bacon. They make good store pigs, and their pork is also said to be of prime quality. Some have pronounced this to be superior to the preceding breed; an opinion to which I cannot subscribe.

THE NORTHAMPTONSHIRE BREED

Is of a light colour, a handsome shape, light and small ear, little bone, deep-sided and compactly-formed. This is a profitable porker, and a good store, for he feeds well, fattens rapidly, and arrives early at maturity.

THE NORFOLK BREED

Is small, with pricked, erect ears; colour various, but generally white. They are well-formed, fatten quickly, and make fine meat. The white-coloured are said to be the best; when striated or blue, the breed is inferior, at least generally so. This is a short-bodied and compactly-formed pig, and is an excellent porker. There is another Norfolk variety, of larger size, spotted, but inferior in point of delicacy.

THE LEICESTERSHIRE BREED.

Of an ancient breeding district, once greatly celebrated for its swine. The old stock were large-sized, deep in the carcass, and flat-sided; head and ear light and handsome; colour, light-spotted. As

we have seen at the beginning of this chapter, Mr. Bakewell, by a judicious crossing, altogether changed the system of breeding, and produced the symmetrical animals we observe at all agricultural meetings, combining size, early maturity, and a great tendency to lay on fat.

The Dishley pigs showed as great skill in Robert Bakewell as did his sheep or cattle. With symmetrical form, as far as rotundity, depth, and thickness could constitute it, he combined such great aptitude to fatten, that it has, with the Chinese and Neapolitan, been the source of almost all the improvements of our breeds of pigs, and a pig is just good "blood" or bad in proportion as it is allied nearly or remotely to the Dishley breed. There was a little tenderness of constitution, but so much flesh and fat in proportion to time and offal, that it looked more like one great cylinder of flesh than a living animal, the feet, neck, and face being lost in the exuberance of fat. Owing to its lethargic disposition, and thoracic temperament, it is not a vigorous breeder, and much less prolific than many other kinds, nor will it grow so rapidly as some varieties, being more calculated to lay on fat than to make bone and muscle. Still it is a physiological wonder—a triumph of skill.

THE LINCOLNSHIRE BREED.

The old Lincolnshire breed was light-coloured, or even white, with, in most specimens, a curly and woolly coat. These pigs were of medium size, were good feeders, came early to maturity, and fattened easily. This county is famed for its strain of pigs; not only the county, but many private gentlemen having a breed to which they give their name, or the name of their properties. The improved breed generally are white, with fine skins, sparingly covered with slender bristles, ears erect and pointed, and the body long, straight, and round.

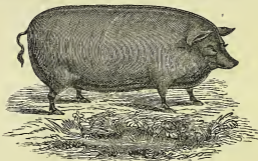
THE ESSEX BREED

Was in former days a very capital pig, but degenerated from its excellence, and of course lost the esteem of breeders. A recollection, however, of the former good qualities which characterized the breed induced some persons of practical judgment to revive it, which was accordingly done; and now this hog, under the name of

THE IMPROVED ESSEX BREED,

Ranks, and that most justly, very high amongst our British breeds of swine. The improvement of this pig is due to a cross with the

Neapolitan; and this cross has been so frequently resorted to, that the pure Essex breed and the Neapolitan are so much alike that it is not every cursory observer who is capable of discriminating between them. It is probable, also, that the Chinese strain was employed in the work of regeneration. The Essex pig is up-eared; has a long, sharp head; a short flat back, with small bone; colour almost invariably black, or black and white. This is so quick a feeder, that he becomes inconveniently fat before he attains any considerable size; and the fault of the breed is that it becomes too dear to buy—too fat to eat. So great, indeed, are his fattening properties, that he sometimes dies a victim of these propensities. Mr. Fisher Hobbs, of Kelvedon, is amongst the most successful improvers of these animals. Some judges will give no prize but to a black pig—a mark of the



IMPROVED ESSEX FIG.

Essex, or Improved Essex, blood. The pure breed should be almost bare of hair, and deep jet black in colour. It was so bred by Lord Harborough, who obtained the prize for his stock at the Smithfield Annual Show. The above cut was taken from a fat prize pig.

There is another improved Essex breed called the *Essex half blacks*, resembling that which I have described in colour, said to be descended from the Berkshire. This breed was originally introduced by Lord Western, and obtained much celebrity. "They are black and white, short-haired, fine-skinned, with smaller heads and ears than the Berkshire, but feathered with inside hair, which is a distinctive mark of both; have short, snubby noses, very fine bone, broad and deep in the belly, full in the hind quarters, but light in the bone and offal.

They feed remarkably quick, grow fast, and are of an excellent quality of meat. The sows are good breeders, and bring litters of from eight to twelve, but they have the character of being bad nurses.*

THE SUSSEX BREED.

Black and white in colour, but not spotted; that is to say, these colours are distributed in very large patches; one half—say, for instance, the fore part of the body, white, and the hinder end black; or sometimes both ends black, and the middle white, or *vice versa*. These pigs are no way remarkable; they seldom feed over twenty stone. They are well made, of middle size, and their skin covered with scanty bristles. The snout tapering and firm, the ears upright and pointed, the jaw deep, and the body compactly round. They arrive at early maturity, fatten quickly, and the flesh is excellent.

THE ORIGINAL OLD ENGLISH BREED

Was long in the leg, large coarse ear, heavy head, rugged hair, and carrying too much bone to be profitable. This breed has yielded to the march of improvement; and I think that, unless in parts of Cornwall, it would be difficult to discover a surviving specimen.

THE ORKNEY BREED.

In the Orkney Islands, the Hebrides, and the Shetland or Zetland Islands, there exists a small and very peculiar breed of swine. In size, this hog is remarkably diminutive, scarcely equalling a good-sized terrier dog in stature: its colour is grey, its coat coarse and bristly. Dr. Hibbert calls it "a little, ugly, brindled monster, an epitome of the wild boar, yet scarcely larger than an English terrier;"† and thus draws a graphic sketch of this strange little swine's character and habits: "This lordling of the Shetland scatholds and arable lands ranges, undisturbed, over his free demesnes; and, in quest of the roots of plants, or of earthworms, hollows out deep furrows and trenches in the best pastures; destroys, in his progress, all the nests which he can find, of plovers, curlews, or chalders; bivouacs in some potato field, which he rarely quits until he has excavated a ditch large enough to bury within it a dozen fellow commoners of his own size and weight. Nor is the reign of this petty tyrant altogether bloodless: when a young lamb is just dropped, it is then that he foams, and as Blackmore has pompously sung, 'flourishes his ivory

* Essex Report, vol. ii.; Complete Graziar, 6th Ed.; and British Husbandry.

† Hibbert's Account of the Shetland Isles.

war,' never quitting his ground till the grass is stained with the red slaughter of his victim."*

These little swine are uncared for by their proprietors, and left to shift wholly for themselves. They know no shelter, save such as they are fortunate enough to find beneath a whin bush, or under the shelter of some friendly rock or bank—they know no feeding, save such as their own ingenuity enables them to procure; yet notwithstanding all this apparent privation (for the localities they inhabit are, as the reader must be aware, none of the most fertile or abundant in such food as would accidentally fall in a pig's way), they are by no means deficient in flesh, especially in autumn, when they are said to be in the best and highest condition.† If driven home and put up to feed, they fatten with considerable rapidity, and on inexpensive food, and increase also in actual size so as to astonish a person previously unacquainted with them.

The Rev. George Low describes the Orkney swine as very small, and presenting much variety of colouring. On his back are strong and long bristles; his ears are sharp-pointed, and stand erect; his snout peculiarly strong, doubtless with a view to the constant exercise which, in the case of these island swine, that organ undergoes. He travels far away, and traverses the distant hills, feeding, as he goes, on such roots, earthworms, &c., as he can procure. With such habits, we cannot be surprised that this animal, notwithstanding his very diminutive size, should commit greater havoc in corn fields than the largest English swine.‡

This little pig, although, as might be expected from his condition and circumstances, never very fat, yet is usually, unless in districts more than ordinarily barren, in tolerable case, and his flesh is of excellent quality. It is generally converted into pork, and forms no trifling article of commerce between the natives and the coast, as an article of shipping stores. In Mr. Low's time, the butchers used to purchase these little swine from their owners at from four to five shillings a-piece; and, after being cleaned and cured, they in turn disposed of them to the shipping contractors at the rate of twopenne per pound. The average weight of these pigs is from sixty to seventy pounds. It may be worth mentioning, that these are the swine of whose hair are manufactured the ropes used in the Orkneys by those adventurers who make their livelihood by suspending themselves from the summit of

* Hibbert's Account of the Shetland Isles, p. 229.

† Quarterly Journal of Agriculture, vol. iii.

‡ Fauna Orcadensis.

the cliffs, over frightful precipices, in search of the eggs and young of the sea-fowl. They prefer these ropes to those made of hemp, on account of their not being so apt to *cut* from the effects of friction against the sharp edges of the rocks to which they are necessarily exposed. This is no unimportant consideration either, when the snapping of a single rope, would, perhaps, plunge two, or even three human beings into eternity. This little pig is the same with the Highland pig of Cully; and, in concluding this sketch of him, I must not omit Dr. Hibbert's characteristic description—

"His bristled back a trench impaled appears,
And stands erected like a field of spears."

A description not a whit less applicable to this diminutive animal than to the most formidable wild boar that ever exposed his rugged front to the spear of the huntsman.

Besides the improved breeds we have named above, every county has its peculiar strain noted for some point of excellence. Crossings are everywhere taking place, and the old stocks—in most cases gaunt, lanky, and lean—are giving place to perfect symmetry of form. In Berkshire, for example, we have the Coleshill strain and the pure Wadley strain. In Essex, Lord Western's strain. In Lincolnshire, Coleby Hall strain; and a similar observation applies to every one of our counties, as any one who has attended the prize cattle-shows in London or elsewhere can easily perceive. A few extracts from the prize lists of 1849 and 1850 will perhaps afford some useful hints on this subject.

Nothing conduces so much to this improved system as the frequent occurrence of prize shows, now so prevalent in all parts of the country. The system stimulates the landed proprietors, and induces them to supply their tenants and cottagers with the breeds most suited to their circumstances and localities.

I shall conclude this chapter with a few extracts, showing the style of animal to which is usually adjudged the prize at these cattle shows. The prizes for pigs at the Smithfield Show of 1850 were awarded as follows:—

"Class XIX. Pigs of any breed, above 13 and not exceeding 26 weeks old: First prize of £10, and silver medal to the breeder, to Mr. W. Fisher Hobbs, of Boxted Lodge, Colchester, for a pen of three 19 weeks and 6 days old improved Essex pigs, bred by himself, and fed on cabbages, potatoes, mangel-wurzel, corn, meal, and milk. Second prize of £2 5s. to Mr. W. Barber, of Langley Broom, near

Slough, for a pen of 21 weeks and 2 days old improved Middlesex pigs, bred by himself, and fed on middlings, barley, pea-meal, and potatoes. No finer specimens of small pork could be seen than Mr. Hobbs' pigs. Mr. Barber's were larger in size and more generally useful.

"Class XX. Pigs of any breed, above 26 and not exceeding 52 weeks old: First prize £10, and silver medal to the breeder, and gold medal as the best pen of pigs in class 19, 20, and 21, to Mr. Coats, of Hammoon, near Blandford, for a pen of three 28 weeks and 6 days old improved Dorset pigs, bred by himself, and fed on whey, grass, and barley-meal. Second prize of £2 5s., to H. R. H. Prince Albert, for a pen of three 38 weeks and 6 days old Yorkshire pigs, bred by himself, and fed on middlings, barley, pea-meal, and potatoes. The Dorset pigs were three black animals of useful form and undoubted worth. The second prize were well fed and bred animals, capable of yielding small hams and bacon at a more advanced age. The coat of hair on the Prince's pigs showed great animal vigour.

"Class XXI. Pigs of any breed, above 12 and under 18 months old: Prize of £5, and silver medal to the breeder, to the Right Hon. the Earl of Radnor, of Coleshill, Berks., for a pen of three 52 weeks and 3 days old Coleshill pigs, bred by his lordship, and fed on barley-meal, pollard, potatoes, and whey. These pigs were of the large breed, white and very handsome; and it is remarked, as an improvement on former years, that the pigs were more active and lively than they used to be, showing a state of feeding better adapted to promote the animal economy."

The show of pigs at the late exhibition of the Smithfield Club (1850) was a good one, comprising fine specimens of the principal breeds and crosses in the kingdom, some of them at different ages, and all in fine condition. We have seen pigs considerably larger than any, and fatter than most, of those exhibited; but nearly all that were shown were sufficiently fat for any practical purpose, and in more than one class they were scarcely half-grown. The improved Essex pigs of Mr. Fisher Hobbs, for which the first prize in one class was awarded, were very good of their kind, and well deserving of attention, especially when their age (only 19 weeks) is considered. This breed attains a medium size and weight, the colour is black, the skin smooth, and the hair thin. The second prize in the same class was given to pigs of a larger breed, termed the Middlesex. These were also good examples of what can be done by judicious selection, feeding, and management. In the next class the three black pigs of the Dorset breed which were selected for the first prize, as well as those

which gained the second prize, possessed much merit: the last were of the Yorkshire breed, and belonged to his Royal Highness Prince Albert; they had a good growth of hair, which is considered a sign of hardiness and of a good constitution. The prize in the next class was awarded to Lord Radnor for pigs of the Coleshill breed. They were of a large size, an excellent form, and a white colour; had a good coat of hair, and appeared to possess a close affinity to the Yorkshire breed. A considerable number of excellent pigs of the Hampshire, Berkshire, and other breeds were exhibited under the head of extra stock, and attracted their share of attention.

At the midland counties fat show at Birmingham, held December, 1861, a pig was so fattened that it could not be induced to rise or even move, and had to be carried into the show by a van. There were other specimens, however, where symmetry combined with fat showed that blood did not necessarily hide itself in mountains of grease.

The general opinion seems to be, that although the pigs, on the whole, are not shown so heavy and unwieldy as on some former occasions, the show of good useful animals had never been exceeded by the last few years at all the exhibitions of fat stock.

CHAPTER V.

CONTINENTAL VARIETIES.

OF the Continental varieties of the hog, perhaps the most important, and that which requires our attention in the very first instance, is

THE WESTPHALIAN BREED.

This is the animal whose hams are so much relished amongst us, and which, on that account, forms no small item of the importations for which we are indebted to our German neighbours. The Westphalian hog requires little description, for he is a very near relative of the wild boar of his native country; and indeed, like that fierce and once formidable animal, usually roams at large in the open forest, feeding chiefly upon beech-mast and acorns until driven home for the slaughter. The colour of the adult Westphalian hog varies: many are so coloured that, were it not for their superior condition and less bristly appearance, it would not be an easy matter to point out any striking difference

between them and their feral relatives; but in every case, whatever may be the hue of the parents, the young are at birth, and for some months afterwards, marked with the longitudinal bands so characteristic of their wild blood. I have already spoken of the improvement resulting from an occasional cross with the wild original, and referred to the celebrated Berkshire breed in attestation of the correctness of my remarks. In further demonstration thereof, I now refer to the animal at present under consideration. Of course, a fair share of credit must be awarded to the cleanliness which their wild mode of living permits the animals to indulge in, as well as to the quantity of nutritious and sweet fruits on which they feed; but even making due allowance for all this, it is, in the first instance, to the *cross* that their excellent quality of flesh must be attributed. In several parts of England, especially in the New Forest, herds of swine are permitted thus to roam at large during the acorn season, and when driven home are said to be in prime condition; indeed, swine would appear naturally predisposed to return, if allowed, to their feral condition. Moubray* mentions the circumstance of two young boars thus retiring into a wood between Colchester and Mersea island, and continuing for years to be the terror of the neighbourhood.

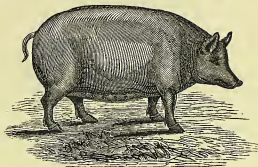
The Westphalian swine are, as is evident from the hams imported into this country, seldom over-fat; but they are not on that account to be deemed difficult to fatten. On the contrary, Mr. Carrol, who has had much experience in the management of these pigs, assures me that they will, if kept up, take fat with remarkable facility, and attain an enormous weight.

THE NEAPOLITAN BREED.

This is a variety well worthy the attention of every experimentalist, as a cross from it is productive of very remarkable improvement. The colour of the Neapolitan swine is black, with no bristles, and little or no hair. The flesh of these swine is extremely delicately flavoured, and the fat wants that rankness so objectionable in some other varieties; it is, however, as well to observe that they are anything but hardy animals, not being able to endure our climate; it is therefore merely as affording us the opportunity of forming, by means of crossing, a valuable mixed breed, that they are deserving of notice. Most of our native breeds may be improved by a cross of the Neapolitan. Indeed, by far the larger portion of the middle breed of pigs, in all the counties of England, manifest this relationship by the exist-

* Page 227.

ence of blue spots on different parts of the body. Mr. Rowlandson, the author of the Prize Essay of the Royal Agricultural Society of England on the Management of Pigs, labours to prove that the Neapolitan is the original breed of pigs, and even urges that the Essex, or



THE NEAPOLITAN FIG.

rather the improved Essex breed, is due to that race, of which he says it is an improvement. We should rather think that the Italian climate, operating on the wild boar domesticated, as well as that of China, softened down the asperities of activity and bristles, and made the soft delicate animal we now see, in the shape of the one or the other of these varieties.

The Hog of Parma resembles the Neapolitan, and is, in my opinion, the same animal, but bred with a view to larger size. With the true Berkshire breed, the Neapolitan produces a cross, to be surpassed by none in every desirable quality that the breeder could look for, more especially if a dash of the *white* Chinese be added. The intermixture of these three breeds—the Neapolitan, Chinese, and Berkshire—may be regarded, if done judiciously, as the *ne plus ultra* of swine breeding. Thus was produced that long-celebrated breed kept by Lord Harborough, and already spoken of. After having been a short time in this country, the Neapolitan hog begins to lose his naked appearance, and to acquire a coat better suited to the more chilly climate into which he has been introduced.

THE FRENCH BREEDS.

The French appear to have long known the value of a cross with the Chinese variety of hog, and most of their best breeds bear evidence

of having more or less relationship to that animal. The most remarkable French breeds are those of Poitou, the Pays d'Auge, Perigord, Champagne, and Boulogne.*

The Poitou breed has a long and rather bulky head, with pendulous and somewhat coarse ears—an elongated body, broad and strong feet, and large bones; its hair and bristles are harsh. That of the Pays d'Auge has a smaller head, with a sharp muzzle, narrow and pointed ears, long body, broad and strong limbs, but small bone; hair coarse, scanty in quantity, and of a white colour. The Perigord swine are generally black, with a very short and lumpy neck, and a broad compact carcass. Those of Champagne are of considerable size, long-bodied and flat-sided, with a broad pendent ear; they are not to be recommended. Those of Boulogne are, as might be suspected, related to the English breeds. Their colour is usually white. They are of a large size, have a large and broad ear, and are quick fatteners. It is to these swine that we are indebted for the celebrated Boulogne sausages. The following extract from the *Ann. d'Agricult. Francaise* No. 29, presents us with the unsuccessful trials of a breeder to improve his stock:—"I commenced," he says, "with the *large* Shropshire pigs; they pleased my eye, and for some little time I felt perfectly satisfied. In a short time, however, I began to observe that although they devoured an immense quantity of food, they fattened but very slowly, and seemed to derive no advantage from the herbage and vegetables which they *found in the fields*."

"When killed, the flesh, and especially the fat, was exceedingly coarse. The sows, nevertheless, produced many pigs at each farrow, which, from their size when young, sold well to persons who were tolerably rich, and knew little or nothing about the breeding of pigs.

"I next tried the small Berkshire pigs, and immediately perceived a very sensible improvement. They fattened quickly, procured most of their nourishment *from the fields*, and their flesh was very superior to that of the last-named breed. But as they were large I thought to effect a still greater improvement by exchanging them for the Chinese; but here I fell into the opposite extreme. The Chinese were prolific, fattened speedily, and almost *obtained their own subsistence*; but they were faulty in form, and their flesh was not firm, but loose in fibre, as if they had died of disease."

The Jutland swine are long-bodied, long-legged, curve-backed, with a large and pendent ear, and grow to a very large size, but are heavy-boned and coarse.

* Mr. Wilson, in "Quarterly Journal of Agriculture"—Essay on the Hog.

In Sweden there are, of course, many different breeds; but that most characteristic of the country is a supposed off-shoot from the wild boar, with a turned-up snout, erect ears, and long and bony legs.

The swine of Russia and Poland are small, and of a reddish or yellowish colour; rough in the hair, and hard feeders.

The Hungarian pigs have straight, pointed ears, short body, short and firm legs; colour grey. These are very ruggedly coated, and the young are marked with the longitudinal bands already spoken of—two circumstances indicative of a connection, and that by no means remote, with the wild boar. These pigs inhabit Turkey in Europe, Croatia, Bosnia, Hungary, and Austria, and are variously named, according to the country from which the specimen immediately in question may have been procured.



CHAPTER VI.

POINTS OF A GOOD FIG.

