
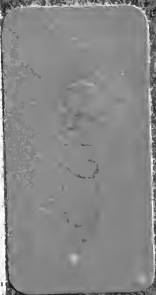
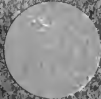
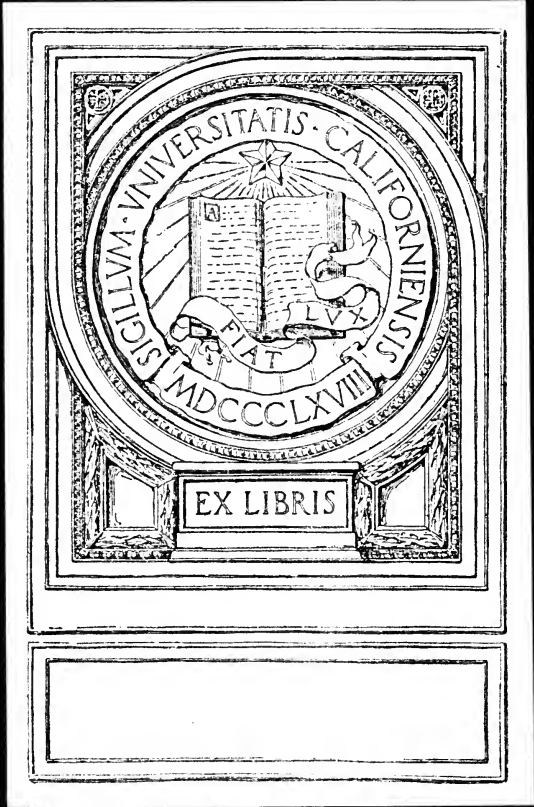


SB
322
E5

UC-NRLF

\$B 71 617





EX LIBRIS

THE CULTIVATION OF ALLOTMENTS

BY

PERCY ELFORD, M.A.

SECRETARY TO THE OXFORDSHIRE EDUCATION COMMITTEE
FORMERLY FELLOW OF ST. JOHN'S COLLEGE, OXFORD

AND

SAMUEL HEATON, F.R.H.S.

STAFF INSTRUCTOR IN HORTICULTURE TO THE
OXFORDSHIRE EDUCATION COMMITTEE

Price Eightpence net

OXFORD

AT THE CLARENDON PRESS

LONDON EDINBURGH GLASGOW NEW YORK
TORONTO MELBOURNE CAPE TOWN BOMBAY
OXFORD UNIVERSITY PRESS
HUMPHREY MILFORD



THE CULTIVATION
OF
ALLOTMENTS

BY

PERCY ELFORD, M.A.

SECRETARY TO THE OXFORDSHIRE EDUCATION COMMITTEE
FORMERLY FELLOW OF ST. JOHN'S COLLEGE, OXFORD

AND

SAMUEL HEATON, F.R.H.S.

STAFF INSTRUCTOR IN HORTICULTURE TO THE
OXFORDSHIRE EDUCATION COMMITTEE



OXFORD

AT THE CLARENDON PRESS

LONDON EDINBURGH GLASGOW NEW YORK
TORONTO MELBOURNE CAPE TOWN BOMBAY
HUMPHREY MILFORD

1917

9/23/18
SB 322

E 5

FOREWORD

NOWADAYS many people are cultivating an allotment or a vegetable garden for the first time, and any practical assistance that can be given to them should be really useful in saving them from unnecessary expense and in enabling them to grow enough garden produce to keep themselves and their families. As our work has for many years brought us daily in touch with the best methods of cultivation of vegetables, it seemed possible that our past experience might be of value to those who are beginners, and even to many accustomed to the pleasure of gardening. In this little book only those things will be recommended which our own experience has proved to be satisfactory, no operation will be described which it is not our practice to perform, and we shall endeavour to point out pitfalls into which the unwary or ignorant are likely to fall.