THERE are many other breeds of swine which might be enumerated, for indeed every country has several peculiar to itself; but I do not like occupying these pages with unnecessary matter, and therefore remain satisfied with having described the most important, and those which present the most striking points of difference from each other. I would now desire to caution the reader against being led away by mere *name*, in his selection of a pig. A pig may be called a *Berkshire*, or a *Suffolk*, or any other breed most in estimation, and yet may, in reality, possess none of their valuable blood. The only sure mode by which the buyer will be able to avoid imposition is, to make name always secondary to *points*. If you find a pig possessed of such points of form as are indicative or productive of early maturity and facility of forming flesh, you need care little what it has seemed good to the seller to call him; and remember that no *name* can bestow value upon an animal deficient in the qualities to which I have alluded. The true Berkshire—that possessing a dash of the Chinese and Neapolitan varieties—comes, perhaps, nearer to the desired standard than any other. The chief points which characterize such a pig are the following:—In the first place, sufficient depth of carcass, and such an elongation of body as will ensure a sufficient lateral expansion. The loin and breast are broad. The breadth of the former denotes good room for

the play of the lungs, and a consequent free and healthy circulation, essential to the thriving or fattening of any animal. The bone is small, and the joints fine. Nothing is more indicative of high breeding than this; and the legs should be no longer than, when fully fat, would just prevent the animal's belly from trailing upon the ground. The leg is the least profitable portion of the hog, and we therefore require no more of it than is absolutely necessary for the support of the rest. The feet are firm and sound; the toes lie well together, and press straightly upon the ground; and the *claws* are even, upright, and healthy. Many say that the form of the head is of little or no consequence, and that a good pig may have an ugly head,* it being no affair of anybody but of the animal himself who has to carry it; but I regard the head of all animals as one of the principal points in which pure or impure breeding will be the most obviously indicated. A high-bred animal will invariably be found to arrive more speedily at maturity, to take flesh earlier, and with greater facility, and altogether to turn out more profitably than one of questionable or impure stock; and, such being the case, the head of the hog is by no means a point to be overlooked by the intending purchaser. The description of head most likely to promise, or rather to be the concomitant of high breeding, is one not carrying heavy bone, not too flat on the forehead, or possessing a too elongated snout; indeed the snout should, on the other hand, be short, and the forehead rather convex, recurving upwards; and the ear should be, while pendulous, inclining somewhat forward and, at the same time, light and thin. Nor would I have the buyer even to pass over the *carriage* of the pig. If this be dull, heavy, and dejected, I would be disposed to reject him, on suspicion of ill health, if not of some concealed disorder actually existing, or just about to break forth; and there cannot be a more unfavourable symptom than a hung-down, slouching head, carried as though it were about to be employed as a fifth leg.† Of course, if you are purchasing a fat hog for slaughter, or a sow heavy with young, you are scarcely to look for much sprightliness of deportment; but I am alluding more particularly to the purchase of young stores, the more general, because the more profitable, branch of pig management.

The breeder of pigs has less difficulty than perhaps any other breeder in aiming at the points of the animal most favourable to his purpose of producing the largest amount of flesh at the least possible cost. The pig has acquired almost classic celebrity from the cele-

* Laurence on Live Stock.

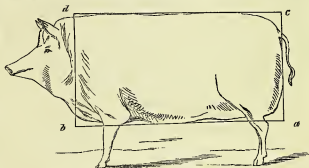
† Ibid.

brated pamphlet of the Rev. Mr. Huxtable, who attempted to show how the farmer was to live and pay his way with corn at five shillings per bushel, and meat at five shillings per stone, by the feeding of pigs. But it is quite clear that the profit or loss in the pig rests on the feeding qualities of the stock.

Nor must it be forgotten that the purposes for which the animal is intended are very material in determining the qualities we should seek for. The salter of bacon, who seeks a weight of thirty stones, does not require the indications of early maturity so strongly as the dealer in pork. The one requires variation of muscle and fat, layer upon layer, like the strata of a fresh water deposit—the other requires rotundity and fatness in very early stages of the animal. Hence the small breed is invaluable for roasters, for pork, and for home-made bacon—the large for extensive salting for distant exportation, and for long keeping. The points of each breed, though generally similar, are also decidedly different.

To begin with the *points of the small breed* :—It may be observed, that in all animals there is more sympathy between the skin and general physiological tendencies, than any other part of the body. It is Nature's envelope, and she never fails to indicate the quality of the substance she covers. Hence, in the small breed, the hair should be soft, delicate, and straggled over the body; short, light, and silky in its texture; and to show its thorough deliverance from the original wild breed, and its entire submission to domestication, there should be no indications of bristles, nor any increased thickness of hair on the top of the neck. The skin should be soft and pliable—not thin and papyry, nor light and flabby, but white, feeling soft and elastic in the hand, and to the touch of the fingers still possessing substance. The cuticle also requires considerable attention. It must be thin, and almost transparent. A thick cutis is an almost invariable symptom of hardness, and of difficulty in fattening. The body must resemble a rectangle in its side view. The back long, and departing very slightly from a straight line from the rising behind the ears to the setting on of the tail, with only a slight rising over the shoulder and ham, to the line, or even above it; but this must be so slight as not to present a slack back. Some parties imagine that this is a mere whim of judges. But it is not so. When the back is so elevated as to rise as high, or nearly as high, as the shoulder-blade and hip bones, it is a strong indication that there is room for the active and full play of the vital viscera. The rising behind the ears is, perhaps, the strongest indication, as regards form, of the power of the animal to secrete fat. It is

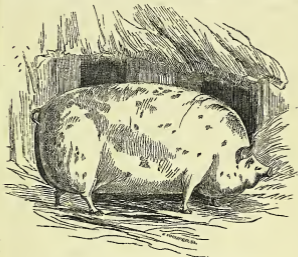
a part unsuited generally to the accumulation of that deposit, and when it shows a tendency to accumulate there, it is no bad sign that the animal will deposit it elsewhere with facility. So with the shoulders and hams. They are the best of the animal. Like the breast and wing of the fowl, they are the most valuable and delicate parts. Nay, more, perhaps the most delicate part of the ham is that nearest the elbow. Hence they should have *depth*, and this gives the two ends of the rectangle, which is the desideratum in a well-formed pig. The same remark applies to the throat. It is not naturally fat. Hence if it pokes down, so as to fill that corner of the rectangle, it is also indicative of the thriving propensity. The chest should be deep and long, and as the belly carries with it a deposit of internal fat, and this must have space, and will have development in well-kept animals, it may be expected nearly to fill that corner also of the rectangle. We have attempted to represent our idea of an outline of a perfect pig. Here *a b c d* form a parallelogram, which is very nearly filled. The proportions of sides and ends are of less consequence than the fact of this symmetrical disposition of parts.



RECTANGULAR FORM OF A PERFECT PIG.

Nor must the rectangular shape be confined to the side view of the animal. Viewed from behind and before, he should have the same peculiarity. The back broad and flat, will give the top; the sides full and deep, will give the sides; while the overhanging hams and shoulders will fill up the angles, and form the base of the rectangle. Nor are these proportions merely fanciful. Breadth is as necessary to the full and active energies of the organs of respiration and digestion, as length, and therefore capacity for the full action of these is

essential to a well-formed animal. Besides these criteria, the head must be fine and small, while the chaps and upper part of the face must have a full development of muscle and fat, not only because the snout is useless and the chaps valuable, but because the smallness of the former is as characteristic of a fine quality in the pig as it is of "blood" in the racer; while the latter is expressive of an animal economy, calculated for feeding. The neck should be short and deep; and a loose and flabby appearance there is the characteristic of a coarse animal, and gross feeder. The ears should be small, and pricked upwards; so certain a mark is this of the small well-bred pig, that they are often denominated the prick-eared breed. They should also



A TWO YEARS' OLD SOW BRED BY MR. WILEY OF BRANDSBY.

be thin and fine, and either destitute of hairs altogether, or very slightly sprinkled with fine soft hairs. The bones should be small; the legs short and fine, and the tail small and curled, as being indicative of a strong back. The eyes should be bright, and mild in their appearance, and all the extremities of the animal should be as small, light, and fine as possible.

In the *large breed of pigs* there is much that is the converse of this, for as size is required, there must be more bone, and more general

coarseness; and as they are not intended to be fed off at so early an age, they are not expected to lay on fat so rapidly. Hence, the large breed of pigs having larger bones, stronger hair, larger and thicker ears, and almost every one of the indications of perfection given above in a slighter degree, indicate an animal destined for a different treatment, serving a different purpose, and having a constitutional temperament differing from the smaller breeds.

The skin of the large pig is thicker, the hair stronger and coarser, and though he can grow and thicken—increase in size—it is not fat only he lays on. He divides it with muscle; and hence his bacon is the streaked, marketable article, which is sought after much more than that of the prick-eared animal. He is also hardier and constitutionally stronger, and much more able to resist the influences of a cold climate, or exposed situation; and in the valleys which intersect the hills, especially of the “backbone of England,” this breed is invaluable; he feeds on the skim milk in dairies where butter is made, and on the whey where cheese is the product, and he is altogether more profitable to the dairy farmer than the small-bred pig.

Many efforts have been made to combine the qualities of the two, but they are, to a certain extent, incompatible. More rapid feeding, and earlier maturity may be gained, at the expense of size, constitutional power, and mottled or streaked bacon.

As types of the class, the Leicester pig, or the Essex, will be the most perfect of the small breed, and the Yorkshire and the Berkshire, of the large.

Nor is colour altogether to be lost sight of.* In the case of pigs I would, as in reference to any other description of live stock, prefer those colours which are characteristic of our most esteemed breeds. If the hair be scanty, I would look for black, as denoting connection with the delicate Neapolitan; but if too bare of hair, I would be disposed to apprehend too intimate alliance with that variety, and a consequent want of hardihood, that, however unimportant if pork be the object, renders such animals hazardous speculations as stores, from their extreme susceptibility of cold, and consequent liability to disease. If white, and not *too small*, I would like them, as exhibiting connection with the Chinese. If light or sandy, or red with black marks, I would recognize our favourite Berkshire; and so on, with reference to very possible variety of hue. Some judges are much influenced by the colour of an animal; they disregard his make and qualities, and pass by him if he is not *black*. It is true that the black nose in

* Laurence.

cattle is generally indicative of a want of pure blood, as is the white back in any ox, not a Hereford or an Irish. To so ridiculous an extent was this notion at one time carried, that the best pigs were passed by, at the Show of the Royal Agricultural Society of England, and the prizes given to those which were of the black breed, this being considered an indispensable qualification for a winner. As indicative of breed, therefore, it may be useful to attend to the colour, and it may be taken as one point indicative of quality: the blue spots of Neapolitan; the white, if small, of Chinese; if large, of the old English; if black, of Berkshire, &c.; but beyond this it is neither politic nor reasonable to go.



CHAPTER VII.

HOUSES AND PIGGERIES.

AN inclosure, proportionate to the number of swine which you intend to keep, and, if possible, so managed as, if necessary, to admit of extending the accommodation, will be found the best for general purposes. It should be provided with a range of sheds, so situated as to be thoroughly sheltered from north and east winds, and snow, rain, and inclement weather, paved or flagged at the bottom, and sloping outwards. I cannot too frequently reiterate my observations relative to the paramount necessity of cleanliness and dryness; let, therefore, both inclosure and sheds possess the means of being kept so. To ensure both these desiderata as far as possible, very efficient drainage is absolutely necessary, and it will be a great advantage if the bottom is of concrete as well as drained. The whole pig cote should slope towards one corner, and be intersected by channels in the flagstone or pavement; the former is by far the best, and to this a common metal stench-trap should be placed. This is in every respect the best, it admits of being taken up and replaced, for the purpose of cleaning out the sediment which will from time to time accumulate. Connected with this drain should be a tank, or it might communicate with the drainage of the rest of the buildings. The interior or covered shed should be kept constantly littered, and so indeed should be the courtyard, if the object of the pig-keeper be to convert his straw into manure. If not, it should be swept and washed clean, and occasionally sprinkled with fresh saw-dust. There is no better absorbent—no

cleanlier material than this, and it is cheaper than straw, when both have to be purchased; much more portable, easier obtained, carried or stowed away, and should be the sheet-anchor of the amateur pig-keeper.

Piggeries sometimes form part of a line of buildings, but are generally kept separate. It is desirable that they should be at some little distance from stables or cow-houses; and they should in all cases be open to the south or south-east, that the sun may have access to them, and that their interior may be protected from the cold north and north-east winds. A very common mode of construction is shown in the annexed figure, in which



a a a a are the covered parts or sheds, each eight or ten feet square, of so many separate sties, and *b b b b* the open courts in which the feeding troughs are usually placed; these may be ten feet square, or larger if thought necessary; the number of sties may of course be in proportion to the number of pigs kept, and two or more pigs may, in ordinary cases, be kept in each sty. The walls of both sheds and courts may be either of brick or stone and lime, and the bottom, inside and out, should be paved or flagged in such a manner as to obviate all chance of its being disturbed, and prevent the necessity of putting rings in the noses of the pigs. The bottom should also slope outward, and a drain, as represented by the dotted line *c c*, should be made to carry off the liquid part of the moisture to the tank built for that purpose, as we have described—a trap being provided in each sty to allow the liquid to pass into the drain. Sometimes the food is supplied through an opening in the wall into the trough, but it may be lifted over the wall, or what is better, the door may be opened, and the court entered, which will admit of the trough being better cleaned out. The next figure is a section on the line *d e*, showing how



the roof of the sheds slopes, and the spouting *f*, which ought to be provided to convey the rain-water to the ground on the outside of the sties, where it may be carried off by an open gutter, or under drain, as may appear most advisable.

Piggeries are sometimes entirely roofed in, which keeps the pigs warmer, and is thought to contribute very materially to their growth, and to make them fatten more readily, especially in the colder parts

of the country; but more care will doubtless be required to keep the sties clean and ventilated. The sheds and open courts are best during the warm weather of summer; and if the pigs are supplied with abundance of dry litter, as should always be the case, they will at any time keep themselves tolerably comfortable as regards heat.

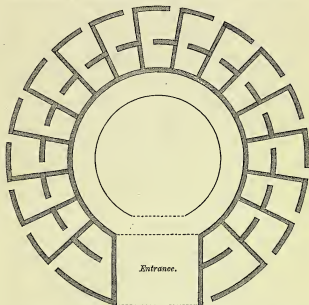
The plan of allowing pigs to run in a large open manure-yard, and tread straw into manure, answers better for young or growing pigs than for those that are fattening; nor is it inconsistent with the best modern methods of making and preserving manure; for while there is not a better understood fact in physiology than that animals must be kept still and quiet during the process of *fattening*, and must have their rambling instincts restrained; yet with animals which are store and growing, a very different course must be adopted. If much confined they will get mis-shapen and ricketty, will lose the bloom of health and vigour, and remain small in size and tender in constitution. Exercise is as necessary for them as it is for horses, and the manure-heap in the yard will be benefited by their rooting; the odd corns will be picked up, and the fermenting mass will form a warm and healthy bed, highly suited to the somnolent habits of the pig in winter. Where this is adopted, the circular range of houses (page 80), for the design of which we are indebted to Mr. Donaldson, is well adapted to the purpose.

DESCRIPTION.

This piggery suits the largest size of farms on which the roots and crops are grown to feed swine in large numbers. There are seventeen sties, with yards, to accommodate two animals in each division; the inner wall being six feet, and the front wall three feet in height. The boar and brood sows will occupy three sties, and two lots of fat pigs yearly from the other sties will accommodate fifty-six animals.

The centre house is two stories high, and on the upper floor the food is cooked by steaming, and cooled in vats. The boiler is placed on the ground-floor, and sends the steam upwards by pipes into the steaming vats. The raw food is hoisted from the ground to the second floor when required. The cooked food, when cooled, is pushed over the intervening road into the sties, along semi-cylindrical concave tubes of corrugated iron, which are supported on cast-iron pillars, and which reach from the central house to the sties, dropping the food into the troughs where the pigs are fed. To push it along these converging tubes, a semi-lunar spade is fixed on the end of a wooden handle, which is used by a man in the centre house; and being fitted

to the shape of the cylinder, the food is moved along them, and falls into the feeding-troughs. This arrangement saves the labour of the hands in carrying or wheeling the food to the sties, as in the common way. The road betwixt the sties and central house admits the free use of the necessary traffic. The plan, as here given, is

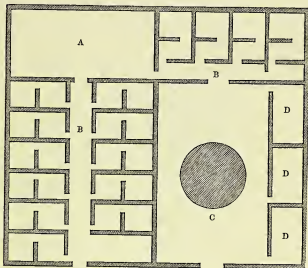


adapted to the centre of a large farm-yard; the sties being on the inner circle, and with openings for feeding-troughs also on the inner circle—but this may be altogether reversed, so as to suit different circumstances.

For the next design we are also indebted to Mr. Donaldson. It is recommended as a piggery suitable for a farm of considerable extent; it also has a cooking-house with a steam apparatus, with sties for boar and sows, yards and shelter-sheds for store-pigs, and sties for bacon hogs—two in each. The food is intended to be run along the front of the sties in light iron waggons.

Either of the above plans admits of unlimited extension; in any

case, a well-arranged series of clean, airy, and well-protected dwellings, is necessary for the well-being of the stock. The food should be prepared at a distance from the animals, and conveyed to them with the utmost regularity as regards the hours of feeding, and it should be poured into the troughs without any chance of impediment from the hungry grunters.



In the ground plan, here given, A is a yard in which is a cooking-house for preparing the food; B B three ranges of sties with yards in the front, adapted for store pigs; C a yard for exercise, with a pond in the centre; D D D three piggeries, for a boar and two brood sows. The angle of the roof for the sties may be the same as that shown at page 78.

Mr. Henderson recommends a house on an entirely different plan. "Have a house," he says, "thirty feet by fifteen, with four doors, all opening outwards, and three partition walls through the house, by a wall between each of the doors dividing the house into four compartments,—The two middle ones for eating, and the others for sleeping apartments, having an inner door between each eating and sleeping

apartment. By this plan, the keeper is enabled to get the eating chambers swept out, the troughs cleaned, and the food put into them, without disturbing the swine, or being disturbed by them. There should be a division-wall through each sleeping apartment; in the hinder part should be the litters, and the front and smaller compartments, through which the animals pass to their food, may be used by them as a kind of necessary—for these animals will never defile their beds, if they can avoid it.

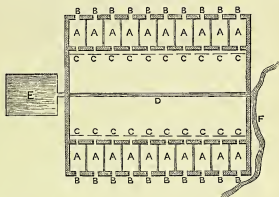
“The manger should be as long as the house is wide, and fixed against the middle wall; in form similar to a horse manger, wide at top, narrow at the bottom, but not so deep; it must be divided into compartments by partition-boards four feet in length or height, and a little broader than the manger is wide. At such a trough a number of pigs will feed as quietly, and as well, as two or three. Before every meal the trough should be well washed and the place swept, and once every day a little fresh litter should be placed in the sleeping chambers. Each of the eating and sleeping rooms should be divided into two. The sleeping rooms should be dark, as animals fatten more rapidly when they can quietly lie down and sleep after each meal.”

These plans are for the most extensive farm-yards; for the cottages a more humble mode must be presumed; in this case a well-built stand and waterproof shed for a dormitory, with an inclosure for air and exercise as large as convenient, must suffice. It should on no account be open to northerly or easterly winds, and it should be sheltered from the glare of the midday sun.

I have appended a general plan of such a piggery as I would recommend to those who follow this branch of rural economy on a moderately extensive scale.

The ground on which the piggery is established should likewise be divided into two parts by a drain, which should run through it; and towards this drain each section should slope. This, the main drain, to which, as I have stated, communication should be established from the other already described, should be carried beyond the fold, and fall into a large tank or pit formed for that purpose. The reasons for this recommendation will, of course, be obvious to every person: the object in view is a double one, viz., at once to keep the pig-fold and sties in a clean and dry state, and to preserve the valuable *liquid manure*, which comes from the animals you keep. The value of liquid manure has been for some years neglected or lost sight of; it is now becoming generally understood and recognized, and in no available instance should measures for its proper collection and preparation be

omitted. There are some who will probably inquire whether it would not rather be better to suffer the moisture to soak into earth or straw, or other substances on the *floor*, so to speak, of the inclosure, and then to clear it all away periodically, than to drain off the liquid into a tank. For the information of such persons, I may observe, that by drawing off the liquid, you add to the cleanliness of your swine, and, in proportion, to their health and capacity for thriving; and also, that the collection of the liquid manure into tanks is less



A. Sties. B. Doors at back. C. Doors in the Front, and Troughs. D. Drain.
E. Tank. F. Stream, admitted at pleasure, to pass through the piggery.

troublesome than the removal of substances saturated with it from the floor of the fold would be. The liquid contained in the tank (if you keep cows, of course they contribute their quota as well as the pigs) is not to be applied to the land intended to be manured, in a liquid state, but is previously to be absorbed by suitable composts; this subject, however, is altogether foreign to the design of the present work; and there are, besides, many treatises on the subject easily procurable and perfectly intelligible; it is therefore unnecessary that we should here enter upon such a disquisition.

You should also have your sties so constructed as to admit of being closed up altogether when desirable; for swine, even of our hardest breeds, are susceptible of cold, and if they be exposed to it in severe weather, it will materially retard their fattening. The sty should be

kept constantly supplied with clean straw. It will be found that carting the refuse into the tank will, in the form of manure, more than repay the value of the straw thus expended. It has been asserted that swine do not thrive if kept together "upon the same ground in considerable numbers."* Moubray is perfectly correct in contradicting this assertion, and in assigning to its proper origin, viz., that its original assertors, in drawing their conclusions, omitted to take want of ventilation and cleanliness into account.

Of the *feeding* of swine, it will be my business to treat hereafter. I am now only treating of their *furniture*. As to *troughs*, let them be of stone or cast-metal,—if of wood, the pigs will soon gnaw them to pieces,—and let them be *kept clean*. Before each feeding, a pail of water should be dashed into the trough. This may be deemed troublesome, and perhaps it may prove so; but it will confer golden returns on those who are sufficiently industrious to attend to it.

A supply of fresh water is also essential to the well-being of swine, and should be freely furnished to them. Some recommend this to be effected by having a stream brought through the piggery; and undoubtedly, when this can be managed, it answers better than anything else. Swine are dirty feeders, and as dirty drinkers, usually plunging their fore-feet into the trough or pail, and thus speedily polluting with mud and dirt whatever may be given to them. One of the advantages, therefore, derivable from the stream of running water being brought through the fold is, its being thereby kept constantly clean and wholesome. If, therefore, you are unable to procure this advantage, it will be desirable to present water to the swine in vessels of sufficient size to receive but one head at a time, and of such height as to render it impossible, or at all events difficult, for the drinker to get his feet into it. The water should be renewed twice daily.

I have hitherto been describing a piggery capable of containing a large number, say several scores of swine, and I may observe that greater proportional profit will be realized by keeping a number of swine than a few—a fact which will be readily understood by a moment's reflection as to feeding—the principle, in fact, being identical with that illustrated by the soldiers' mess, or the boarding-house system, so extensively and advantageously practised amongst ourselves. It may happen, however, that want of capital, or of inclination to embark in swine-feeding as an actual speculation, may induce many to prefer keeping a small number of pigs, or even perhaps one

* Moubray, p. 208.

or two, in which case such accommodation as I have been describing would be more than superfluous. In this case, a single hut, well sheltered from wind and rain, and built with a due regard to comfort and warmth, with a little court surrounding its door, in which the tenant may feed, obey the calls of nature, and when in merry mood, which swine frequently are, disport himself, or bask in the sunshine, will be found to answer; a small stone trough, or, if such cannot be conveniently procured, a wooden one, bound with iron, to preserve it from the powerful jaws and strong teeth of the user, who would otherwise employ his leisure hours in gnawing it to pieces, will complete the necessary furniture. The trough will serve alternately for food and drink. Even, however, when this limited, but, under circumstances, sufficient, accommodation is resorted to, I desire it to be particularly borne in mind, that a strict attention to cleanliness is no less necessary than when operations are carried on on the most extensive scale. Both the floor of the hut and that of the little court should be paved, and should incline outwards; along the lowest side should also be a drain, which should have a sufficient declination, and should be so contrived as to communicate with your manure-tank. I need, I hope, scarcely add, for the attention of cottiers, that the farther they can conveniently build the manure-heap, or form their little tank from this dwelling, the better: vegetable matter, in progress of decomposition, gives rise to pestilential vapours, or miasmata, than which there cannot be a more fertile source of malignant fever.

When the weather is fine, a few hours liberty will serve the health, and consequently the condition, of your pig, and if he could obtain a little grazing, it would be all the better. Should you be desirous of breeding, and keep a sow for that purpose, you must, if you have a second pig, provide a second sty, for the sow will require a separate apartment when heavy in pig, and when giving suck. This may be easily effected by building it against that which you have already erected, thus saving the trouble of raising more walls than are absolutely necessary; and it need not have a court attached to it, should it be inconvenient for you to have one, as the best accommodation can be given up to the breeding sow, and your bachelor pigs will do well enough with a single apartment, if it be not too confined, and have sufficient ventilation, and if you permit them the advantage of taking the air for a few hours daily. The extensive feeder should not be without a boiler of large size, properly fitted up in his yard, and, if he can procure it, an apparatus for steaming, as some vegetables are cooked in this mode more advantageously than by boiling.

The poor man can use a pot as a substitute for a boiler, remembering in every case to clean it before using. Food should be presented to swine in a tepid state—neither too hot nor too cold.

The dimensions of a sty should be about seven feet, or perhaps eight feet square, and the court about ten feet. The second or supplemental sty need not be more than six feet square, and, as I have already observed, does not absolutely require a court; of course, if you can throw up the three mud walls, and append the little gate necessary for the ingress and egress of the tenant, it will be so much the better. I am now speaking only of cottier management, but the following pages will apply to him equally as much as to the most extensive proprietor.

In constructing cottier pig-cotes, it is hardly necessary to say that the roof should always slope from the court and behind the sty, or be efficiently spouted, and the water should be carried off by a system of drains, entirely separate from those conveying the liquid from the sties. One reason why liquid manure is so little appreciated, and said to do so little good, is the very dilute state in which it is applied, being usually little better than merely coloured water. As much external wet as possible should be kept out of the pig-sty, as it materially aids cleanliness.

CHAPTER VIII.

BREEDING, REARING, AND FEEDING.

IN the selection of a boar and sow for breeding, much more attention and consideration are necessary than people appear generally to imagine. It is as easy, with a very little judgment and management, and much less expense than is generally necessary, to procure a good as an inferior breed; and, as the former is infinitely more lucrative and remunerative, in proportion to any necessary outlay, than the latter can possibly ever be, it is hoped that a little attention to the subject will not be refused.

In choosing the parents of your future stock, you must diligently bear in mind the precise objects you may have in view, whether the rearing for pork or bacon; and whether you desire to meet the earliest market, and thus realize a certain profit, with the least possible outlay of money, or loss of time; or whether you mean to be contented to await a heavier, although somewhat protracted return.

If bacon, and the late market be your object, you will do well to select the large and heavy varieties, taking care to ascertain that the breed has the character of being at once possessed of those qualities most likely to ensure a heavy return, viz., *growth*, and *facility* of taking fat. I have already described the best known varieties of hog, and stated the proportion in which these properties are relatively possessed by each. To that description I refer my reader.

If, on the other hand, your object be to produce pork, you will, of course, find your account in the smaller varieties; such as arrive with greatest rapidity at maturity, and which are likely to produce the most delicate flesh. In producing pork, it is not advisable that it should be *too fat*, without a corresponding proportion of lean; and, on this account, I would recommend that you rather take a cross-bred sow than a pure Chinese stock, from which the over-fattening results might most naturally be apprehended. The Leicester or Berkshire, crossed with Chinese, is about the best porker I can mention. But here, again, permit me to refer to my description of the several varieties.

In every case, whether your object be pork or bacon, the points to be looked for are,—in the sow, a small lively head, a broad and deep chest, round ribs, capacious barrel, a haunch, falling almost to the hough, deep and broad loin, ample hips, and considerable length of body in proportion to its height. Nor must the broad, flat, table-like back, the broad, thick shoulders and hams, be forgotten. The flesh should rise full and round behind the ears. One qualification should ever be kept in view, and, perhaps, should be the first point to which the attention should be directed, viz., *smallness of bone* in proportion to the flesh, and fineness of the best parts, with lightness of offal.

Let the boar be less in size than the sow, shorter and more compact in form, with a raised and brawny neck, lively eye, small head firm, hard flesh, and, if of the large breed, his neck well furnished with bristles; in other respects, look for the same points as I have described in reference to the sow. Breeding within too close degrees of consanguinity, or, as it is technically styled, *breeding in and in*, is sometimes said to be calculated to produce degeneracy in size, and also to impair the animal's fertility; it is certainly to be avoided where the breed is not of great culture, although some breeders maintain that a *first cross* does no harm, but, on the contrary, that it produces offspring which are predisposed to arrive earlier at maturity, and take fat with greater facility. This may in some instances be the case; it is so with horned cattle,—but, as far as swine are concerned,

it is a matter of some question, though it must be confessed the producers of the finest animals are very close breeders.

Differences of opinion exist as to the precise age of boar and sow at which breeding is most advisable. They will, if permitted, breed at the early age of six or seven months; but this is a practice not to be recommended. My advice is, to let the sow be at least one year old, and the boar at least eighteen months; but if the former have attained her second year, and the latter his third, a vigorous and numerous offspring are more likely to result. The boar and sow retain their ability to breed for about five years, that is, until the former is upwards of eight years old, and the latter seven. I do not recommend using a boar after he has passed his fifth year, nor a sow after she has passed her fourth, unless she has proved a peculiarly valuable breeder; in which case, she might be suffered to produce two or three more litters. When you are done with the services of the boar, have him emasculated—an operation that can be performed with perfect safety at any age,—fatten, and kill, or sell him. When it is no longer desirable to breed from the sow, kill her also. Perhaps it is the most economical way, where the breeding and fattening of pigs are carried on simultaneously, to take no more than three litters from a sow before she is killed. If less are taken, she will not have arrived at her full maturity—if more, she will be injured for bacon. A sow who has had but three litters will be as fine bacon as an emasculated hog; but if she has more, she will be coarse and strong in flavour. Another objection to keeping sows to a great age is, that they usually become ravenous and voracious when they get old, and often take to the worrying of lambs and poultry, and sometimes so gross and indolent as to lay upon their own offspring. Young pigs are likewise far more matronly and active, and their litters have more energy and vital power than those of older animals, though the number of their produce is often smaller.

If a sow be of a stock characterized by an unusual tendency to take on fat, it is well to breed from her at an unusually early age, say eight or nine months; for this tendency to fat in a breeding sow is highly objectionable, as materially conducing to danger in parturition. Let her have the boar a couple of months after pigging, and let her breed as frequently as she is capable of doing. This will effectually check the tendency to fat; and, after having taken a few litters from her, you will find the rapidity with which she will feed, will soon qualify her for the butcher. In the case of such a sow, do not give her the boar before putting her up to fatten; but as soon as she is so

fat as to be within six or eight weeks of being fit for the butcher, she should be sent to the boar. The reasons for this are obvious. Once in three weeks she, being highly fed and in a very vigorous condition of body, becomes in season, frets, gets excited, often off her food, and loses several days of fattening; and if you should wish to kill her during these seasons of excitement, or a few days before or after, there is every probability of her bacon becoming bad, and at any rate a certainty of its flavour being injured. To put to the boar when first put up to feed would be injurious, because the nutriment of the fetus would abstract from the feeding of the mother, and it is best to risk the loss of the seasons of periodical disturbance; but later on, gestation has a sedative effect, and no injury, but the greatest benefit, will result from its having taken place in its early stages. It is manifest any coarse indifferent boar will, in this case, answer the purpose.

Feed the breeding boar well; keep him in high condition, but not fat; the sow, on the other hand, should be kept somewhat low, until after conception, when the quantity and quality of her food should be gradually and judiciously increased. The best times for breeding swine are the months of April, and July or August. A litter obtained later than August has much to contend with, and seldom proves profitable; some, indeed, state, that when such an occurrence does take place, whether from accident or neglect, the litter is not worth keeping. It is little use, however, to throw anything away. Should the reader at any time have a late litter, let him leave them with the sow; feed both her and them with warm and stimulating food, and he will thus have excellent pork, with which to meet the market when that article is at once scarce and dear, and consequently profitable. By following this system of management he will not only turn his late litter to account, but actually realize almost as good a profit as if it had been produced at a more favourable season.

The period of gestation in the sow varies; the most usual period during which she carries her young is four lunar months, or sixteen weeks, or about one hundred and thirteen days. M. Teissier, of Paris, a gentleman who paid much attention to this subject, in connection not merely with swine but other animals, states that it varies from one hundred and nine to one hundred and forty-three days; he formed his calculation from the attentive observation of twenty-five sows.

The sow produces from eight to thirteen young ones at a litter, sometimes even more. A Mr. Tilney, of Writtle, in Essex, had some years back a sow which, in thirteen litters, produced THREE HUNDRED AND ONE PIGS, and out of these actually brought up one hundred and

*Summer for
Pigs*

16 weeks

seventy-seven. Such extraordinary fecundity, however, is not desirable, for a sow cannot give nourishment to more young than she has teats for, and, as the number of teats is twelve, when a thirteenth little one is littered, he does not fare very well, having to wait until some one of his more fortunate brothers or sisters shall have had their fill. The sufferer on these occasions, is, of course, the smallest and weakest, and is in Ireland commonly called the "Rutlin," or "Rutling," in Yorkshire a "reckling;" a too numerous litter are all, indeed, generally undersized and weakly, and seldom or never prove profitable; a litter not exceeding ten, will usually be found to turn out most advantageously. On account of the discrepancy subsisting between the number farrowed by different sows, it is a good plan, if it can be managed, to have more than one breeding at the same time, in order that you may equalize the number to be suckled by each. The sow seldom recognizes the presence of a strange little one, if it have been introduced among the others during her absence, and has lain for half an hour or so amongst her own offspring in their sty. Mowbray gives a very remarkable instance of a sow,—a cross with the black Chinese, the property of Arthur Mowbray, Esq., of Cherbrook, Durham, which suckled NINETEEN PIGS at the one time; this is very unusual, and can only be accomplished by dividing the litter into two divisions, and turning the sow to each alternately. Much greater care is also necessary in such cases, both of the pigs and their mother, than when the litter is smaller; and they require a warm house, amply, but not over littered, with fine fresh hay. As soon as the inflammatory stage of pigging is over the mother must also be kept on the most nourishing food. Neither new milk, bean meal, oatmeal, nor any other nourishing food must be grudged, for if it be worth while to keep the animals at all, it is desirable to sustain them as well as possible.

The pig suffers the least from PARTURITION, and is the easiest delivered, of all domestic animals. She usually shows symptoms of uneasiness first by great anger at all other pigs within her reach, begins to collect straw in her mouth, and carries it to a remote corner of the yard in which she is running loose. She must not be stopped here. This wild instinct can be satisfied only by exhaustion. When the bed is made she must be removed to a rather dark house, quite screened on every side, and about eight or nine feet square, so that she may have ample room to lay and turn in every direction. One of the best contrivances is to have a lath run round the house, six inches from the ground and six from all sides of the house, well stayed below and on

each side by perpendicular and horizontal pieces of wood. She will thus be unable to lie close to any one side of the house, and cannot thereby crush to death any of her offspring during the throes of parturition.

A little attention will be necessary in the first stage to see that the delivery is perfect. She must be at all events kept lying as still as possible, unless she needs help, which will not take place in one case in a thousand. These cases do, however, occur; and, as works on this matter are scarce, a few words may be acceptable. The difficulty can only occur in one of three ways, viz., a false presentation, a sinking of the pig into the uterus, instead of its being presented in the vagina, or a contracted orifice; in the latter case, a veterinary surgeon of correct anatomical knowledge is utterly indispensable.

The most usual false presentation is when the pig comes sideways, and so chokes the passage. Here a mere turn with the hand, as soon as the effort has ceased, will set all right. If the pig has sunk down, it may be necessary to use more care; the best and safest plan is, to have a child's hand introduced, to raise up the young animal to its proper position. This will succeed when all other methods will fail. As soon as each pig is delivered, it should be placed before its mother, and it will soon begin to select its teat; once selected it will generally keep to it, if its right is not disputed by a stronger brother. In this case, as in others, the "weakest goes to the wall," and the weakest pig has to take to the first or last brace of teats, which are the least productive of milk; thus the smallest and weakest are kept down. If any pig should be very weak, and the weather should be very cold, it may be taken near the fire and wrapped in flannel. This usually restores vigour. Some parties so confine all the first littered animals when there is an apprehension of a scarcity of milk. This is by no means a bad contrivance.

As soon as the pigging is over, she will begin to cleanse—or, in other words, eject the placenta. This is usually as easily got over as farrowing, but a little more watching will be necessary, than even in pigging. It should be immediately removed, or she will begin to eat it, and may be thus taught to devour poultry, lambs, and, very probably her own produce.

As parturition usually produces thirst, let the sow have a quart of slightly warmed milk, and thickened with a little bran. This quenches thirst, keeps off constipation, and is one of the finest of medicines. As soon as she has cleansed, and all the young ones have been suckled, she should be gently driven out to stale, for such is the

cleanliness of the pig, that she would damage herself if she was not taken out rather than spoil her bed by staling, or disturb her young ones. A little care of her bowels, plenty of bran and milk food, given in small quantities, frequent turning out for short periods in a sheltered place, will be necessary at first. If much fever or constipation should take place, a little sulphur,—two heaped teaspoonsful,—in her milk, will relieve her; nor will she refuse the milk which contains it if it be thickened with a little wheat meal, Barley, and even oatmeal, must be avoided for the first three or four days; afterwards she may have any kind of food whatever, except meal, which, useful as it is to store pigs, should never be given to those which are suckling.

So long as the sow is carrying her young, feed her abundantly, and increase the quantity until parturition approaches within a week or so, when it is as well to diminish both the quantity and quality, lest the acquisition of fat should be productive of danger; but while she is giving suck you cannot feed too well. You may wean the young at eight weeks old, and should remove them for that purpose from the sow; feed them well, frequently, abundantly, and sufficiently—but not more—on moist, nutritious food, and pay particular attention to their lodgment; a warm, dry, comfortable bed is of fully as much consequence as feeding, if not even of more. Should the sow exhibit any tendency to devour her young, or should she have done so on a former occasion, strap up her mouth for the first three or four days, only releasing it to admit of her taking her meals. Some sows, as we have said, are apt to lie upon and crush their young. This may be best avoided by not keeping the sow too fat or heavy, and by not leaving too many young upon her. Let the straw forming the bed also be short, and not in too great quantity, lest the pigs get huddled up under it, and the sow unconsciously overlies them in that condition. Moubray mentions that it has been proposed to provide against the accident of the sow overlying her young, by appending to the lower part of the interior walls of the sty an inclining or projecting rail, beneath which the little pigs may run when the sow is going to lie down. I have seen this plan adopted, and that successfully; but I think that if the sow be not kept too fat, and if the sty be sufficiently roomy, there will exist no necessity for its adoption. Her lying down should be watched for a few times after pigging.

The young pigs should be gradually fed before perfectly weaning them; and for first food nothing is so good as milk, which may be succeeded by ordinary dairy wash, thickened with oat or barley meal, or fine pollard; this is better scalded, or better still, boiled. To the

sow some dry food should be given once daily, which might consist of peas or beans; Swedish turnips, carrots, parsnips, or the like, either well boiled or raw, may be given; but I prefer the food to be *always* boiled, or, what is better, *steamed*. Some wean the pigs within a few hours after birth. It can hardly be conceived under what circumstances this may be found advantageous; but I think that the best mode of management is clearly to turn the boar into the hog-yard, a month or two after parturition, at which time it is proper to remove the sows for a few hours daily from their young, and let them accept his overtures when they please. It does not injure either the sow or her young if she take the boar while suckling, but some sows will not do so until the return of their milk, and this is much more natural.

CASTRATION is an operation usually performed by a village castrator, who makes a living by performing the operation. If the litter were all hogs there could be no difficulty, as with the male the operation may be performed by any one of ordinary skill, with a little ordinary knowledge and common sense; the operation of spaying the female, to which we shall afterwards allude, requires skill and anatomical knowledge, or at least considerable practice, before it can be safely performed.

In castrating hogs, let a person grasp the young pig, which should be from fourteen to twenty-one days old, by both its hind legs, with its face to his person, and so as to expose the testes on a level with the hands of the operator. The skin of the testes is loose; and, with a lancet, or sharp round-pointed knife—the latter is generally adopted—a longitudinal cut is given to the scrotum over each of the testes. The finger and thumb are then pressed gently on each side of the incision, until the testis protrudes, which is then grasped gently by the other hand, and the spermatic cord separated by the knife. The operation is very rapidly done, and need not occupy more than three minutes. It is desirable that the pigs should fast a few hours after the operation; but they seem to suffer so little from it, that they will seldom be even stiff the next morning.

When the pig is a greater age, the operation is one of greater difficulty; with the aged boar, especially, it is a very difficult affair, as he cannot be held up in the way the young pigs can under a month old. It is thus necessary to lay him on his side, and have him well secured before the operation is performed. He should also fast a little before the operation, as well as the following night, and be supplied only with bran and milk after. Sows in season should be kept from him till the wound is healed.

There is more difficulty, however, in performing the operation, either in the old or young, when there is a rupture, which is not unfrequently the case. Greater care must be taken in making a perfectly clean cut. The pigs should fast a day before, and a night, at least, after the operation; and the scrotum should be carefully stitched up after the operation, otherwise inflammation will ensue.

The SPAYING of female, or gilt pigs, is a more difficult operation, and requires generally much more care. An ignorant operator often makes sad mistakes, and frequently produces irremediable injury. The operation is usually performed when about three weeks old, and the whole litter is cut at prices varying, in different localities, from 1s. 6d. to 2s. 6d. per litter, great or small. The animal is first laid on its right side, so that the left, or near side, is upwards. The two hind legs are stretched out straight, so as to present the mid-flank fully exposed to the operation. An incision, about two inches long, is then made with the round-pointed knife, and the thumb and finger are introduced to search for the ovaries, which are easily found from their being separate at one end and presenting a convoluted or knotted appearance to the eye. These are collected together, and folded over the edge of the wound downwards, and when the operator is satisfied that all are exposed, he cuts them by a little pressure of the knife towards the skin, and the uterus falls back into its place. He then proceeds to stitch up the orifice with three or four stitches. A little fasting for a short time is generally required, especially from large quantities of liquid food, and they usually very soon recover. The only care the operator has to take, is to clean his knife well after every cut, to secure the whole of the ovaria, and to avoid stitching up any of the intestines with the skin. If this be done, death is almost certain to follow. Though an operation usually performed at or before a month old, both spaying and castrating may be safely done at any reasonable age of the animal.

WEANING usually takes place at six or eight weeks old. Long before this, a little new milk, or boiled skim milk, should be placed before them, and they will soon be taught to drink. Hence the weaning, when it takes place, will be a much smaller privation to the animals, and they will scarcely ever know it if they previously eat well, and have plenty of milk, with a little barley or bean meal.