A. I. L.



CONTENTS

	PAGE
CHOICE OF AN ALLOTMENT	5
MANURES FOR AN ALLOTMENT GARDEN	10
ARRANGEMENT OF CROPS	13
Rotation Cropping	16
Area of crops	16
WINTER CROPPING OF AN ALLOTMENT GARDEN	17
SOWING AND PLANTING	19
Jerusalem Artichoke	19
Broad Beans	19
Dwarf Beans	21
Runner Beans	21
Beet Root	22
Broccoli	23
Borecole or Kale	24
Brussels Sprouts	24
Cabbage	25
Savoy or Dutch Cabbage	26
Carrots	27
Cauliflower	28
Celery	28
Cucumber	30
Leek	30
Lettuce	31
Onion	31
Parsnip	33
Pea	34
POTATOES	35
Preparation of the heavy ground	37
Manuring and planting	37
Manuring and hoeing	38
Earthing up	39
Prevention of disease	39

POTATOES (<i>continued</i>)	PAGE
Lifting the crop	40
Varieties of potatoes for various kinds of soils	41
<hr/>	
Radish	40
Spinach (Round)	42
Tomato	42
Turnip	43
Vegetable Marrow	43
A USEFUL TABLE FOR SOWING	44
VEGETABLE GARDEN PESTS	45
Black or Collier Fly	45
Green Fly	46
Beetles	46
Click Beetles	46
Turnip Flea Beetle	47
Weevils	47
Pea Weevils	47
Butterflies and Moths	48
Pea Moth	48
Snowy Fly	48
Carrot Fly	49
Celery and Parsnip Fly	49
Onion Fly	50
Slugs and Snails	51
Eelworms	51
Woodlice	52
Ants	52
Centipedes	52
Millipedes	52
Rats and Mice	52
Birds	53
DISEASES	53
CALENDAR OF GARDENING OPERATIONS	57

*The reproduction of the blocks on pp. 45 ff. is by the kind permission
of Messrs. Sutton & Sons, Reading.*

CHOICE OF AN ALLOTMENT

ALTHOUGH it is not always possible to select an ideal spot for an allotment garden, yet it is worth while to know what to consider if a selection is possible. The garden should not be on very high ground, since on high, exposed positions drying winds and gales may do much damage. Nor should it be too lowlying, since many lowlying gardens are subject to fogs and late spring frosts, and may even be waterlogged.

It is also desirable that the garden should have a gentle slope to the south, south-east, or south-west, so that the crops get a maximum amount of sunlight and air. Plants grown under these conditions ripen earlier and resist insects and disease better than if these conditions are impossible.

We are often asked how large an allotment garden should be. No general answer can be given. A man with a good deal of time on his hands might cultivate as much as forty poles (or quarter of an acre), but the usual sizes are half a chain (or 8 square poles), ten poles, and one chain (or 16 square poles).

There is a decided advantage in having the allotment garden long and rather narrow, especially if it is possible to have it long from east to west and short from north to south.

The *length* should be from 40 to 50 yards and the width from $5\frac{1}{2}$ to 9 yards, exclusive of the paths, which between the allotments should be about 18 inches wide. It is a good plan to make the *paths* as dry as possible, by digging out the soil to a depth of 9 inches and filling

in the space with rough broken bricks, stones, and clinkers to a depth of 6 inches and then covering the whole with fine gravel, sand, or sifted ashes 3 inches deep, making the centre of the paths a little higher than the sides. Grass paths look nice, but not only do they harbour insects but are very slippery in wet weather unless the grass is constantly cut. A foot-scraper is essential and may be easily made from a piece of hoop iron and pieces of wood. The main roads and drainage of a field of allotments, where necessary, are attended to by the Committee of Management.

Water is always greatly in demand on an allotment in dry summers. Where there is no river or stream and the water is not laid on to a field of allotments by the Committee of Management each allottee has to look after his own water-supply.

This may be done by sinking a few barrels, one above the other, at the end of the allotment. The top barrel being well above the ground and fitted with a cover, which has to be locked to prevent the more improvident allottees from taking advantage. Well-water should be exposed to the sun and air for some days before it is used.