At weaning time the young pigs may be rung. This operation must, of course, be to a certain extent a painful one, but, perhaps, scarcely so much so as the noisy demonstrations on the part of the little sufferers would seem to indicate. No young things like to be

rudely meddled with, and of all animals the pig is about the least manageable as a patient. RINGING is, however, absolutely necessary, unless the cartilage of the nose be *cut away*, a practice resorted to in substitution for it in some parts of the country; the latter practice is, however, far more cruel than ringing, and its efficacy is by many stated to be at the best questionable. A sow in pig should never be rung; it often produces epilepsy in the young pigs.

After about five weeks' high and careful feeding subsequent to weaning, the young pigs may be put up for stores, porkers, &c., according to your views respecting them. Very young pigs, indeed, immediately after being weaned, if fed on the refuse of a dairy, will be brought up for delicious pork in five or six weeks; for the last week, prior to killing, the addition of beans, peas, or bruised corn, will impart a degree of firmness to the flesh, that is considered an improvement. This is called "dairy-fed pork," and it never fails to fetch an enhanced price, thereby amply remunerating the producer.

Pigs designed for pork should not be fattened to the same extent as those designed for bacon. I am aware, however, that it will be in vain for me to request the reader not to do so, as fat produces weight—weight, profit—and profit is the object of the feeder. But to those who feed for domestic consumption I do offer the suggestion, and they will find their account in following it. Porkers, when intended for domestic use, may be allowed to run at large. Grazing, or the run of a wood in which roots or nuts may be met with, is calculated in an eminent degree to improve the quality of their flesh. Of course it will be necessary to give the pigs regular meals, independently of what they can thus cater for themselves; and the hours for so doing should be in the morning, before the pigs are let out, and in the evening, before they are returned to the sty. Pigs are more sagacious than they generally obtain credit for; they speedily become habituated to the afternoon hour of feeding, and will regularly resort to the sties for their accustomed dinner, thus saving considerable trouble that would otherwise arise from the necessity of collecting and driving them home. But when pork feeding is carried on solely for profit, there can be no question that the sty is the only place where they should be kept. For the period they are confined, the want of exercise, even in young animals, does not at all interfere with their health, and they will lay on fat much more speedily and easily if they are confined. Sleep seems to be as necessary to the pig for fattening even as food; and hence a warm comfortable bed of hay will always compensate the pork-feeder, as will a supply of earth, or what is even

not ring
Sows in pig

better, *small coals*. When confinement is adopted, this is absolutely necessary, and the want of this is often so great that the sty is rooted up, and even the walls are attacked. When these symptoms take place, it is by no means indicative so much of a depraved appetite—a fact to which it is generally attributed—but to a want of management in supplying edible alkalies to the animal to neutralize the acid and assist digestion. Too many swine should not be kept in the one sty; and if one appear at any time to have become an object of persecution to the rest, he should be withdrawn. The introduction of strangers should likewise be avoided.

The cottager who has but one sty, is often necessitated to introduce two into the same place; one a porker and the other a feeder. They should, if possible, be both put up together, or a furious onslaught will be made on the new-comer. Two stranger pigs put up together seldom quarrel. True, the “master pig” will always keep off his inferior till he has done; but, as there is usually plenty put in the trough for both, he generally gets satisfied at last. If necessity compels the introduction of the two at different periods, the new-comer may be rubbed well over with strong salt and water, and this will be a little protection. A few days will, if got over, reconcile the enmity. If one irascible pig should be found in a sty, it is best to isolate him at once; and, when several are put in the same place, care should be taken to remove any one which may happen to acquire the nasty habit of voiding his ejectiona into the trough after feeding, and so starving the rest of the animals feeding with him. A master pig will sometimes do this after he has satisfied his own appetite; he should immediately be removed as a nuisance.

Bacon pigs fatten best by themselves. They need no liberty; and it is only necessary to keep the sty dry and clean, and to feed abundantly, in order to prepare them for the knife. In order to fatten a pig, his *comforts* must, in every respect, be attended to; and there cannot be a more gratifying sound to the ears of the zealous pig-feeder than that peculiar, self-satisfied, contented grunt, with which the huge hog, basking, perhaps, beneath a summer's sun, announces to his admiring owner that all his wants and wishes have been gratified. This is the never-failing omen of success, and you may look for such weight and condition as will bring to your purse the remunerative commendation you have earned.

Animal chemistry and physiology have done much of late in the researches on the food of animals. It has demonstrated that there are three great principles to attend to in the feeding of animals.

small coals for
Pigs confined in

There are three processes continually going on, all of which must have an ample supply, or no kind of animals can possibly be fed to profit. The first is respiration, or the burning of carbonaceous matter in the lungs, and so maintaining animal heat. This is kept up by those proximate principles in food, such as starch, sugar, gum, &c. The next process is to supply waste of matter. In young animals, not only is the waste to be supplied, but also the calls upon the system for additions to increase the animal structure; thus, in grown animals the refuse, bone, &c., taken up by the absorbents must be supplied. Hence nitrogenous matter, to supply this waste, must be given, and this is represented by the principle in plants called gluten, albumen, &c.; while the last, and most important process, perhaps, as *directly* affecting the pig-feeder, is the formation of fat, whereby a store of material is laid in by nature, to make up for the waste, if a want of the respiratory matter should take place.

Professor Johnston, who may always be safely quoted on all matters of agricultural science, gives a table of the comparative nutritive elements of different kinds of food, and from which we select those materials used in pig-feeding, omitting the parts of the table not applicable to the three processes we have before alluded to:—

	Heat-producing: Starch, sugar, gum, &c.	Flesh-and-bone- producing: Gluten, albumen, legumin, &c.	Fat-producing: Fatty matter.
Wheat . . .	55 . . .	15 . . .	3 per cent.
Barley . . .	60 . . .	14 . . .	2 . . .
Oats . . .	60 . . .	16 . . .	6 . . .
Rye . . .	60 . . .	13 . . .	3 . . .
Indian corn . . .	70 . . .	12 . . .	7 . . .
Rice . . .	75 . . .	7 . . .	0·7 . . .
Beans . . .	40 . . .	26 . . .	3 . . .
Peas . . .	50 . . .	24 . . .	2·1 . . .
Potatoes . . .	18 . . .	2 . . .	0·3 . . .
Turnips . . .	9 . . .	1·5 . . .	0·3 . . .
Carrots . . .	10 . . .	1·5 . . .	0·4 . . .
Mangel wurzel . . .	11 . . .	2 . . .	. . .

Now, as it is generally economical to combine roots with grain, potatoes are the most useful, in the three physiological senses we have indicated, as a root, and oats as a grain, and therefore they are usually selected by the best pig-feeders, and are the usual aliments where large and fat pigs are the desiderata.

Wheat meal, now that grain can be purchased, husk and flour, at one shilling per stone, is by far the cheapest of all kinds of grain, but it is hardly so well relished as oatmeal, because it adheres from its

glutinous character to the teeth of the animals, and so annoys them, and all disturbances invariably do harm to fattening animals.

For store pigs, the pickings of the fold-yard, especially where cattle are fed on linseed cake—for they will carefully collect all the dung in this case and feed upon it—with a few chopped turnips and a little sour wash in winter, nothing more will be requisite. In summer they may run out in the grass fields, and have a little wash, in which almost any refuse may be thrown. Mr. Thomas Howard, late of the Haddit Hare, near Helmsley, has assured the writer that his very carefully selected breed of pigs were fattened on nothing but grass and water in several cases. As the pastures fail, and before the stubbles are ready, a handful of old dry beans in the morning, per animal, will exercise a very wonderful influence for the better; the binding character of the beans will counteract the too relaxing wash and grass; and, when the harvest is over, the stubbles are a very valuable auxiliary. When these are finished, the pigs should at once be put up to feed; and at first a large quantity of roots may be given. It is a great satisfaction, then, that diseased potatoes will not only have no injurious tendency on either the live animal or its bacon, but will be almost, if not altogether, as fattening as when they are sound. Hence the value of a stock of pigs.

As the feeding progresses, barley or oatmeal should be given in increasing proportions; and, as the process becomes more nearly completed, the whole of the roots may be abstracted with advantage.

When, as in the west of England, especially the west of Yorkshire, the pig gets too heavy to stand,—when he is “daawn,” as it is provincially called,—oatmeal balls, made just dry enough to hold together, are given, and the sensuous delight of the fat monster, as he lies, eats, and sleeps, with the evident satisfaction he displays, shows that they are no bad judges of the appetite of the animal.

Boiling and steaming the food is absolutely essential to pigs, Mr. Boswell of Kingussie, a very scientific Scotch farmer, tried an experiment on two lots of pigs. Five he put up and fed on food cooked by steam, and they increased in weight (live) 4 cwt. 2 qrs. 7 lbs., at a cost of £6 19s. 4d., while other five of the same kind and quality, fed on raw food of the same description, gained only 2 cwt. 2 qrs. 21 lbs., at a cost of £5 8s. 6d.

The digestive powers of the pig are by no means strong. They partake of the sluggishness of his general organism. Hence he must have his roots broken down by steam or boiling, and his grain not merely crushed but absolutely made into flour. He will feed better

also on slop food, which has undergone one process of decomposition—fermentation—than when it is fresh.

Position, circumstances, and price, will often decide the kind of food given to pigs. We knew a grazier who fed on cheap Indian corn; but it did not answer, low as it was, with pork at five shillings per stone, and he lost one hundred pounds by his pig speculation alone.

Those who make pig-feeding a business, and consequently keep a number of these animals, should so manage as to be enabled to provide for their maintenance and fattening from the produce of their crops. They should, therefore, especially as there is now a general failure of the potato crop, cultivate, for pig-feeding, beans, peas, barley, buckwheat, flax, parsnips, carrots, cabbage, lettuce, Lucerne, Italian rye-grass, clover, rape, chicory, vetches, sow thistle—a most nutritious article of diet for pigs, but so much neglected that it is as yet scarcely ever to be met with in a state of cultivation, or in any condition but that of a weed. Nor ought we to forget a most important article of porcine dietary—I allude to mangel and Swedish turnips—and an article that is now found to be no less valuable for human food than it is admitted to be for the food of cattle. I could adduce numerous testimonials of the value of Swedish turnips, and even some cases of their superiority over the potato in fattening pigs, but space will not admit of my doing more than quoting an anonymous letter which appeared in the Farmer's Gazette of November 23, 1844:—"Until this last year, I was in the habit of giving them steamed potatoes, with a portion of broken corn, and now and then bean-meal. The latter article I have used very little, as beans are seldom grown in my district, except by the landed proprietors, and a few extensive farmers. I resolved this year to try, for experiment, if pigs could be fattened on Swedish turnips, and am happy to say, at present, my herd are fattening as well as they were this time last year, when they were consuming a great quantity of potatoes. Hay being so scarce this year on my small farm, I would have been obliged to buy a considerable quantity if I did not change my mode of feeding. The potatoes my pigs ate last year I am able to give to my horses and cows, thereby saving my hay; and I have no doubt but pigs can be fattened as well, though not, perhaps, as quick, on steamed Swedish turnips. I give them as much as they can eat of the turnips, mixed with a little broken corn, wheat chaff, and about a pint of buttermilk to every three pigs, and I have every reason to expect, judging from their present improvement, that they will be ready for market about a fort-

night later than I had them at last year, and at, at most, one half the expense. I bought them in the beginning of December for about £2 a-head, and, if they continue to improve as they are doing, I have no doubt but they will average from 4 cwt. to 4½ cwt. at Christmas," &c., &c.

The best possible mode of feeding pigs is with a mixture of two or more of the roots or plants that I have enumerated, well steamed, and a little meal or bran added, or, instead of meal or bran, add brewer's grains, wash, half-malted barley, pollard, &c.; let these be well boiled and given moderately cool, and in a moist state.

The advantages derivable from the use of hay-tea in store-feeding pigs was, I think, for the first time announced to the public, some years ago, by Mr. Saunders of Stroud, in Gloucestershire. Mr. Saunders was induced to try this diet with pigs from an observation of its efficacy in weaning calves; his experiments were attended with the most unqualified success, and their results were laid before the public in the columns of the *Agricultural Magazine*. In the manufacture of his tea, Mr. Saunders employed various sorts and qualities of hay—the most suitable were found to be clover, sainfoin, and lucerne: the tea produced from an infusion of these plants was then thickened with grains, bran, pollard, any kind of meal most plentiful at the time, boiled cabbages, or potatoes; he had no carrots or he would have used them. Mr. Saunders generally combined several of these ingredients in a mess, and found that one sack of potatoes, when thus combined with wash—no other ingredients being present—went as far in feeding as four or five bags given in an unmixed state; the expense being also greatly reduced. Mr. Saunders gradually increased his stock of swine to the number of four hundred, and in the course of his experiments he used upwards of fifteen hundred hogsheads of wash, or about five hogsheads daily. His swine were thus maintained at a rate somewhat under one penny per day for each—were in excellent condition, and many, indeed, ripe and ready for the butcher. He had previously been feeding them on potatoes alone, and after he resorted to the new method of feeding just described, he, within a week or fortnight, found his stock improved in coat and skin, showing in the smoothness of the former, and in the glossy and cleanly appearance of the latter, a corresponding advance in the animals' general health and condition. Mr. Saunders used to store his potatoes, after having been steamed, in casks carefully closed, and found that, thus stored, they kept sweet for twelve months; and, fermenting, generated a sort of spirit, which he seems to have thought, by promoting sleepiness on the part of the swine, conduced

to their acquiring fat with more than ordinary rapidity, as well as giving to their pork a peculiarly rich and delicate flavour. One sack of meal was, by this system of management, found to go as far as two would do under the old system, and he found also that thickening the wash gradually with meal formed the best introduction to what are generally known as the higher and last stages of the process of fattening. In Mr. Saunders' calculations, he did not take the manure into consideration at all; but had he done so, of course even his estimate of 1d. per day for the feeding of one pig would have been considerably reduced.

That the hay-tea would be useful, there can be no doubt. The rich grass from the Stroud valley would have a very different influence on the tea from the generality of hay produced in the country at large; and it is probably the change of flavour in the food, and, above all, the cooking—for he had given raw potatoes before—to which the advantage was mainly attributable.

The use of flax-seed, as an addition to the other food for fattening swine, has been recommended by some; but such as have adopted it have found it not to answer nearly so well in the crude state as in boll, previously kiln-dried, and well crushed, so as to crack the seed, otherwise the animal will pass a large proportion of the seed in a whole state; the whole seed also acts as a purgative and diuretic, qualities which will be seen to be opposed to the secretion of fat. To prepare the bolls for food, steep them for twelve hours in water, which may be poured on them in a tepid state, but not at boiling heat: and, prior to giving the mess, add as much lukewarm wash as will bring it to the consistence of gruel. This wash may be produced from brewer's grains, or simply from mangel or Swedish turnips, well boiled and smashed, and given with the water in which they have been boiled: the addition of a proportion of bran improves the mess, and, when one has it, it should not be omitted.

The adoption of hay-tea as the vehicle for mixing these ingredients will be found also advantageous. Do not *boil* the flax bolls; boiling will produce a coarse, tough, and not very digestible mass; but steeping, on the contrary, furnishes a rich and nutritious jelly. Linseed-cake is a good substitute for the bolls, and is to be given in a proportion of a stone, substituted for seventeen or eighteen pounds of ground bolls. Neither the linseed-cake nor the bruised bolls should be given, except in combination with a large proportion of other substances, as they are of a very greasy nature, and are apt to impart a rank flavour to the flesh, if given in an unmixed state, and are,

besides, actually more efficacious in combination. If you happen to have plenty of meal, the addition of a little to one of the daily feeds will be found to tell well, especially towards the close of fattening, a few weeks previous to transferring your stock to the butcher.

The refuse of mills forms a very valuable item in swine food when mixed with such boiled roots as have been enumerated; as what are called starch sounds, the refuse from the manufacture of that article; also the fibrous refuse remaining from the manufacture of potato starch. The scarcity of that root has now, however, rendered this refuse so scarce as to be scarcely worth enumerating.

Swine are frequently kept by butchers, and are then fed principally upon such garbage of the shambles as entrails, the paunches, lights, and the viscera of sheep and cattle, as well as the blood. Swine are, like their human owners, omnivorous, and few articles come amiss to them. It must, nevertheless, be confessed that the flesh of pigs fed on animal food is rank both in smell and taste, and readily distinguishable from that produced from a vegetable diet. It is not unnatural that a prejudice should exist against eating the flesh of carnivorous animals; but when such a mode of feeding is accompanied by a sufficient share of exercise, and is followed so sparingly as not to admit of the animal becoming fat, there is no reason why it should not be as good as any other. The flesh of the dog has been a memorable and fashionable dish since the days of Roman and Carthaginian luxury, and even yet rivals that of swine in the estimation of a Chinese gourmand. Cases of necessity have occurred when the cat and the rat have been sacrificed to appease the cravings of starving men, who have subsequently pronounced their nauseous repast to have been delicious. It would be painful and revolting to do more than barely allude to those cases of terrible privation, when grim death was to be baulked of his prey only by man feeding upon the flesh of his fellow-man—yet such has occurred; nay, there still exist tribes of savages who feed habitually, and from preference, upon human flesh. From both these sources reports have come, stating its flavour to resemble that of *pork*. The flesh of the bear is in considerable esteem, and his hams are by many deemed superior even to the finest and best cured Westphalian; and we have numerous accounts from various travellers bearing ample testimony to the excellence of steaks cut from the reeking buttock of a fresh-killed lion, who had, perhaps, previously breakfasted upon some unfortunate Hettentot. I mention these facts to show that I am not unnecessarily prejudiced, and that it is on the *merits* of the case alone that I con-

denn butcher-fed pork. Pork butchers, resident in large towns, are very apt to feed chiefly on offal of all sorts, including that arising from the pigs daily slain and dressed for the market. To make swine feed upon the entrails and other offal of their slain brethren strikes me as revolting; and it would, in my opinion, be agreeable, were it possible, to put an effectual stop to the practice.

There is yet another description of feeding that conveys unpleasant sensations to my feelings: I allude to the feeding of swine in knackers' yards. The animals are kept by these persons in considerable numbers, and are fed wholly upon the refuse of the dead horses, chiefly the entrails, the carcass being in too great demand among those who keep dogs to permit of its being unnecessarily wasted. I have frequently been disgusted by the sight, in one of these yards, of three or four fierce, wolfish-looking hogs, their muzzles plunged to the eyes in the abdomen of a slaughtered horse, and their savage jaws dripping with gore. Nor are these horses always *fresh*. I have witnessed the swine, on more than one occasion, revelling in *corruption*, and disputing with the maggot and the worm the possession of a mass of liquid putrefaction. In Paris this beastly practice has been long known; but where the *knackers* themselves are in the habit of regaling on the choicest morsels, can we wonder that they should fancy the less dainty portions of the same old garron good enough for hogs. In the yards attached to many of the continental schools of veterinary science, a similar, but if possible, more disgusting spectacle is constantly to be witnessed. Pigs are not now so generally kept in Dublin as formerly, for the people do not well know what to feed them upon; yet I would venture to affirm that a visitor to "Red Cow Lane" would still find confirmation of what I have asserted, in half-a-dozen or more foul-feeding and strong-smelling swine, banqueting on the corrupting carcass of some wretched old horse, on whom starvation had left little beyond mere bone and skin.

As I have said before, carnivorous animals are doubtless as fit to be eaten in their turn as any other; and it is possibly merely prejudice that induces us to prefer flesh raised from grain or vegetables. Such may be the case; but I think that I am not the only person in the world labouring under such prejudices, or who would as willingly eat sausages prepared from kitten flesh, as has been asserted respecting some of the London cheap sausage-makers, as feed upon pork produced from such sources as I have described. And are we to say nothing of the number of horses which die of glanders, farcy, or some similarly frightfully-contagious and incurable disorder? How can we be certain

that this is not one of the many sources whence occasionally spring apparently causeless pestilences, or malignant epidemics? While such a practice is tolerated, with what caution should we not purchase bacon or pork, lest we should thus eat at second-hand of substances so revolting to the feelings, so dangerous to individual and public health! Whether knackers should be permitted to keep swine at all, is indeed a question; for without an express prohibition to that effect, issued by the higher powers, I do not see how the evils of which I have spoken could possibly be removed.

Chandler's greaves are likewise objectionable as food for swine, unless given in comparatively small quantities, and mixed with bran meal, and boiled roots. If fed wholly on either greaves, or oil-cake, or flax-seed, the flesh becomes loose, unsubstantial, and carrion, and gives out a flavour resembling that of rancid oil.

Pigs that have been fed chiefly on corn, alternated with the vegetable diet already described, produce pork nearly equal in delicacy of flavour, whiteness of colour, and consequent value, to that well-known delicious article dairy pork. Indian corn is useful for store, but not in fattening pigs; its nutritious qualities are by no means proportionate to the bulk used, and it should therefore if employed be used in conjunction with oat or barley meal, or some other equally nutritious matter.

When swine are not of very large size, and it is desirable to raise pork rather than bacon, a very economical mode of feeding may be advantageously adopted: it consists of equal parts of boiled Swedish turnips and bran. If it be desirable to render the accumulation of fat a little more rapid, let oatmeal be substituted for the bran, and, in flax-growing countries, the bolls prepared as already directed.

Ere leaving this subject, I must mention one practice, too little known, or too much neglected by swine-feeders—a practice, also, that will be found to conduce materially to that great object of all swine-feeders, the production of bulk and weight at the lowest possible outlay. The practice to which I allude is washing. A hog washed weekly with soap and a brush will be found to thrive, and put up flesh in a ratio of at least five to three, in comparison to a pig not so treated. This fact has been well tried, there can be no possible question about its correctness, and the duty is not a very difficult matter to perform; for the swine, as soon as they discover the real character of the operation, are far from being disposed to object, and after a couple of washings, submit to the ceremony with the best grace imaginable.

Beware that you do not overfeit your hogs. You may start; but I assure you that it is quite possible to give too much even to your

pigs, and to produce disease by over-feeding. Illustration is even more satisfactory than description, so I think I cannot do better than quote an anecdote, in illustration of my remark, related by Moubray.*

"Four or five-and-twenty years ago, the late Mr. Tattersall requested of me to choose him a store pig to put up for fattening. I applied to Mr. Wyat, the then salesman, and we chose one at Finchley, out of a fine drove of *Herefords*, not then out of fashion. After the hog had been at Mr. Tattersall's two or three days, I received a letter from him to tell me it was taken very bad—in fact, dying. On inspection, I found the animal sleepy and torpid, refusing food, but occasionally throwing up the contents of its stomach, which consisted of half-digested meal. I immediately perceived the cause of the patient's malady. The feeder, determined to lose no time, had been assiduously filling the trough with food; the hog being empty, after a long journey, voraciously devoured it, until its stomach was filled, and its digestive faculties totally overpowered. My prescription was, abstinence from corn, a moderate quantity of sweet grains, thin wash, sulphur with it, and in a few hours the hog was perfectly recovered. In the sequel, the feeder held up his hands with astonishment at the possibility of a hog being gorged with food."

Many examples of great weights produced by judicious feeding and management are upon record. Mr. Crockford's Suffolk hog, at two years old, weighed seventy stones of fourteen pounds to the stone; but I scarcely think it could have been *true Suffolk*, that being a very small breed, scarcely larger than the Chinese. Mr. Ivory's Shropshire hog weighed one hundred and twelve stones, or fourteen hundred, *when killed and dressed*; and there was, a short time since, a specimen of the *improved Irish breed of hog* exhibited in Dublin at the Portobello Gardens, which weighed upwards of twelve hundred weight; this, when killed, would have amounted to something over half a ton. I went to see the animal; he was of a white colour, with a clean, short coat, an ear of moderate size, inclining somewhat forward, short legs, long body, deep in the side and belly, broad chest, ample shoulder, wide in the haunch and loin, the ham reaching to the hock, small compact feet, and very small hane. I should say that this hog stood about four feet at the shoulder. He was in beautiful condition, clean in skin and coat, well and regularly fed, and well and cleanly bedded, and on inquiring, I found that *washing* had been one of the circumstances to which his thrift was attributable. I was given to under-

* Page 224.

12. one pig

stand that his food had consisted of brewers' wash and grains, with boiled and steamed turnips and mangel wurzel.

Lest any of my readers should imagine that I have dwelt with too much minuteness on the feeding of pigs, I may as well quote an instance or two of the profit to be realized therefrom.

Mr. Saul, of Garstang, Lancashire, writes,—“On Friday last, Mr. Eccleston of Garstang slaughtered a prime pig, fed by Mrs. Swarbrich of Naseby. It was only eight weeks since nine fine young pigs were taken from it, and sold in Garstang market for £7, being five weeks old, this being her second litter; the former realized the same sum; and now, when slaughtered, the sow weighed thirty-four score, and according to the present market price, at eight shillings per score, amounts to £13 12s.; and therefore, by adding the £14 for the two litters of pigs, makes the value of this pig amount to £27 12s., which makes its profit of more value than can be made from a fat cow in the same neighbourhood.”

The following was the mode of feeding adopted:—“Profit was the great object of the feeder of the pig slaughtered by Mr. Eccleston, of Garstang, and it would have well repaid keeping for a few weeks longer, but Lent being at hand was the reason why it was not. And here is a clear proof in this experiment, that it is better to keep them more than one year for profit; and it is well known that there is little profit in feeding an old sow. The food of this pig has been principally whey, as in this neighbourhood there are large quantities of cheese made, and the whey is excellent both for pigs and calves; and if it was not for them it would not be consumed. To this whey was merely added what waste and leavings was made in the house, or what is called the *swillens*. When she had the young pigs she had about twelve pounds of oatmeal allowed the first week, which was made into porridge. The mode of feeding for fattening was on oatmeal and potatoes. The potatoes were boiled by themselves; to twenty-one pounds of meal were added seven pounds of potatoes, they being boiled to a complete jelly, and then mixed with the meal, and made into balls. It consumed ninety pounds of meal, and thirty pounds of potatoes per week, with whey and water to drink; so that in eight weeks it consumed seven hundred and twenty pounds of meal, the price being 1½d. per pound, and which therefore amounts to £3 15s.; and the thirty pounds of potatoes per week amounts to 240 pounds, which at ¼d. per pound amounts to 5s.; and there was also twenty pounds of wheat bran given to it at different times, to keep its bowels open; the price of this bran was 1s. 2d.; and for twenty-four pounds

of meal, given to it when it had the young pigs, 2s. 6d. The price of the pig at first was 12s., which makes the total amount laid out on this pig to be £4 15s. 8d.; and therefore, by deducting this sum from the £27 12s., the produce, it leaves a clear profit of £22 16s. 4d., besides the valuable manure it must have made in the course of the two years."

In conclusion, I would request the reader to observe a few cautions in conjunction with the directions already given relative to feeding.

I. AVOID FOUL FEEDING. No food fit for the table can proceed from unclean feeding.

II. ADD SALT in moderate quantities to the mess given: you will find your account in attending to this.

III. FEED AT REGULAR INTERVALS. Nothing is more essential to a healthy animal. Without this precaution all other attempts at cleanliness will be in vain.

IV. CLEANSE THE TROUGHS PREVIOUS TO FEEDING, by washing out carefully.

V. DO NOT OVERFEED; give only as much as will be consumed at the meal. Never allow any to remain in the trough: clean it out for the store pigs.

VI. VARY YOUR BILL OF FARE. Variety will create, or, at all events, increase appetite, and it is farther most conducive to health; let your *variations* be guided by the state of the *digest cast*: this should be of medium consistence, and of a greyish-brown colour; if *hard*, increase the quantity of bran and succulent roots; if too liquid, diminish or dispense with bran, give beans or acorns, and let the mess be firmer; if you can add a portion of corn, that which is *spoiled*, and thus rendered unfit for other purposes, will be found to answer perfectly well.

VII. FEED YOUR STOCK SEPARATELY, in classes, according to their relative conditions; keep sows in young by themselves; stores by themselves; and bacon pigs and porkers by themselves. It is not advisable to keep your stores too high in flesh; for high feeding, however strange it may seem, is calculated to retard development of form and bulk. It is better to feed pigs intended to be put up for bacon, *loosely*, and not too abundantly, until they have attained their full stature; you can then bring them into the highest possible condition in an inconceivably short space of time. It is by such a system of management as this that the monstrous swine are raised, their weight exceeding frequently twelve hundred pounds, or, at all events, half a ton.

VIII. DO NOT REGRET THE LOSS OR SCARCITY OF POTATOES so far as swine-feeding is concerned. The potato is capable of being replaced, and its loss has been the means of stimulating inquiry, and producing experiment, which has resulted in the discovery that many other useful vegetables have been hitherto neglected, and foolishly passed aside.

IX. DO NOT NEGLECT TO KEEP YOUR SWINE CLEAN, DRY, AND WARM. These are *essentials*, and not a whit less imperative than feeding, for an inferior description of food will, by their aid, succeed far better than the highest feeding will without them; and while I speak of *cleanliness*, suffer me to reiterate the benefit derivable from *washing* your pigs; this will repay your trouble manifold. They are always washed for agricultural shows, where they must be exhibited fat.

X. WATCH THE MARKETS. *Sell* when you see a reasonable profit before you. Many a man has swamped himself by giving way to covetousness, and by desiring to realize an unusual amount of gain; recollect how very fluctuating are the markets, and that a certain gain is far better than the risk of loss—even great capitalists have fallen from over-avidity. Do you recollect two homely, but not the less true proverbs:—"Make your hay while the sun shines," and "A bird in the hand is worth two in the bush?"

see page 96 - Dirt or small Crabs

CHAPTER IX.

TIME REQUISITE FOR FEEDING FAT—QUANTITY OF FOOD—AND PROPORTIONATE INCREASE OF WEIGHT IN A GIVEN TIME.

THIS will, of course, vary very considerably, according to the weight, age, breed, and condition of the store when first put up, as well as the description of food on which, up to that period, the animal has been fed. The same observations are applicable to the *quantity* of food required for the production of fat; and perhaps the best idea that can be given of these matters will be furnished by the detail of the weight, age, and other conditions of several individual pigs, when first put up, the quantity and quality of food given them, the weight they had attained when slaughtered, and the time that had elapsed, during the process of fattening, from their having been first put up until killed.

In Mr. Laurence's days the breeds of swine had not arrived at the

same degree of perfection to which they have now attained, and consequently they did not in general take fat with such facility as they now do. It will probably prove interesting to the reader to compare the progress of fattening in Mr. Laurence's time with that which now falls more immediately under our own observation, in these days of scientific agriculture and almost universal improvement. Mr. Laurence says that fifty large Norfolk swine, from eighteen to nineteen stone each, in thriving, healthy condition, were kept so on four-and-a-half bushels of peas per day, with wash; being about three quarts each per day.

A Hampshire sow, weighing eleven stone, was stored upon two quarts and a half of peas per day, with roots and wash.

A Shropshire hog, three years old, was kept in high condition as a store,—being nearly eighty stone, or six hundred and forty pounds weight,—on three bushels of barley meal, with house-wash as usual, for every seventeen days; about eleven pints per day.

The Earl of Winchelsea's celebrated prize hog, which obtained such admiration in the year 1803, got of corn and meal one quarter, one bushel, and one peck, in fourteen weeks, three days. This animal was of the Suffolk breed, and consequently small.

A Kentish hog, being six months old, and weighing twenty stone, one pound, or one hundred and sixty-one pounds, having been put up to fatten, consumed, during a period of forty-two weeks, forty-six bushels of peas and barley. It was then killed, and when stripped of its head, feet, flare, or internal fat, all loose fat, skirts and kidneys, was found to weigh fifty-three stone, three pounds.

A Tonquin pig,—an epithet then given to the black and white, or improved Essex breed,—weighed, at four months old, one hundred and four pounds and a half. It was put up for forty-seven weeks; consumed during that period eleven bushels two pecks of hog peas, and eighteen sacks of meal (at eighty-five pounds to the sack). When killed, its weight was thirty stone, two pounds, at eight pounds to the stone, and had been, as usual, dressed London fashion, *i. e.*, deprived of head, legs, flare, loose fat, &c.

Mr. French Burke says:—"The time requisite for fattening depends, of course, on the condition of the animal when put up, as well as upon his age. If a young store, five or six weeks may be sufficient; if older, six or eight; and if of the mature age intended for a perfect bacon hog, of that moderate degree of size and fatness which is preferred for the general consumption of the middle classes, from twelve to fourteen. A bacon hog, if intended to be thoroughly fattened for

farm use, should, however, be of a large breed, and brought to such a state as not to be able to rise without difficulty, and will, perhaps, require five or six months, or even more, to bring him to that condition. This, however, supposes him to be completely fat; to ascertain which with perfect accuracy, he ought to be weighed every week during the latter part of the process; for although his appetite will gradually fall off as he increases in fat, yet the flesh which he will acquire will also diminish, until *at last it will not pay for his food*, and he should then be immediately slaughtered. Thus the increase of flesh in a pig put up to be fattened, and regularly weighed, was, on the following dates:—

		stone.	lbs.	
" Oct. 10	.. ..	36	7	
24	.. ..	41	5 ..	38 lbs. gain.
Nov. 7	.. ..	45	7 ..	34 do.
21	.. ..	47	2 ..	11 do.
Dec. 5	.. ..	48	7 ..	13 do.
22	.. ..	48	6 ..	1 lb. loss.*

" Respecting the quality of food, vast numbers of bacon hogs are imported from Ireland, where they are almost invariably fed upon potatoes; but however apparently satisfactory may be their weight and condition, yet when slaughtered immediately, or before having several weeks of substantial food, to harden their flesh, they are always found inferior to the corn-fed pork and bacon of this country, the fat having a tallowy appearance, of an insipid taste, and shrinking for want of firmness; whereas, when boiled, it should be transparently hard, with a tinge of pink in its colour, the flavour should be good, and the meat should swell in the pot. Potatoes, therefore, though fine food for stores, should never be used alone as sustenance in the fattening of bacon hogs; for, in proportion to the quantity employed, it will render the flesh, and consequently the price, inferior to that of hogs which have been properly fed. They are, however, frequently employed, when steamed, in conjunction with either tail, or stained barley, coarsely ground; and farmers who grow potatoes for the market may thus profitably dispose of the chaffs along with their unmarketable corn: but those persons who wish to acquire a reputation for producing fine bacon, should never use anything for fattening but hard meat, together with skim-milk, if it can be procured."

The rapidity with which flesh can be laid on by pigs when all the resources of human skill are brought to bear upon the point is further illustrated by the experiment made by a very intelligent agriculturist, Mr. John Outhwaite, of Bainessee, related at the Thirsk meeting of

* Buckinghamshire Report, p. 323.

the Yorkshire Agricultural Society. He laid a wager of £10 that one of his pigs would lay on ten stones in a month, in place of one in a week, which is the usual average of a well-fed pig. He estimated the weight of the animal at thirty-two stones, and commenced by weighing the pig to test the effect of his mode of feeding. At first he gave it new milk, oatmeal, some balls made of milk and wheat meal, with a little ale to drink, and, in addition, half a dozen apples, every day. The apples appeared to keep up the tone of the animal's stomach, and gave it an appetite. So nice did the pig become from this pampering of its appetite, that if they gave it one with a white, and another with a red streak, it preferred the red. By way of testing the mode of feeding, he had a partner treated in the same manner; and in eighteen days' time from the laying of the wager, had this pig killed. The result not being so satisfactory as he could have wished, he again changed his system of feeding, and, instead of giving new milk and ale in separate troughs, he gave rum and new milk mixed. It had a tumbler of rum three times a-day, in addition to its milk, for the last ten days of its feeding; and the poor pig being drunk nearly the whole of its time, had little to do but drink and sleep. This pig gained in weight, from the Tuesday morning at seven o'clock, under this mode of feeding, to the Friday in the following week, as much as *five stones, seven pounds*; an increase of weight perhaps unparalleled in the time. It was offered ale, but it refused it, and rejected all but the new diet of rum and new milk. The animal weighed forty-two stones, twelve pounds, being an increase of nearly a stone over the gain of ten stones in twenty-eight days.

Now, though the above is neither a criterion of the amount of flesh and fat laid on in ordinary cases, nor a profitable mode of feeding pigs, it illustrates the principles of pig-feeding in a very high degree. The animal in question *never felt a want*—hence there was no uneasiness, no activity even of its mental powers. It was *perfectly still*. The only powers of life called into action were those of involuntary vital effort, and it was, moreover, *kept warm*, another desideratum in pig-feeding; not by close and pent-up confinement, but with free ventilation, combined with an artificial warmth within. A lesson may therefore be learnt even in this particular.

The ordinary period afforded to a pig to feed in, assuming its weight to be twenty-four stones, and being a large breed pig, would be something like two months or ten weeks in fattening, if fed on half a bushel of potatoes, boiled or steamed, and mixed with nine pounds of barley meal, some salt, and a little warm water, or the potatoes given



slightly warm; perhaps the most successful and judicious of all kinds of feeding.

We still need some experiments in pig-feeding, similar to Mr. James's in sheep; and until this is done, the fattening of pigs will be to a certain extent in the dark. Still the eye can perhaps detect the increase in pigs' flesh more readily than either in cattle or in sheep—the touch being called to the aid in both these, to assist the eye, which is scarcely ever done in the fat pig of whatever age.

CHAPTER X.

DISEASES OF SWINE.

I WOULD here particularly warn the reader against quackery. There are in every rural district persons who assume to themselves the title of "cow doctors," or "pig doctors," who profess an intimate acquaintance with the diseases of these animals, for every one of which they impudently boast of possessing a specific. As a general rule you may distrust, nay carefully eschew, every remedy to which the epithet of *infallible* is applied, and rather leave your pigs to unassisted nature than entrust their curative treatment to these equally ignorant and impudent pretenders. In order to prescribe, with any reasonable hopes of success for any animal, a knowledge of that animal's anatomy, physiology, and habits when in health, are indispensable in the first instance, and an intimate acquaintance with the characters of the substances employed as remedies, in the second. Are these various departments of knowledge accessible by mere instinct or intuition? Are others? Will you employ a regularly bred lawyer to afford you his advice in an intricate legal question, or will you apply to a forensic amateur? What is true of one profession, is surely no less so of another. Nor would I recommend you to place much confidence in books, published by quacks, and purporting to contain infallible specifics for the several diseases to which live stock are liable. These books, with some few truths, that have accidentally crept in, and are scattered through their pages, very thinly dispersed however, contain a vast amount of trash; and you will, by attending to them, probably lose more than merely your time—the lives of your beasts: medical and scientific knowledge are absolutely necessary to the writing of such books. Veterinary text-books,

written by competent persons, are very different things. A host of honourable names stand upon record, on the face of their publications, in proof of the correctness of my assertion. By diligent study of these books, farmers might, I have no doubt, eventually arrive at a very respectable share of veterinary knowledge; acquire a tolerable idea of the internal structure of the several inhabitants of the farm-yard, and of their physiology also; by practical observation, they would become able to detect the presence of disease from the symptoms present, and be then able to adopt such a course of treatment as might be suggested in the books they possessed.

In many cases, a human surgeon is able to treat the diseases of the inferior animals successfully. There are, however, certain essentials necessary to his doing so, which every human surgeon does not possess. There is certainly no doubt that an analogy exists between the structure of the inferior animals and that of man, and also between their diseases and his; but it must be borne in mind that the degree of analogy between the diseases of any class of animals and those of man is influenced, not merely by the extent to which the analogy of structure exists, but likewise by the extent in which man is more an artificial animal than they are. Hence, although it is unquestionably true, that in the case of the inferior animals, certain remedies do produce certain and proportionate effects, yet it is no less true that these effects in some instances vary; these facts hold good with reference not merely to internal remedies, but external applications. From these circumstances arises the necessity for the existence of a medical profession exclusively devoted to the sanatory treatment of the inferior animals,—hence the necessity of zootomy and zoo-physiology being made a separate study. Under these circumstances, I reiterate the advice I have already given you in my work on "Dogs,"—apply, if possible, to a regular veterinary surgeon. I recollect reading, I forget, however, where, an amusing anecdote relative to quackery. I made a note of the anecdote:—A celebrated quack doctor—a man who, from having been an apothecary's messenger, had contrived to raise himself to the dignity of a carriage and four, without having ever devoted a single hour to the study of medicine or surgery, was one day asked, by a skilful, but poor, licensed member of the faculty—"Well, Mr. Rock, would you kindly tell me how you are making your thousands a-year, without ever having entered the doors of a medical school, or obtained a diploma, while I, who spent years in walking the hospitals, and am a regularly bred medical man, can scarcely support myself in any sort of comfort?"

"Certainly," replied Rock, "hut not now; come and breakfast with me to-morrow, and I will explain everything to your satisfaction."

On the following morning, the poor physician waited upon the prosperous impostor. He was left for nearly an hour in the parlour, ere that great man made his appearance, and had meanwhile amused himself in looking out of the window, which faced the street. At length the quack entered the apartment.

"Have you been long looking out of the window?" inquired the host.

"Since I arrived," replied the poor doctor.

"How many persons have you seen passing by during that time?"

"I really could not say."

"Do you think," asked Rock, "that you have seen a hundred?"

"I dare say I have," answered his guest.

"And how many of these persons could you call people of sense?" inquired Rock.

"Why, that is a strange question."

"Do you suppose," continued Rock, "that out of the hundred persons whom you have seen passing, there were ten persons whom you would feel justified in styling people of sense?"

"Probably not so many," replied the doctor.

"Well," resumed Rock, "let us admit them to have been ten. These *ten* are *your* patients; the remaining *sixty* are *mine*. Is your query of yesterday solved or not?"

And a more correct explanation was never given.

Swine are by no means the most tractable of patients. It is anything hut an easy matter to compel them to swallow anything to which their appetite does not incite them, and hence prevention will be found better than cure. The pig is not naturally the stupid un-social brute he is generally represented to be. Much of his intractability arises from the erroneous mode of treatment ordinarily adopted with regard to him; and it will be found that, if treated with kindness, his sagacity will display itself—many of his bad habits will be obviated, and the animal will lead a happier life, and be less subject to disease. CLEANLINESS is, in my opinion, the great point to be insisted upon in swine management; if this, and warmth, be duly attended to, the animal will not, save in one case perhaps in a hundred, become affected with any ailment.

The pig-feeder will find that in by far the majority of cases his pigs will never ail anything from their birth to their slaughter. There

may be a few attacked with disease, but he will generally find the first symptoms of it will give way before a dose of flour of sulphur,—say half an ounce for a large animal, combined with new milk, which he will generally drink,—with warmth and confinement. As it is almost impossible to administer medicine by force—it is well to thus take the disease in its first stage, and hence give it to them by enticement.

As, however, even under the most careful system of management, an occasional disappointment may occur, the reader is furnished with the following brief view of the principal complaints, by which some are, *under the most unfavourable circumstances*, liable to be attacked, and the plainest effectual mode of sanatory treatment, in such cases, to be adopted.