Much of the land converted into allotments is *grass land*, and much time and money is wasted by those who do not know what to do. If the weather is favourable, the best time to 'break up' such land is from October to December, and the top 'spit' should be again moved in February or March.

A question often asked is, 'What shall we do with the turf?' If the soil is of a heavy retentive nature (clay) it is better to burn it, and mix the ashes with the seeds when sowing, this will ensure more evenly distributed

seeds, and thus economy in seeds. If, on the other hand, the soil is chalk, sand, or marl, it is better to dig it in—that is, place it grass side downwards between the first and second spits, if it is possible to move the soil two spits deep, but if only moved one spit deep, skim off the turf about 3 inches thick and place it in the bottom of the trench (which should be 18 inches wide and 12 inches deep) grass side downwards, chop it up well and cover it with a thin layer of quicklime, then dig up the soil which was under the turf one spit deep and place it on the chopped turves, in this way another trench is ready for the next set of turves.

If the soil is a good loam the turves taken off should be stacked in layers, grass side down, one above another. The stacks should not exceed 4 feet on each side and 4 feet in height.

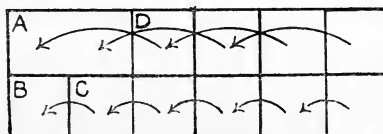
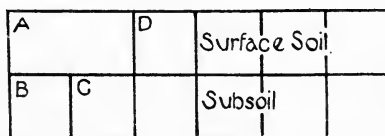
A layer of powdered quicklime should be spread for the first layer of turf to rest on, and the stack should be covered with quicklime 2 inches in thickness. The decayed turf makes excellent potting mould.

Most people understand how to *dig*, but relatively few do it well. When digging, put the spade or fork well into the ground, holding it upright, and having made a good open trench, 12 inches wide, right across the ground, as deep as the blade of the spade (known as a 'spit'), then dig a second trench by the side of the first—turning the soil well over and placing it in the first trench.

If the plot of ground is five or more yards wide it will save labour to divide it lengthways in halves, and then it will only be necessary to move the earth from the first trench a short distance to fill in the last trench. Begin working from the lowest part of the plot.

Trenching or deep digging, two spits deep or more,

has many advantages where it can be done. The orthodox way of trenching is to open out a trench one spit deep and 4 feet wide (see diagram A to D) and place this surface soil near where the last trench will be, so as to have it ready to fill up the last trench. Then half this width, *B* (2 feet), is dug out another spit deep. The earth in this deeper spit will probably be different in appearance and character from that in the top spit. It should be placed near the surface soil for filling in the bottom half



How trenching should be done.

of the last trench. The bottom of the trench (*B*), which is now 2 spits deep, should be forked up and a good dressing of animal refuse and roadside quarterings, with a sprinkling of lime on the top, should be added; the subsoil trench (*C*) should be turned on to this and more manure can be added. Then the trench (*B*) should be filled up with the top spit of the next trench (*D*). Each trench should be kept two feet wide until the work is done.

Heavy or clayey soils should have materials added

which will render them lighter and more porous, such as strawy manure, sand, brick and lime rubble.

Light or sandy soils should have leaf mould, rotted farmyard manure, and 'catch' crops—that is, mustard, vetch, &c., grown on purpose for 'green manuring'; these enable the soil to keep its moisture longer.

Where trenching is not possible *Bastard Trenching* should be done. It is the moving of the top spit and turning the second spit or subsoil without taking it out of the trench.

No one should forget that for plants to thrive the air must be able to get well down into the soil, and bastard trenching helps this.

Often it is not advisable to bring subsoil, or the second spit, to the surface, but it is good to thoroughly stir or move it.

Ridging, or roughing up the ground in winter, is usually much neglected, but it is extremely valuable as it breaks up the soil into a fine state of division, and so renders it suitable for cultivation. Water on freezing expands in the tiny cracks and crevices in the stones and forces them open, thus improving the 'tilth'.