The principal diseases to which swine are liable are :—1, Fever; 2, Leprosy; 3, Murrain; 4, Measles; 5, Jaundice; 6, Foul skin; 7, Mange; 8, Staggers; 9, Crackings; 10, "Ratille," or swelling of the spleen; 11, Indigestion, or Surfeit; 12, Lethargy; 13, Heavings; 14, Diarrhoea;" 15, Quinsy; 16, Tumours; 17, Catarrh; 18, Tetanus; 19, Inflammation; 20, Apoplexy; 21, Epilepsy; 22, Colic; 23, Rabies.

All which dangerous, and often fatal, maladies may, I am prepared to assert, be PREVENTED from occurring by the simple attention to cleanliness already recommended, with judicious feeding. A hog can be relieved by bleeding, when such an operation will effect relief, whether he like to submit or not; but it is very questionable whether he can be compelled to swallow medicines without his perfect consent and concurrence; these, therefore, will be best administered by stratum, and the hog's *appetite* is the only assailable point he has: my meaning will appear as I proceed to details.

I. FEVER.—The symptoms are, redness of the eyes, dryness and heat of the nostrils, the lips, and the skin generally; appetite gone, or very defective, and the presence, usually, of a very violent thirst. Of course, no symptom can be regarded as individually indicative of the presence of any particular disease; these, which I have named; might, individually, indicate the presence of many other diseases, nay, of no disorder at all, but collectively, they point to the presence of fever as their origin.

Let the animal, as soon as possible after the appearance of these symptoms, be bled, by cutting the veins at the back of the ears. The pressure of the finger raises the vein, and you can then puncture it with a lancet. If the bleeding from this channel be not sufficiently copious, you must cut off a portion of his tail; and after bleeding, let him be warmly housed; but, at the same time, while protected from

colds and draughts, let the sty be well and thoroughly ventilated, and its inmate supplied with a constant succession of fresh air. The bleeding will usually be followed, in an hour or two, by such a return of appetite as to induce the animal to eat a sufficient quantity of food to admit of your making it the vehicle for administering such internal remedies as may seem advisable. The best vehicle is bread, steeped in broth. The pig, however, sinks so rapidly when once he loses his appetite, that no depletive medicines are in general necessary or suitable; the fever will usually be found to yield to the bleeding, and your only object need be the support of the animal's strength, by small portions of nourishing food, administered frequently.

Do not, however, at any time suffer your patient to eat as much as his inclination might prompt; the moment he appears to be no longer ravenous, remove the mess, and do not offer it again until after a lapse of from three to four hours. It is a singular fact, that as the hog surpasses every other animal in the facility with which he acquires fat, he likewise surpasses all others in the rapidity with which his strength becomes prostrated when once his appetite deserts him. The French veterinarian practice recommends the addition of peppermint to the bread and broth. If the animal be not disgusted by the smell, it may be added; and, if the howels be confined, the addition of castor and (unboiled) linseed oil, in equal quantities, and in the proportion of two to six ounces, according to the size of the pig, should not be omitted.

If you find yourself unable to restore the animal's appetite, the case is nearly hopeless, and you may legitimately regard its return as one of the most infallible symptoms of returning convalescence. It is, however, possible to administer medicine by force; although for my own part, I cannot say that I have ever found it practicable. Mr. Mouhry relates the following anecdote:—"I have been favoured by a very old friend with the following successful and instructive case, which I give from the MS. received. 'In the autumn of 1828, one of my sows, four years old, a good mother, remarkably good-tempered, a cross between the Oxford and China breeds, with eleven fine pigs by her side, which had been farrowed three weeks, was suddenly seized with fever and inflammation. In twelve hours she became unable to stand; was very restless, and apparently in great agony; no evacuation having taken place during two days. In consequence I called in the aid of a noted cow-leech in the vicinity, who gravely promised he would do what he could for her; but that all would be of no use. The operations of bleeding, anointing, and medicine, were carried on for three days, at a charge of thirty-five shillings, when

the sage doctor dismissed the case, with the consolation to me that he could do no more for the patient, and that it was impossible that she should live. I then took her in hand myself, bled her, and gave her a strong dose of salts and jalap, which I succeeded in delivering, her jaws being held open by a rope attached to each. In about an hour thereafter, she had three pints of warm gruel, and, in less than three hours, I had the satisfaction of observing symptoms of great tranquility and improvement in my patient. After leaving her at night on a clean and comfortable bed, I was gratified by finding her on her legs the next morning, in a fair progress to recovery. I then repeated the above dose, somewhat reduced in strength, and still keeping her on warm gruel, when, in two days, my satisfaction was complete, on finding her quite restored to her former health, saving a little inconvenience from the obstruction of her milk. Of the young pigs, previously removed, nine did well, and the sow became freed from all relics of her disease in ten or twelve days. I did not, however, choose to risk another farrow with her, therefore put her to the boar in October, and fed her for the knife. She was killed at Christmas, and made excellent bacon. Thus, I saved a fine hog by Dr. Common Sense, to atone for the insufficiency of the most skilful *leech* then and there going; and if my brethren pig-breeders would follow my example, in most cases, in my opinion, it would be to the benefit both of their pockets and their pigs.' * *

This must have been a sensible man, and I regard his anecdote as most instructive. Still, I fear that the forcible administration of medicine to swine is rarely practicable.

There is a description of fever that frequently occurs as an epizootic. There appeared some time ago in "*The Veterinarian*" a very able article, by M. Roche Lubin, descriptive of the symptoms, character, and curative treatment of this malady, which I quote for the benefit of my readers.

"*The charbonneuse typhus* of pigs does not always assume the same character. It often attacks the male pigs, and generally the most vigorous and the best looking, without any distinction of age, and with a force and promptitude absolutely astonishing; for in the space of twelve hours, I have seen a whole piggery succumb: at other times, its progress is much slower; the symptoms are less intense and less alarming; and the veterinary surgeon, employed at the commencement of the attack, may promise himself some success. It will be advisable to divide the whole into different classes.

"FIRST CLASS.—*Symptoms*.—The pigs that are ranged in this class often die without there being the slightest precursory symptoms. I have only been able to collect the following symptoms:—Sudden loss of appetite, general prostration of strength; small and frequent pulse; the ears drooping, of a dark colour, and tender to the touch; the eyes projecting and haggard; the conjunctiva of a deep red; the mouth half open, red, and charged with foam; a leaden tint stealing over the part; frequent and laborious perspiration; anxiety; plaintive cries; frequent convulsions; the appearance of red spots, and becoming more and more deep at the ears, the belly, and the inner surface of the thighs; palsy of the hind limbs; involuntary and fetid discharge. In less than an hour this animal died.

"POST MORTEM APPEARANCES.—The carcass, which was opened almost immediately, offered, externally:—The belly projecting; the mouth large, and of a violet colour; the tongue, thickened, black, and hanging from the mouth; black spots, varying in size from one inch almost to four, most numerous under the belly, the groin, and on different parts of the body; these sometimes unite to form large patches; these spots, which can be only the result of agglomeration and decomposition of blood in the cellular-adipose tissue of the animal, and also a yellow brown serosity, pervading every part. The lungs were large, brown, filled with blood, and the ventricles of the heart gorged with coagulated blood; its envelope presents various large ecchymoses; the pleura presents the same appearance; the bronchi and trachea are filled with a yellow humour; the meninges are thickened, and covered with black and coagulated blood; the cerebral substance presents inflamed points, deprived of their serosity; the rachidian sheath was also exceedingly thickened. I have often seen the *ramollissement** of the whole of the spinal cord, but still oftener that of the lumbar region; at the same time, I have witnessed decided paralysis of the hind limbs.

"The abdominal viscera have exhibited numerous disorders in the various openings which they have presented. The liver and the spleen have been exceedingly voluminous, and gorged with blood; the biliary vesicle has been much contracted, containing a thick, black, and fetid bile; the epiploon, the mucous membrane of the stomach, and intestinal canal, are spotted with black points; these same thickened membranes of a deep red hue, infiltrated with blood or serosity, disorganized or decomposed; the mesentery, the ganglions of the groin and of the arm-pits, have some portions infiltrated, blackened, and pestilential;

* Softening.

the bladder was always of a red hue, thickened, and containing an oily and red urine. Four times I found the kidneys softened, and a general flaccidity in all the tissues, and particularly in the glandular organs. I never found any effusion either in the chest or abdomen, but I have often seen them in the cerebral ventricles,

"SECOND CLASS.—*Symptoms*.—In this class I range the pigs in which charbonneuse typhus follows a somewhat rapid march, and offers some sufficiently distinct periods. The symptoms that are the least alarming, and the malady the least rebellious, are the following:—The animal is dispirited, continually lying down, and not getting up without evident pain; the ear is hot and painful; the pulse quick, but regular; the conjunctiva red; the eye fixed; the respiration a little agitated; the flank distended and painful; the tail hanging down; the animal drinking with difficulty, and eating without appetite, even the most delicious food; he is likewise constipated. This state sometimes remains two days without any sensible change; but on the third or fourth day, if the medicine that we have employed is without effect, the symptoms redouble their intensity. The pig grinds his teeth, trembles, and is convulsed in every part; the pulse becomes intermittent, and, by degrees, is almost perfectly lost; the pupil is dilated; the red spots become more and more deep in colour, and death is near at hand.

"The pathological lesions are nearly the same as these already described, except those of the tissues. I have sometimes found the nasal and buccal membranes quite decomposed, and the interior of the mouth presenting numerous black and charbonneuse spots. One mark should be regarded. The sows with young ones always resist the attack of the disease; but as soon as the little ones are produced, the malady does not spare either the one or the other.

"THE CAUSES OF THE DISEASE are, in the majority of cases, the BAD STIES in which the pigs are lodged, and the noisome food which they often contain. The food which the pigs meet with and devour are the remains of mouldy bread and fruit, especially that of peas and lentils—the fermentation and decomposition of which farinaceous substances, and especially the bran which is too frequently given to them, and the prolonged action of which occasion the most serious ills in the whole economy. In addition to this, is the constant lying on the dung heap, whence is exhaled a vast quantity of deleterious gas; also, where they remain far too long on the muddy or arid ground, or are too long exposed to the rigour of the season. Such are the causes which impress a functional derangement that cannot fail of being

dangerous or fatal, especially when brought back to the farm. The pigs are then exposed to a dangerous degree of humidity; they lay themselves down in an acrid and disgusting dung-heap, that cannot fail of being strongly destructive. I could also cite many villages and farms which, for two months of the year, have the residence of their pigs destitute of almost everything that is comfortable and useful.

"Although during the whole course of the year this typhoid disease never suspends its ravages, yet there are certain times in which it rages with great intensity—in the course of the summer, and the commencement of autumn. There are farms and communes where it is enzootic. It is a highly contagious disease. I could cite many facts confirmatory of this. I need only speak of the inoculation in different parts of the body, and the ichorous matter which is contained in the spots that infest every part; and the consequence of the pigs at first brought home, apparently sound, but when a little time has passed away, the disease spreading through the whole of the piggery.

"As to the transmission of the malady by ordinary means to different kinds of animals, I am unable to give any opinion. The flesh of infected pork has been given to dogs. Nothing has resulted from this experiment, and the inoculation of blood and of ichorous matter have not occasioned any morbid affection with regard to the last of these animals; but it was not the same with regard to some sheep that were submitted to the same experiment. They died two days after the operation, presenting all the symptoms and pathological lesions of charbonneuse fever.

"PRESERVATIVE TREATMENT.—The experience of every day proves that it is more easy to prevent a malady than to cure or combat it. In consequence, I have always said to the farmers who suffer the sad accumulation of typhoid maladies, that they will never banish from their piggeries the system of carelessness and ignorance, touching the cultivation of the pig, and a neglected branch of their revenues. I have always said to them that, in despite of their singular remedies, the scourge under which they labour will not disappear until they place the animals in proper situations, not humid, but well aired, and where the litter is often renewed; until, also, they procure sound nourishment, properly regulated, and of sufficient quantity, a pure and limpid water to quench their thirst, and bathe them, whenever the temperature is much increased, while they are weltering in the mire. It is also necessary that the pigs should remain in their sties in cold and rainy weather. In the course of the summer it is always necessary to give, from time to time, some nitrated, salted, and acidulated

food. The Rogue-fort cheese is a useful stimulant for those that are weak and feeble. The administration of any bitter decoction will often be productive of benefit. During the principal ravages of the epizootic I have derived benefit from small quantities of camphor and nitre, mixed with a decoction of sorrel. To this some have added, and with considerable benefit, a small quantity of mercury. The nasal membrane then secretes more abundantly, the urine is clearer and more frequent, and the evacuation of the fecal matter is more easy and copious.

"This mode of treatment may be continued eight days. If a pig is evidently ill, it should be separated from its companions, and even their abode should be changed, and fumigation should be practised every third day.

"As soon as a pig is attacked with disease, he should be separated from the others, placed in a warm situation, some stimulating ointment applied to the chest, and a decoction of sorrel administered. Frictions of vinegar should be applied to the dorsal and lumbar region, with aromatic fumigation about the belly. The drinks should be emollient, and slightly imbued with nitre and vinegar. If the fever now appears to be losing ground, which may be ascertained by the regularity of the pulse, by the absence of the plaintive cries that were before heard, by a respiration less laborious, by the absence of convulsions, and by the non-appearance of blotches on the skin, there is a fair chance of recovery. We may then be content to administer, every second hour, the drinks and the lavements already prescribed, and to give the patient his proper allowance of white water, with ground barley and rye. When, however, instead of these fortunate results, the symptoms are redoubling in intensity, it will be best to destroy the animal; for it is rare that, after a certain period, there is much or any chance of recovery. Bleeding, practised at the ear or tail, is seldom of much avail, but occasionally produces considerable loss of vital power, and augments the putrid diathesis."

II. LEPROSY.—The fact of the pig being subject to leprosy was by some persons supposed to be the reason for the Divine prohibition of pigs' flesh to the peculiarly chosen Jews, as they were themselves subject to it in no small degree. Be this as it may, however, it often attacks the swine in very hot seasons in this country, where man is free from its ravages.

The symptoms of this complaint usually commence with the formation of a small tumour in the eye,* followed by a general prostra-

* M. Dupray D'Emportes, and Le Gentilhomme Cultivateur.

tion of spirits; the head is held down, the whole frame inclines towards the ground; universal languor succeeds; the animal refuses food, languishes, and rapidly falls away in flesh; blisters soon make their appearance beneath the tongue, then upon the throat, the jaws, the head, and the entire body. The flesh of a leprous pig is said to possess most pernicious qualities, and, as doing so, to be, independent of our disgust, wholly unfit for human food. If the animal be killed in the very first stage of the disease, however, the affection is only superficial, the flesh nothing the worse, but rather improved in tenderness, and, indeed, not to be distinguished from that of a perfectly sound animal. The cause of this disease is want of cleanliness, absence of fresh air, want of due attention to ventilation, and foul feeding. The obvious cure, therefore, is—first, bleed; clean out the sty daily; wash the affected animal thoroughly with soap and water, to which soda or potash has been added; supply him with a clean bed; keep him dry and comfortable; let him have gentle exercise and plenty of fresh air; limit the quantity of his food, and diminish its rankness; give bran with wash, in which you may add, for an average-sized hog, say one of twenty stone (8 lbs. to the stone), or 160 lbs. weight, a tablespoonful of the flour of sulphur, with as much nitre as will cover a sixpence, daily. A few grains of powdered antimony may also be given with effect. The animal, if in summer, should be kept in the shade, and placed in a house facing the north, where it may have free access of air of the coolest kind.

III. MURRAIN.—It resembles leprosy in its symptoms, with the addition of staggering, shortness of breath, discharge of viscid matter from the eyes and mouth. The treatment should consist of cleanliness, coolness, bleeding, purging, and limitation of food. Cloves of garlic have been recommended to be administered in cases of murrain. Garlic is an antiseptic, and as in all those febrile diseases, there exists a more or less degree of disposition to putrefaction, it is not improbable that it may be found useful.

IV. MEASLES.—This is one of the most common diseases to which pigs are liable. The symptoms are—redness of the eyes, foulness of the skin, depression of spirits, decline or total departure of the appetite, small pustules about the throat, and red and purple eruptions on the skin. These last are more plainly visible after death, when they impart a peculiar appearance to the grain of the meat, with fading of its colour, and distention of the fibre, so as to give an appearance similar to that which might be produced by puncturing the flesh.

I would suffer the animal to fast, in the first instance, for twenty-

four hours, and then administer a warm drink, containing a drachm of carbonate of soda and an ounce of bole armenian; wash the animal, cleanse the sty, and change the bedding; give at every feeding, say thrice a-day thirty grains of flour of sulphur, and ten of nitre. It is to dirt, combined, with a common fault, too little thought of, viz., giving the steamed food or wash to the pigs at too high a temperature, that this disease is generally to be attributed. It is a troublesome malady to eradicate, but usually yields to such treatment as I have described, and is rarely fatal.

V. JAUNDICE.—Symptoms: yellowness of the conjunctiva, or "white of the eye," a similar hue extending to the lips, with sometimes, but not invariably, swelling of the under part of the jaw. Bleed behind the ear, diminish the quantity of food, and give a smart aperient every second day. Aloes are, perhaps, the best, combined with colocynth; the dose will vary with the size of the animal; a decoction of woodbine leaves and shoots has been recommended by the French veterinarians, but I am not prepared to speak to its success.

VI. FOUL SKIN.—A simple irritability or foulness of skin will usually yield to cleanliness, and a washing with solution of chloride of lime, but if it have been neglected for any length of time, it assumes a malignant character, scabs and blotches, or red and fiery eruptions appear, and the disease rapidly passes into

VII. MANGE.—If the foul hide, already described, had been properly attended to, and the remedies necessary for its removal applied in sufficient time, this very troublesome disorder would not have supervened. Mange is supposed, by most medical men, to owe its existence to the presence of a minute insect, called "*acarus scabiei*," or "mange-fly," a minute creature, which burrows beneath the cuticle, and in its progress through the skin, occasions much irritation and annoyance. Others, again, do not conceive the affection styled mange to be thus produced, but refer it to a diseased state of the blood, which, as is usually the case, eventually conveys its morbid influences to the superficial tissues. Much has been, and still might be said on both sides of the question; but such a discussion is scarcely suitable to the pages of a popular work. The *symptoms* of the disease are sufficiently well known, consisting of scabs, blotches, and sometimes multitudes of minute pustules, on different parts of the body. If neglected, these symptoms will become aggravated, the disease will rapidly spread over the entire surface of the skin, and if suffered to proceed upon its course unchecked, it will, ere long, produce deep-seated ulcers and

malignant sores, until the whole carcass of the poor affected animal becomes one mass of corruption.

THE CAUSES OF MANGE have been differently stated; some referring them to too high, and others to too low a diet. How too *low* a description of diet can apply to *swine* it is not easy to conceive, the feeders of that animal never keeping him save for the purpose of making profit of him. Dogs, and other such animals, who are kept only for ornament or pleasure, might, indeed, be starved, or, at all events, placed by their unfeeling masters upon *low diet*, but, most assuredly, no swine-feeder would commit such an egregious act of folly. The notion, therefore, of mange in swine being caused by *under-feeding* is not for a single instant to be entertained. No: the cause is to be looked for in *dirt*, accompanied by *hot-feeding*; hot-feeding alone would, perhaps, be more likely to produce *measles* than *mange*; but *dirt* would unquestionably produce the latter disease, even if unaided by the concomitant error of *hot-feeding*.

Of course, I would not for a moment assert that pigs, however well and properly kept, will not occasionally become affected with this, as well as with other disorders, from *contagion*. Few diseases are more easily propagated by *contact* than mange. The introduction of a single affected pig into your establishment may in one night cause the seizure of scores, and probably furnish you with a three months' hospital experience. Do not, therefore, introduce any foul-skinned pigs into your piggery; in fact, it would be a very safe, and scarcely a very troublesome, proceeding, to wash every new purchase with a strong solution of *chloride of lime*, a preparation to be had from any druggist or apothecary, if not, indeed, from most country grocers. This substance is very cheap, and a little trouble, when applied as a preventive, is surely preferable to a great deal of both trouble, and perhaps *disappointment*, when you are compelled to resort to it as a cure.

If a hog be only afflicted with a mange of moderate virulence, and not of *very long standing*, the best mode of treatment to be adopted is—

1. Wash the animal from snout to tail, leaving no portion of the body uncleansed, with *soft soap* and water.

2. Put him into a dry and clean sty, which is so built and situated as to command a constant supply of fresh air, without, at the same time, being exposed to cold or draught; let him have a bed of clean fresh straw.

3. Reduce his food, both in quality and in quantity; let boiled

or steamed roots, with buttermilk or dairy wash, supply the place of half-fermented brewer's grains, house-wash, or any other description of feeding calculated to prove of a heating or inflammatory character. It is, of course, scarcely necessary to add, that those who have been feeding their swine on *horseflesh*, or chandler's greaves, cannot be surprised at the occurrence of the disease; let them, at all events, desist from that rank and nasty mode of feeding, and turn to such as has been indicated.

4. Let your patient fast for five or six hours, and then give to a pig of average size, Epsom salts, 2 oz., in a warm bran wash. This quantity is, of course, to be increased or diminished as the size may require it. The above would suffice for a pig of from fifteen to twenty stone weight (8lbs. to the stone). It should be previously mixed with a pint of warm water. This should be added to about half a gallon of warm bran wash. It will act as a gentle purgative.

5. Give in every meal afterwards—

Of Flour of Sulphur, one tablespoonful;
Of Nitre, as much as will cover a sixpence,

for from three days to a week, according as you observe relative to the state of the disease. When you perceive the scabs begin to heal, the pustules to retreat, and the fiery sores to fade, you may pronounce your patient cured. But before that pleasing result will make its appearance, you will perceive an apparent increase of violence in all the symptoms—the last effort of the expiring malady, as it were, ere it finally yields to your care and skill.

6. There are, however, some very obstinate cases of mange occasionally to be met with, which will not so readily be subdued. When the above mode of treatment has been put in practice for fourteen days, without effecting a cure, prepare the following:—

Train Oil	. . . . .	One pint,
Oil of Tar	. . . . .	Two drachms,
Spirits of Turpentine	. . . . .	Two drachms,
Naphtha	. . . . .	One drachm,

with flour of sulphur, as much as will form the above into the consistence of a thick paste. Rub the animal, previously washed, with this mixture—let no portion of the hide escape you. Keep the pig dry and warm after this application, and suffer it to remain on his skin for three entire days. On the fourth day, wash him once more with soft soap, adding a small quantity of *soda* to the water.—Dry the animal well afterwards, and suffer him to remain as he is, having again changed his bedding for a day or so: continue the sulphur and

nitre as before. I have never known any case of mange, however obstinate, that would not, sooner or later, give way before this mode of treatment.

7. Your patient being convalescent, whitewash the sty; fumigate it, by placing a little chloride of lime in a cup, or other vessel, and pouring a little vitriol upon it. In the absence of vitriol, however, boiling water will answer nearly as well.

Finally: Recollect the trouble you have had in curing your patient, and by proper attention to cleanliness of sty and diet, together with regularity in feeding your stock, take care that you do not have to incur the like on any future occasion. Recollect, also, that all mercurial applications are, as much as possible, to be avoided; but, above everything, avoid the use of ointments composed of hellebore, corrosive sublimate, or tobacco-water, or, in short, any *poisonous* ingredient whatever; very few *cures* have ever been effected by the use of these so-called remedies, but very many *deaths* have resulted from their adoption.

VIII. STAGGERS, caused by excess of blood to the head; bleed freely from behind the ears, and purge.

IX. CRACKINGS will sometimes appear on the skin of a pig, especially about the root of the ears and tail, and at the flanks. These are not at all to be confounded with mange, never resulting from anything but exposure to extremes of temperature, without the suffering animal being able to avail himself of such protection as, in a state of nature, instinct would have induced him to adopt. They are peculiarly troublesome in the heats of summer, if the hog be exposed to a hot sun for any length of time, without the advantage of a marsh or pool in which to lave his parched limbs and half-scorched carcass. This is an inconvenience sometimes also experienced by the hog's congener, the rhinoceros, and the marsh or fenny swamp is by him too resorted to for relief. This will suffice to inform the reader of the proper means to be adopted in order to *prevent* the occurrence of cracked ears or skin. Should he desire to afford aid, where neglect has already done its work, let him anoint the cracked parts twice or thrice a-day with tar and lard, well melted together.

X. RANILE, or SWELLING OF THE SPLEEN.—The symptom most positively indicative of this disease is the circumstance of the affected animal leaning towards one side, eringing, as it were, from internal pain, and bending towards the ground. The cause of the obstruction on which the disease depends is over-feeding, permitting the pig's indulging its appetite to the utmost extent that gluttony may prompt,

and the capacity of its stomach admit of; a very short perseverance in this mode of management will produce this, as well as other maladies, deriving their origin from a depraved condition of the secretions and obstruction of the excretory ducts.

On first perceiving the existence of the complaint clear out the alimentary canal by means of a strong aperient. If you think you can manage it, you may administer this forcibly by having the mouth kept open by two cords, that attached to the upper jaw being thrown across a joist, and drawn just so tight as to compel the patient to support himself on the extremities of his fore-toes; but if you are doubtful of success in the employment of violence,—and, if the pig be a large one, your doubts will be anything but unreasonable,—allow the animal to fast for from four to five hours; he will then take a little sweet wash or broth, and in it you may mingle a dose of Epsom salts, proportioned to his bulk. This will generally effect the desired end of a copious evacuation, and the action of this medicine on the watery secretions will further relieve the existing diseased state of the spleen. Many recommend *bleeding*, and if the affection have continued for any length of time, it should be resorted to at once; when the disease is, however, discovered ere it has attained any considerable head, the aperient will suffice. The French veterinarians recommend the expressed juice of the leaves and tops of wormwood and liverwort to be given,—half a pint for a dose. The decoction of these plants produced by boiling them in soft water for six hours is more readily obtained than the expressed juice, and this may be given in doses of from half a pint to a pint and a half, according to the size, age, &c., of the patient.

Seammony and rhubarb, mixed up in a bran mash, or with Indian meal, may be given with advantage the following day, or equal portions of blue-pill mass and compound colocynth pill, formed into a bolus with butter, and the animal, having been kept fasting the previous night, will probably swallow it; if he will not do so let his fast continue for a couple of hours longer, and he will be pretty sure to comply with your wishes. Lower the animal's diet, and keep him on reduced fare, with exercise, and if you can manage it, *grazing*, until the malady has quite passed away; if you then wish to fatten, remember to do so gradually; be cautious of at once restoring the patient to full diet, and indeed my advice to you would be to keep him for a month as a store, and then, when you do put him up to fatten, to feed at regular intervals, and always remove whatever food is left from each meal. This is a practice that should never be neglected by pig-feeders,

and they will find it not only highly preservative of health, but conducive, in a degree those who have not tried it will scarcely expect, to rapid progress towards being fully ripe for killing.

XI. SURFEIT.—Another name for indigestion; the symptoms are such as might be expected—panting, loss of appetite, swelling of the region about the stomach, &c., and frequently throwing up the contents of the stomach. In general this affection will pass away, provided only it is permitted to cure itself, and that all food be carefully kept from the patient for a few hours; a small quantity of sweet grains, with a little bran-wash, may then be given, but not nearly as much as the animal would wish to take. For a few days the food had better be limited in quantity, and of a washy, liquid nature. You may then resume the ordinary food, only observing to feed regularly, and, as already directed, remove the fragments remaining after each meal.

XII. LETHARGY.—Symptoms: torpor and desire to sleep, hanging of the head, and frequently redness of the eyes. The apparent origin of this disease is the same as the last, only in this instance acting upon a pig having a natural tendency to a redundancy of blood. Bleed at the back of both the ears as copiously as you can, and if you cannot obtain a sufficient quantity of blood from these sources, have recourse to the tail. Administer an emetic, of which a decoction of chamomile flowers will be the safest; but if you have an intelligent apothecary from whom to obtain it, he will, on your informing him of the size of your patient, be able to give you a sufficient dose of tartar emetic, which will be far more certain. After this, as in the former case, reduce for a few days the amount of the animal's food, and administer a small portion of sulphur and nitre in each morning's meal.

XIII. HEAVINGS, or Inflammation of the Lungs.—This disease, which has acquired its name from the principal symptom by which it is characterized, is scarcely to be regarded as curable. If, indeed, it were observed in its first stage, when indicated by loss of appetite, and a short, hard cough, it might run some chance of being got under by copious bleeding, and friction with stimulating ointment on the region of the lungs; minute and frequent doses of tartar emetic should also be given in butter, all food of a stimulating nature carefully avoided, and the animal kept dry and warm. Under these circumstances there would be no reason absolutely to despair of a cure, but it would be advisable at the same time, if the pig, when this primary stage of the malady was discovered, were not in very poor condition, to put him to death. If once the *heavings* set in it may be calculated with confidence that the formation of tubercles in the substance of the lungs

has begun, and when these are once formed they are very rarely absorbed. The cause of this disease is damp lodging, foul air, want of ventilation, and unwholesome food. It is difficult to suggest what should be done when matters have reached this pass, or what remedies would prove of any service. It is now too late in most cases to resort to blood-letting, and the hide of the hog is so tough that it is not easy to blister it for the purpose of counter-irritation; you may, however, try the following, though perhaps the knife might be best, if only to relieve the poor sufferer, and provide against the danger of infection; for it may be as well to state that once tubercular formation becomes established, the disease may be communicated through the medium of the atmosphere, the infectious influence depending upon the noxious particles respired from the lungs of the diseased animal. Nor is this the only danger to be apprehended; it is yet a question whether this complaint may not be thus communicated to other descriptions of live stock, producing among cattle a disease analogous to, if not identical with, that malignant epizootic which recently committed so much devastation among our cattle. To resume: you may, however, try the following:—Shave the hair away from the chest and beneath each fore-leg; wet the part with spirits of turpentine, and set fire to it; you will, of course, have had the patient well secured, and his head well raised, and have at hand a flannel cloth, with which to extinguish the flame, when you conceive it has burned a sufficient time to produce slight blisters; if carried too far a sore would be formed, which would be productive of no good effects, and cause the poor animal unnecessary suffering. Calomel may also be used, with a view to promote the absorption of the tubercles, but the success is questionable.

XIV. DIARRHŒA, or Looseness.—The symptoms, of course, require no comment, as they constitute the disease. Before attempting to stop the discharge—which, if permitted to continue unchecked, would rapidly prostrate the animal's strength and probably terminate fatally—ascertain the quality of *food* the animal has recently had. In a majority of instances you will find this to be the origin of the disease; and if it has been perceived in its incipient stage, a mere change to a more binding diet, as corn, *flour*, &c., will suffice for a cure; if you have reason to apprehend that *acidity* is present, produced in all probability by the pig having fed upon coarse, rank grasses in swampy places, give some chalk in the food, or powdered egg-shells, with about half a drachm of powdered rhubarb; the dose, of course, varying with the size of the pig. In the acorn season, and where facilities for

obtaining them exist, they alone will be found quite sufficient to effect a cure. When labouring under this complaint, dry lodging is indispensable; and *diligence* will be necessary to maintain it and cleanliness.

XV. QUINCY, or an inflammatory affection of the glands of the throat.—Shave away the hair, and rub with tartar emetic ointment. Steeping with very warm water is also useful. When external suppuration takes place, you may regard it as rather a favourable symptom than otherwise. In this case, wait until the swellings are thoroughly ripe, then, with a sharp knife, make an incision through the entire length, press out the matter, wash with warm water, and afterwards dress the wound with any resinous ointment, which you can obtain from the nearest apothecary. If you cannot obtain any thing of the kind, you may form a very tolerable substitute by blending yellow soap with coarse brown sugar. You should, however, never have your house without a good assortment of cattle medicines, distinctly labelled with their names and qualities, and a graduated scale of doses. These can be obtained from any respectable druggist, can be procured at very trifling expense, and may possibly save you the loss of many valuable animals.

XVI. TUMOURS, or hard swellings, which make their appearance on several different parts of the animal's body. It would not be easy to state the causes which give rise to these tumours, for they vary with circumstances. They are not formidable, and require only to be suffered to progress until they soften; then make a free incision, and press out the matter. Sulphur and nitre should be given in the food, as the appearance of these swellings, whatever be their cause, indicates the necessity of alterative medicines.

XVII. CATARRH, an inflammation of the mucous membranes of the nose, &c., if taken in time, is easily cured by opening medicine, followed up by warm bran-wash, a warm dry sty, and abstinence from rich grains, or stimulating farinaceous diet. The cause has probably been exposure to drafts of air. See to it.

XVIII. INFLAMMATION OF THE LUNGS, producing consumption, is a disease not uncommon to pigs. Professor Dick says, that the only hope of cure is by attacking the complaint in its early stages. Incipient inflammation often occurs and cures itself, as is evident by the numerous instances of the lungs adhering to the walls of the chest in fatted animals. It may be detected by loss of appetite, severe cough, and painful and laborious breathing. A pig afflicted with this in the north of England is said to be "bellowed," or diseased in its "bel-

lows." Bleeding should be immediately resorted to. A dose of the following ingredients may be tried to stave off consumptive tendencies :—

Spirit of sweet nitre . . .	Quarter of an ounce.
Digitalis tinct.	Twenty drops.
Emetic tartar	One drachm.
Hydroceanic acid	Ten drops.

If after the first stage incipient inflammatory action passes over, warmth and milk diet will be necessary, and the sooner the animal is fed the better.

XIX. **APOPLEXY** is a very rare disease in pigs, and one which, if of a very violent kind, admits of no cure. Many a fat animal dies, said to be stertorous and apoplectic, or choked with fat, which suffers from a very different cause. At the fat show at Birmingham, held Christmas, 1851, several of the fat pigs died, as was imagined, victims of this disease, and not a few jokes were cracked by the scribblers who, in their garrets, and never tasting a piece of good bacon, can rail against over-feeding. The fact is, however, they were suffocated, not by fat, but by the carbonic acid gas, evolved by the thousands of persons in the Bayly Hall, a close building, and where the ventilation was by no means adequate to effect the escape of the result of the breathing of so many animals. That heavy gas sinking to the bottom of the floor affected the pigs, while the cattle and human beings were almost free from its influence, and many a valuable pig was sacrificed to this circumstance.

XX. **EPILEPSY** is a disease much more common, and often arises from the ringing of the mother during the period of gestation. It will manifest itself by trembling and staggering of the litter when young, and sometimes show its effects on the grown up pigs. It is far best to pork the animals at once. If it manifests itself in store animals full grown, anoint the back bone with turpentine and tallow in equal proportions, melted together, and give half an ounce of sulphur, with a quart of hot spiced ale.

XXI. **COLIC** is not an uncommon disease, resulting from too much soured food. It is manifested by great and violent, but intermittent pains; the pig will roll about and kick its belly, then rise up and walk about for a few minutes, and again have a recurrence of the paroxysm; administer during the interval :—

Peppermint water	One gill.
Tincture of opium	Forty drops.

The animal to be kept warm, and supplied with food, new milk warm, until entirely better.

RABIES is one of those afflictive maladies which is, perhaps, developed in the greatest possible degree in the pig. All hope of recovery should be at once abandoned, and the pig at once slaughtered by shooting, and buried whole.

LICE.—These are sometimes troublesome in store pigs. Let them be well washed with soft soap and water; or, if this fails, with a decoction of tobacco. These will be further treated on in the "Pests of the Farm," in this series of Handbooks.

I have now given a summary of all the principal diseases to which swine are, even under the worst of circumstances, liable; and I have certainly omitted none that it would be possible for any but a skilful veterinary surgeon, personally examining the patient, to treat with any hope of success. The instructions which I have given comprise all that the amateur could comprehend, as much as he will ever find necessary for domestic practice, and FAR MORE than he will ever find occasion to follow, if he have attended to what I have so frequently insisted upon—cleanliness, dry lodging, regularity of feeding, the use of *salt* in the food, and the addition of occasionally a small quantity of sulphur and nitre to the morning's meal. Attention to these precautions will never fail to preserve your stock in health, and thus obviate the necessity of resorting to the use of physic. By thus consenting to take a very trifling amount of trouble, you will save yourself a vast deal of it; nay, you will not only save yourself trouble, but money, anxiety, and disappointment—and all by merely bearing in mind, and adopting in your practice, the old adage—*Prevention is better than cure.*

CHAPTER XI.

SLAUGHTERING AND CURING.

THE Almighty Creator, when he had formed man, and placed him upon the earth, gave him power of life and death over all the inferior animals. This power was, however, given to him to be used, not to be abused; while permitted to slay for food, clothing, or other necessities, nay, luxuries of life, it was never designed by our all-benevolent, as well as omnipotent Lord, that this power should be converted into a medium of cruelty, or that life should be taken away from any

of his creatures in any other than the most humane manner possible. Of this fact we are assured in many passages of the sacred writings so distinctly, that we cannot for a moment doubt that he who exercises cruelty towards the inferior animals of creation, commits a direct offence against the will of the common Creator. The necessity of humanity towards animals thus stands as not only a high moral duty, but one absolutely enjoined as a divine ordinance; it is also a part and parcel of all that is noble or excellent in human nature.

Do we not invariably find humanity and virtue, vice and cruelty, leagued together? Do we ever find the great, the noble, the exalted in mind, guilty of cruelty? What is one of the most common features in the confession of the condemned criminal? Is it not that he commenced his career of crime in the torture of the lower animals, ere he raised his hand against his fellow-man? Fortunately, of late years, the laws of Great Britain have mercifully extended their protection to the till then groaning portion of the creation. None can now be cruel with impunity; if detected, or informed of. The Society for the Prevention of Cruelty to Animals prosecutes all such; and it ought to be the pleasing task of every humane man to cooperate with it, and aid in the detection and punishment of offenders. My reasons for thus introducing the present chapter have their origin in scenes of horrible cruelty, that I have myself witnessed. Of the abominations practised in reference to others of the victims of the shambles, this is not the place to speak; elsewhere, and on another occasion, their sufferings may occupy our attention, at present it is only with the poor hog that we have aught to do.

It is a mistake to suppose that this poor animal is insensible to pain. The old fable of mice burrowing beneath his skin, and rearing a colony of descendants in his fat, though handed down from one author to another, until it was seriously quoted by one of our modern worshippers of his predecessors only the other day, is equally false, foolish, and unfounded. The poor hog does indeed feel, and that most acutely; well would it be for him that he did not, for then what miseries would he not be spared! He would not then care whether he was put out of pain at once, or suffered to hang up by the hind legs, the limbs previously dislocated at the hocks, between the tendons and the bone of which has been passed the hook by which he is suspended. Were he indeed insensible to pain, it would, of course, be a matter of indifference whether or not he were suffered to die first, or, as soon as he had bled a sufficient quantity, was, still living and breathing, plunged into boiling water, in order to remove his hair; or

then, with a refinement of cruelty that would not even permit of his being put out of his misery so soon, removed from the caldron ere life or feeling had yet departed, opened, and disemboweled live.

I should be sorry to give pain to the feelings of any of my readers, but I had rather hurt their feelings than leave a suffering, a tortured quadruped—and that, too, one so useful to us—to experience such an ungrateful return, in the shape of such terrible and revolting miseries. I have described nothing but what I have personally witnessed, and I trust that what I have said may induce master-butchers and others to ascertain the conduct of their slaughterers, and the manner in which they perform their necessary, but painful duty.

The usual mode of killing a pig in the country is, or used lately to be, fastening a rope around the upper jaw, and throwing it across a joist a beam; this is hauled by an assistant just sufficiently tight to compel the animal to support himself upon the extremities of his toes, with his snout elevated in the air. The butcher then kneels in front of him, and taking a sharp and pointed knife, first shaves away the hair from a small portion of the front of the throat, then gently passing the sharp-pointed steel through the superficial fat, gives it a plunge forward, a turn, and withdraws his weapon. A gush of blood follows, which is usually caught in proper vessels, for the purpose of forming black puddings. The rope is somewhat slackened; the victim totters, reels; the eye glazes, his screams ceases—he falls; and life would speedily become extinct, but sometimes, alas! the butcher is paid by the job; he is in a hurry; and, ere the breath is out of the poor brute's carcass, nay, ere he ceases to struggle or moan, he is tumbled into the scalding-tub; he is then withdrawn in a second, placed upon a table, and the hair and bristles carefully removed by scraping with a knife; disemboweling follows—and it is well if the poor wretch has perished before that process commenced. For the credit of humanity this but seldom occurs.

In olden times, it would appear that our butchers were less hasty, or more merciful. In the osseous deposits already spoken of, relics of ancient days, all the skulls of pigs had been broken in upon the frontal bones, precisely in the same manner as had the skulls of oxen and other animals found in the same deposit. Oh, how pleased should I be if I could succeed in persuading modern killers to adopt this practice, this humane custom of our forefathers! Were the pig first deprived of sensibility by compression of the brain, as produced by a violent blow upon the forehead, he would be a passive victim in the

butcher's hands, who could not only perform all the remainder of the process with more humanity, but—and think well of it, such of you as might probably be swayed by no other consideration—with more despatch and less trouble. I do earnestly hope that my words may not be altogether thrown away.

I am happy in being able to add, that since I wrote the above, I have ascertained that the humane custom of knocking the pig on the head before cutting his throat is rapidly gaining ground, and that no respectable butcher will allow it to be dispensed with. In the country parts, however, the old abuses are still permitted to exist; and I am grieved to say that *everywhere*, with a very few honourable exceptions, the barbarous practice of plunging the pig into the scald while yet living is still *systematically* and *designedly* adopted. A very respectable man surprised me the other day by deliberately telling me that "A pig will no way scald so well as when the life is in him." This is, however, a mistake. It is only necessary not to suffer the animal to become cold and stiff. Readers, I raise my voice in behalf of a most useful and most cruelly treated animal; may I beg of you all to unite with me in the cause of humanity, and then I shall not have raised my voice in vain?

The usual mode to ascertain the death of the animal, for he will have life after all symptoms of breathing and all movement have ceased, is to pass a sharp knife between the claws, in a part which is very sensitive, and, if he flinches, the scalding process where adopted is never allowed to take place until this flinching to the knife ceases. When this no longer occurs, it is taken for granted that sensation has ceased; whether it altogether ceases with volition is by far too wide a question to discuss here. Sir Humphrey Davy, more of a chemist, however, than a physiologist, had a notion that sensation might exist long after external symptoms of life and volition existed, and hence requested of his brother that he might not be dissected, or even opened, so much did the impression haunt him to the last.

A very important element in the production of good bacon is that the pig should be killed as speedily and with as little delay and excitement as possible. He should be starved, and not allowed any kind of food for at least twenty-four hours before slaughtering, and the greatest care should be taken to divide the jugular vein thoroughly, so that he may bleed as speedily and completely as possible.