MANURES FOR AN ALLOTMENT GARDEN

The manures usually available to an allotment holder are of two kinds—natural and chemical.

In the former, stable manure is most in demand on account of its cheapness and being easily procurable.

To be of the greatest benefit it requires some management when placed in a heap, for it loses much of its value when it gets too hot and dry, or when so saturated with water that a stream of black liquid runs from the heap; the soluble plant foods should be retained by placing occasional layers of soil, some 3 inches thick, between the layers of manure, and the top of the heap should be covered with a layer of soil at least 6 inches thick.

Cow manure is most suitable for light and hot soils.

Pig manure is suitable for light and loamy soils.

Night soil on the earth pail system may be used to advantage. Household slops are useful for watering most plants, potatoes excepted. Ten pole of ground is sufficient for the night soil from four to six people.

Chemical manures applied as a powder should be well broken up and evenly distributed. See that the manures do not fall on the leaves. A manure applied in a liquid form is of greater value as a plant-food than if applied in the form of a solid.

The following table, with diagram, gives full information on the general manures, when and how to apply them :

<i>Kind of manure</i>	<i>Plant food supplied</i>	<i>Soil most suitable</i>	<i>Time to apply</i>	<i>Quantity to apply</i>	<i>Form in which to apply</i>	<i>Suitable mixtures</i>
Basic Slag	Lime and Phosphates	Retentive	Autumn & Feb.	4 lb. per pole	Powder	May be mixed with Kainit
Fowl Manure	General	General	Spring	1 bush. per pole	"	Mixed with sifted soil and dug in. Best applied alone.
Guano	Nitrogen, Phosphates, and Potash	"	"	2 lb. per pole or 1 oz. to 1 gal. of water	Powder or liquid	
Kainit ¹	Potash	Sandy loam	Autumn & Feb.	3 lb. per pole	Powder	May be mixed with Basic Slag.
Leaves	General	Stony and sandy	Spring	2 cwt. per pole	Decayed	Kainit may be added.
Lime	Calcium	General	Winter	14 lb. per pole	Powder	Best applied alone.
Nitrate of Potash ¹	Nitrogen & Potash	"	Spring & Summer	1 lb. per pole or $\frac{1}{2}$ oz. to 1 gal. water	Powder or liquid	" " "
Nitrate of Soda	Nitrogen	Sandy loam	Spring	1 lb. per pole or $\frac{1}{2}$ oz. to 1 gal. water	Powder or solution	" " "
Salt	Chloride of Sodium	"	"	7 lb. per pole	Powder	" " "
Soot	Ammonia	General	Winter	6 " " "	"	" " "
Stable Manure	General	When new and strawy— heavy	"	1 $\frac{1}{2}$ cwt. per pole	New	" " "
" "	"	When decayed— sandy loam	Spring	1 $\frac{1}{2}$ " " "	Decayed	" " "
Sulphate of Ammonia	Nitrogen	Heavy loam	"	2 lb. per pole or $\frac{1}{2}$ to 1 oz. to 1 gal. water	Powder or solution	May be used with Phosphates.
Sulphate of Potash ¹	Potash	Sandy loam	"	1 lb. per pole or $\frac{1}{2}$ oz. to 1 gal. of water	Powder or liquid	Best applied alone or with Superphosphate.
Superphosphate	Phosphates and Lime	General	"	3 lb. per pole	Powder	May be mixed with Sulphate of Ammonia.

¹ Cannot now be bought. Use wood ashes, 5 lb. per square pole.