And now, having supposed the animal killed and dressed, let us proceed to inquire into the most approved modes by which its flesh may be converted into bacon and ham. "The hog," says Mr. Hender-

son,* "should be left fasting for full twenty-four hours before being killed; and after the carcass has hung all night, it should be laid on its back upon a strong table. The head should then be cut off close by the ears, and the hinder feet so far below the houghs as not to disfigure the hams, and leave room sufficient to hang them up by; after which the carcass is divided into equal halves, up the middle of the back-bone, with a cleaving knife, and, if necessary, a hand-mallet. Then cut the ham from the side by the second joint of the back-bone, which will appear on dividing the carcass, and dress the ham by paring a little off the flank, or skinny part, so as to shape it with a half round point, clearing off any top fat that may appear. The curer will next cut off the sharp edge along the back-bone with a knife and mallet, and slice off the first rib next the shoulder, where he will find a bloody vein, which must be taken out, for if left in that part it is apt to spoil. The corners should be squared off when the ham is cut out."

I have quoted this passage, because it recommends a novel mode of cutting bacon, and one which I have not as yet seen practised. The ordinary practice is to *cut out* the spine or back-bone, and, in some counties, to take out the ribs also. It is only in porkers that the back-bone is thus divided.

The most approved mode of saving bacon, as practised by a majority of those extensive curers who have kindly favoured me with the necessary details of this portion of my subject, is as follows:—If the swine you design killing have been a recent purchase, and have been driven from a distance, so as to have become winded or jaded, it is right that they should be kept up for a week, or perhaps more, until the effects of the journey have been entirely removed, and the animals restored to their original tranquility and primeness of condition; during this interval they should be fed upon meal and water. A difference of opinion exists, as to whether this food should be given in a raw state or boiled. I have taken some pains to ascertain the truth, and have no hesitation in pronouncing in favour of the latter; at the same time, however, the mess should be given in a perfectly cold state, and not of too thick consistence. Some recommend that a small dose of nitre should be given daily in the food for a fortnight previous to killing; others pronounce this to be unnecessary; but all unite in recommending a very considerable reduction in the animal's food for two days before killing, and a total deprivation of food for at least the last twenty hours of life.

In the country districts of Ireland, the pig is usually secured by the

* Middlesex Report—Second Edition.

hind leg to a post or ring, the head is fastened to another; the animal is thus securely strapped down upon a sloping slab or table, and the head is severed from the body by means of a sharp knife. I am informed that the bacon of a pig thus killed is more easily saved and is superior in flavour and colour.

Mr. Richard Pick, of Sowerby, has recently adopted a plan of shooting pigs with a bullet previous to their being stuck with the knife, which appears speedily to put an end to their sufferings,—care being taken to prevent the bullet going into the shoulders of the animal.

The ordinary mode of killing a pig is, I am most happy to say, gradually approximating to such as humanity would dictate. It is thus:—A flat stage or table, inclining downwards in one direction, is prepared; the pig receives a sharp blow with a mallet upon the forehead, which effectually deprives him of sensation; he is then thrown upon the stage, and a knife plunged into the chest, or rather into that spot where the chest meets the neck. The blood flows freely, and is received into vessels placed for the purpose. A large tub or other vessel has been previously got ready, which is now filled with boiling water. The carcass of the pig is plunged into this, and the hair is then removed with the edge of a knife. The hair is more easily removed if the pig be scalded ere he stiffens or becomes quite cold, and hence some butchers cruelly conceive it advisable to scald him while *yet there is some life in him*. The animal is now hung up, opened, and the entrails removed; the head, feet, &c., are cut off, and the carcass divided, cutting up at each side of the spine. A strong knife and mallet are necessary for this purpose, and will be found to answer better than a saw. The inside should be carefully washed with a cloth or sponge to remove the whole of the blood.

Bacon is cured in very different ways. For domestic use:—it is usually laid upon a table, and salt, with a little nitre, added, well rubbed in, first on one side and then on the other, either with the bare hand or the salting glove. Some straw is then placed on the floor of an outhouse, a fitch laid thereon, with the rind downwards—straw laid above this, then another fitch, and so on. Above the whole is placed a board, and heavy stones or weights above all. In three weeks or a month the meat is sufficiently salted, and is hung up to hooks in the kitchen rafters. The general practice of burning wood and turf in some kitchens imparts a sweetness to the bacon thus saved that is not to be met with in *any* which you can purchase.

Another mode is as follows:—Prepare a pickle, by boiling common salt and nitre in water; mix, for a single pig of tolerable size, one

pound of coarse brown sugar with half a pound of nitre, and, by mixing all the sugar and nitre you require to use in the first instance, you will prevent its being purloined by children or servants; rub this well in with the salting glove, then put the meat into the pickle, and let it lie in this for two days; afterwards take it out of the pickle, and rub it with salt alone; then put it back into the pickle.

For a *mild cure*:—Form *sweet pickle* by boiling molasses with salt and water; rub the meat with sugar and nitre—add a small portion of strong pickle to the meat—put the meat into this, and let it lie in it for three weeks. If there be any spare room in the cask, fill it up with molasses—eight pounds of salt, one pound of nitre, and six pints of molasses, will about suffice for each hundredweight of meat, and will take about five gallons of water.

In about three weeks,—less or more time being required according to size,—take the meat out of pickle, and hang it in the drying-house. While in the drying-house the flitches should be hung neck downwards. You may cut out the ham and trim the flitch according to fancy. Nearly every county has, in this respect, a fashion of its own.

You, then, if you possess the means, remove your hams and bacon to the smoking-house: they should not be suffered to *touch each other*; with this precaution, you may hang them as closely as you please. Smoke-houses are of every dimensions; but the smallest answer as well as the most extensive. Before suspending the meat in the smoke-house, it should be previously well rubbed over with bran. The fire is made of saw-dust, which burns with a low smouldering glow, giving out far more smoke than if actually flaming.

In the process of smoking, your meat will lose from about fifteen to twenty pounds per hundredweight—a fact necessary to be borne in mind.

Sometimes the pigs are killed before they arrive at full size, and their hair removed by singeing; the bacon and hams of these are said to possess peculiar delicacy of flavour.

The best saw-dust for smoking hams or bacon is that made from oak, and it should be thoroughly dry. The saw-dust of common deal imparts a flavour of a disagreeable character, not unlike that of red herrings.

WESTPHALIAN HAMS.—The *genuine* Westphalian bacon is particularly good; but all sold under that name is not genuine; in London, especially, spurious Westphalian hams are manufactured to a considerable extent. The process of imitation is not difficult, and none but one of the trade can detect the imposture. The fine quality

of Westphalian bacon depends on several causes: the healthy and semi-wild life the swine are permitted to enjoy—their relationship to the wild boar—they are not fattened to the fullest extent previous to killing. A large portion of *sugar* and *juniper-berries* are used in curing, the proportion being usually one and a half pound of sugar to three of salt, and two ounces of nitre. The *smoke* is also applied in a *cold state*. This is, perhaps, the principal secret. The hams are hung at the top of a very lofty building, and by the time the smoke reaches them it is perfectly *cold*.

The ham of the Westphalian hog closely resembles that of the common *old Irish* breed; and the hams of that animal, when cured as has been described, could not be distinguished from those of Westphalia by the nicest judge, and are, therefore, sometimes used to deceive.

YORKSHIRE BACON.—There are few counties where, upon the whole, a finer kind of bacon is produced than in this large county. Commencing by a pure breed—fed by farmers in the corn districts, and dairymen in the grazing vallies, on the very best milk and barley, with a small proportion of potatoes—it has none of those rancid and disagreeable flavours so often applying to the Irish and American bacon. The mode of curing adopted is the following:—The pig, after hanging twenty-four hours, is thoroughly stiffened, and is then cut up in the ordinary mode. The shoulders are carefully searched for the large veins which proceed from the jugular, and, as the last blood is frequently found in these veins, they are carefully extracted with a fork. The bacon is then removed to leaden bowls—salt wiped over the smooth side—the shanks carefully stopped for four to six inches deep with salt and saltpetre. This is one of the most important facts in curing bacon. The skin side is then laid downwards, and the whole flesh side covered with salt, and sprinkled with saltpetre. The same applies to the hams and the other sides, and the proportion of coarse salt—which is always used for the purpose in preference to the more finely pounded—allowed for a twenty stone pig, is one stone of salt and one pound of saltpetre; and so on in proportion. Two or three pigs may be laid in a leaden bowl, exposed to a north aspect, with plenty of air, and in a clean place, especially free from all putrifying matter. In three days all the sides are removed, the bottom ones placed uppermost, and the whole of the bare places in the flesh side are again covered with salt. In this way it is removed three or four times in a month, during which period it is said to be in pickle. At the end of this period, it is taken out of the leaden bowls, set on an

edge, and wiped with a cloth to dry off the extraneous salt. It is hung for three weeks more in the kitchen, and is then fit for storing away,—which is generally done in sacks in which bran has been strewed. In these it remains until taken out for use.

In some districts there is an old-fashioned habit of rubbing the salt upon the skin side with great assiduity. An ear of the pig is taken, and the salt is rubbed in for half an hour together. Now, this is absurd. You can never rub the salt through the skin, and it is as unnecessary as it is annoying and troublesome. It is fast giving way, and is only practised by very old housekeepers in the moorland districts.

LIMERICK.—The hams cured in Limerick have long enjoyed considerable celebrity, and are supposed to be superior to many others—those of Westphalia and Hampshire, perhaps, alone excepted. Their excellence appears chiefly to depend upon the sparing use of salt, and the substitution for it, to a great extent, of coarse sugar, with judicious smoking. Some of the Limerick smoking-rooms are upwards of thirty feet in height.

BELFAST used to enjoy a reputation equal to Limerick; it, however, no longer does so: probably the former town having become so much engaged in the export trade, for which quantity was found more profitable than quality, may have been the cause of this falling off. I have, however, spoken to some experienced curers on this subject, and they inform me that this inferiority of the Belfast to the Limerick hams is owing only to the inferiority of the pigs in the north of Ireland, their being better breeds in and near Limerick.

HAMPSHIRE.—The Hampshire Bacon is in greater esteem than even the Westphalian,—a circumstance attributable to the superior excellence of the New Forest *swine* to those of that country, while they share equally with them the privilege of a forest life and acorns. The Hampshire curers smoke with saw-dust. In both this county and in BERKSHIRE, *singeing* is adopted more generally than scalding; and this process is considered superior to scalding, the latter being supposed to soften the rind and render the fat less firm.

The WILTSHIRE bacon is of peculiarly delicious quality; but the cause is obvious, and is not to be referred to any of the details of the curing process. This bacon is prepared from *dairy-fed* pork. This is the true secret. The same remark applies to the CUMBERLAND bacon.

In some counties the hog is *skinned* prior to curing. Some amount of additional profit is, of course, derivable from this practice, but the

bacon is inferior, being liable to become rusty, as well as to waste in the boiling. The skin is used for making saddles.

Hams and flitches should always be hung up in a *dry* place: indeed it will be found useful to sew up the former in pieces of canvass or sacking, as is practised with the Westphalian.

It is difficult to save bacon in summer time, or in warm climates; but a machine has recently been invented, for which a patent has been obtained, which renders the saving of meat, under the most adverse circumstances, perfectly easy. The machine acts as a force-pump or syringe. Its extremity is inserted into the meat, and the handle worked; the brine, which must be very strong, is thus *forced through* the grain of the meat, and it is effectually impregnated with it, and well cured long ere it could turn. There can be no doubt but that this instrument is, under such circumstances as I describe; eminently useful; but it is no less certain that meat so cured is not equal to that saved under ordinary circumstances, and in the ordinary manner; the *grain of the meat* is too much loosened by the use of the machine, and the texture is thus deteriorated; it should, therefore, only be used where *necessity* requires, and never by *preference*, where the ordinary process can be adopted.

To extract the superabundant salt from your meat, prior to use, has long been a desideratum. The steeping it in water to which carbonate of soda has been added is found useful; so is the addition of the same substance, or of lime, to the water in which it is boiled; so is changing the water after the meat has been about half boiled. Sailors find washing the meat in sea-water very efficacious; but I have made the discovery that this object can be attained to a far fuller extent by a very simple chemical process.

Put your meat to steep in tepid water, and after it has lain in it for some hours, add a small quantity of sulphuric acid. In three or four hours, take it out, and wash it two or three times in water; to the third water add a small portion of carbonate of soda. Take your meat out, wash it again, and boil it for dinner. You will find the salt nearly, if not wholly discharged; but you need not be surprised should the *colour* of the meat be somewhat darkened, the deterioration does not extend farther; the flavour remains the same as when first corned, and the article becomes as wholesome as fresh meat. It is possible that this simple process may be found useful in long voyages, for a long-continued use of salted animal food without a free use of vegetables is found to contribute to the production of many diseases.

A much more simple process is the steeping of the bacon overnight

simply in cold water. So great is the affinity of salt for water that a twenty-four or even eighteen hours' steep in water will generally remove any degree of superabundance. It interferes less with the flavour than any chemical mixtures whatever, and is on this account, and its easy mode of being effected, by far the preferable plan.

The following communication received from Mr. J. Hawkins, of the Portobello Market, Dublin, on the subject of curing, will, as coming from a person a curer by profession, be found at once interesting and useful:—"Should the following observations prove suitable to your purpose, they are much at your service; and I may as well mention that they are particularly designed for amateur curers of their own meat, such as farmers, housewives, and others. The trade are supposed to know their own business, and would only deem me presumptuous were I to offer any directions to them.

"The hog is usually kept fasting for twenty-four hours previous to being killed. He is then brought to the slaughter-house, and despatched in the following manner: the butcher takes a mallet (a hammer with a long handle, like those used for breaking stones on a road), and with it strikes the pig on the forehead: if he be an expert hand, a single blow will suffice to knock the hog down, and render him quite senseless. A knife is then taken, and the butcher sticks the animal in the lower part of the throat, just between the fore legs. A boiler or tub, full of very hot or boiling water, is then prepared, in which the hog is immersed until the hair becomes so loose that it can be scraped off with a knife quite clean; when there is no convenience of this kind, the same effect may be produced by pouring boiling water over the pig. The hog is then hung up by the hind legs, cut up the middle, and the entrails taken out; after this, the carcass is left there for about twelve hours, to cool and become firm, when it is fit for boning or cutting up. Sometimes, instead of scalding, the pig is swaled by fire—burned straw is generally used for this purpose; and this is called 'singed pork.'

"The following is the mode of boning or cutting:—The pig is placed on a strong table or bench; the head is then cut off close to the ears; the pig is then opened down the back, a cleaver or saw is used for the purpose, and both back-bone and hip-bones are taken out, except in one or two places, yet to be spoken of, where a different system is pursued. The hind feet are then cut off, so as to leave a shank to the ham. The fore-legs are then cut round at the hough, the flesh scraped upwards off the bone, and off the shoulder-blade, which is taken out quite bare under the side. The saw is then run along the

ribs, so as to crack them; they then lie quite flat. The pig is then divided straight up the back, and the sides are ready for salting, the ham still remaining in. This is the method usually practised in the county Wicklow.

"When the sides are ready for salting, they are well rubbed on the rind side, and the space from which the shoulder-blade was taken out is filled with salt. The sides are then laid singly upon a flagged floor, and salt is shaken over them. In a day, or two days if the weather be cold, they must be again salted in the same manner; but now two sides may be put together, and powdered saltpetre shaken over each side, in the proportion of about two ounces to each side, if of average bacon size. After three or four days the sides are to be again changed, the shanks of the ham rubbed, the salt stirred on, a little fresh salt shaken over them, and five or six sides may now be placed over each other. The sides may then be left thus for a week when they may be piled one above the other to the number of ten or twenty sides, if you have killed so many pigs. Leave them so for above three weeks, until they get firm; they may then be considered saved, and will keep so for six or eight months, or according to pleasure.

"When required for use or for market, the sides are taken out of the salt, well swept and cleaned—the ham taken out, hung up, and dried with turf; if a brown colour be desired, a little saw-dust of hard wood may be thrown over the turf. If hung up in a kitchen where turf is burned, and suffered to remain, not too near the fire, the same effect will be produced; and if the bacon have been well saved in salt, it will be excellent.

"The Belfast and Limerick methods of cutting differ from what I have described, inasmuch as the hip-bones are left in, and the hams are cut out, while the pig is fresh, and saved separately. In some cases, also, the ribs are taken out of the sides, and, in Belfast, the shoulder-blade is taken out over the side.

"Both the Belfast and Limerick hams are cured in the same mild manner; they are, as I have stated, cut out of the pig when fresh, cured separately, and only left a sufficient time to be saved, and no more. They are not suffered to become too *salty*, a fault sometimes perceptible in the Wicklow hams. The Limerick and Belfast curers also make up different other portions of the pig separately, as *long sides*, *middles*, and *rolls*, for the English market.

"Sometimes the ribs are taken out, and sometimes not, according to the market for which they are intended. Limerick, Belfast, Wicklow, and Waterford, are the principal curing districts of Ireland.

"The Wicklow method, first described, is that in use in all counties of Ireland which prepare their bacon for the Dublin markets. The bacon, when cured, is then consigned to factors in Spitalfields, and sold on commission to the provision-dealers of Dublin.

"Limerick and Belfast hams are cured in the following manner:—They are, as I have said, cut fresh from the pig, with the hip-bones left in them, and are placed on a flagged floor, the front of the second ham resting upon the shank of the first, and so on until all are placed; they are then sprinkled with strong pickle from a watering-pot, and a small quantity of salt is shaken over them. Next day, the hams are taken up, well rubbed with salt, and laid down as before, when saltpetre is shaken over them in quantities proportionate to their size; they are left so for two days, and then taken up and rubbed as before, when they are laid down again, according to the space they have to fill—from three to six hams in height, with layers of salt between. After six days, the hams are reversed in the piles; that is, those that were packed on the top are put at the bottom. They then remain for six days longer in the pile, when they are considered cured. They are then taken up and washed, and hung up to dry in the air. When they are to be smoked, they are placed in a house made for that purpose, and smoked—in Belfast, with wheaten straw and saw-dust; in Limerick, with peat or turf.

"The English method of cutting up and curing is similar to that practised in Belfast and Limerick, with the difference that—with the exception of Hampshire, and I believe one other county—they never smoke their bacon. Cumberland, Hampshire, and Yorkshire, are the principal curing counties, and the Hampshire bacon is held in higher esteem than the Westphalian.

"Of the Westphalian mode of curing I know nothing farther than that the smoke is applied *cold*. The hogs also lead a sort of wild life, and are seldom, if ever, put up to fatten before killing. Nearly all the hams called Westphalian come from Hamburg. They are cut like the Limerick and Belfast, the hip-bone being left in.

"We have this season had imported a great quantity of hams and other bacon from Cincinnati and Baltimore, in America. They are cut in the same manner as the Limerick, and are in much esteem. The cured *shoulders* of the pig have also been imported—cut straight across, with the blade in, and the shank left attached. We have also received *middles*, and quantities of pork packed in barrels, which is merely the pig cut up in pieces, and packed in pickle.

"I have reason to know that there are at the present time num-

bers of curers emigrating from our best curing districts to America, and we may accordingly expect, ere long, to find our Baltimore hams surpassing, owing to the *quality* of the pigs they will have to operate upon, even our long-famed Limerick hams. There are now very few pigs *feeding* in Ireland, the usual medium of fattening—the potato—being lost to them; and I am certain that, even were potatoes this year to resume their wonted healthy condition, and be produced in as great quantities as ever, it would yet be four years at least before we could again have pigs as plenty amongst us they as have been."

Curing bacon for the navy is a process somewhat different from ordinary salting. A little more skill is exercised in cutting up the pig into pieces of as nearly equal size as possible. A preparation of salt and saltpetre dissolved in water, and almost in a saturated solution, is placed in the curing-tub, and then allowed to remain from three to four weeks. A barrel is then provided, and the bottom covered with a layer of hay and salt, alternating layers of pork and salt up to the top, where it is covered and coopered up, so as to exclude the air as nearly as possible. A hole is then made in the head of the cask, and the saturated pickle is poured in till the cask is full, when it is plugged up and ready for use. Salt pork, as it is called, is generally a much more useful and genuine article than either of the preserved meats, or the salted beef supplied to the navy.

The principal injuries to which bacon is subject after curing is, becoming *rusty*, and being infested with the larvæ of a small fly known as *jumper*s.

The first often takes place if it be dried too near the fire, or be exposed unnecessarily to the air. In drying, it should be so near the fire as to be in its influence—so far from it as to prevent its frying, and so turning rancid, known provincially as "rusty" or "reasty" bacon.

Some parties recommend whitewashing the bacon with lime-wash after it is dried, and this is certainly a decided preventive; but it may be equally prevented by being cured with plain bran or any wholesome material which will keep it from the air.

Of *jumper*s we shall speak in the companion treatise, the "Pests of the Farm," and it is only necessary here to say, that if the bacon be covered with a sack, or some closely woven material, the parent flies will not get access, and their eggs will not be deposited in the sack. Exposed bacon, in situations liable to be affected and made wet by changes of the atmospheric moisture, is almost certain to be infested with *jumper*s. They are of no more consequence, happily, but

the mere waste ; for bacon where they exist is generally of by far the finest flavour.

In conclusion. Less has been said and written on the pig than it deserves. It is available for all who have no means of breeding any other animal ; and an amateur absolutely without land may in a very short time produce the finest breed of pigs, grow and cure his own bacon, and thus be so far independent of the supply of this greatest luxury of the table.

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