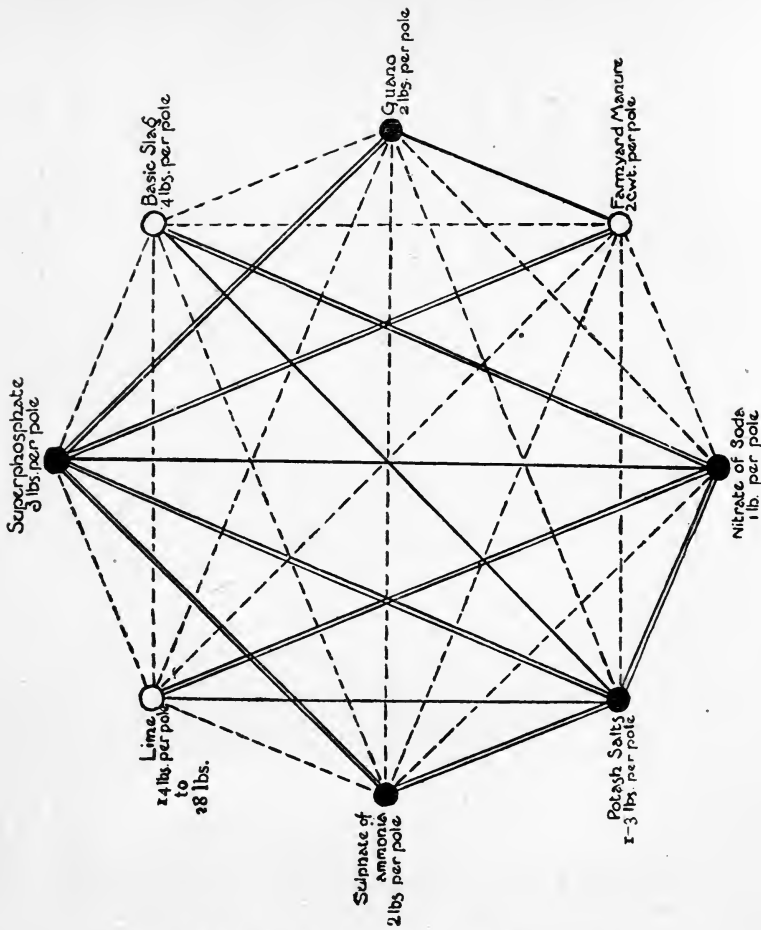
A. Manures connected by a dotted line should not be mixed
 B. Manures connected by a single line should be used immediately after mixing. C. Manures connected by a double line can be mixed and used any time. White circles show autumn and winter manuring; black circles spring and summer manuring.

Nitrogen-containing manures promote growth.
 Potassium-containing manures stimulate fruit-and formation, colour, and flavour.

Phosphatic manures increase the food-forming parts of vegetables.

These three manurial substances are, however, required for all plants, and the fertility of a soil depends on the presence of all these. If one is absent the soil will grow very little.

Peas and Beans do not need nitrogenous manures, as they can use the atmospheric nitrogen by the aid of the soil bacteria.



ARRANGEMENT OF CROPS

Special mention has been made in regard to the shape of the allotment garden.

PLAN A.

THIS SHOWS THE SYSTEM OF BAD CROPPING.

S.

Scarlet Runners.		
Carrots.	Beet.	Lettuces and Radishes.
Broad Beans		
Dwarf Beans.		
Potatoes.		
Peas.		
Onions.	Turnips. (Broadcast.)	Parsnips.
Green Crops.	Leeks.	

N.

[Turn over.]

PLAN A (continued).

Reasons why wrong—

1. The shape of the plot is wrong because the rows of crops are too long, providing more stuff at one time than can be used without waste.
2. Long rows are against frequent and successional sowings of crops, producing waste of land, waste of labour, waste of seed, and waste of crop.
3. The rows of crops should run in the direction, as near as possible, of north and south—not east and west—so as to get the maximum amount of sunshine and air.
4. Tall-growing crops like Scarlet Runners should not be planted so as to keep sun and air from the other crops.
5. Patch cropping, as is done with Carrots, Beet, &c., is wrong: it is
 - bad for seed sowing;
 - bad for cultivation;
 - bad for intercropping;
 - bad for successional cropping;
 - wastes ground;
 - conducive to diseased crops.
6. Putting all the Peas together causes a waste of ground.
7. Putting all the Potatoes together is conducive to the potato disease, unless given plenty of room.
8. The sowing of crops broadcast is a waste of seed and against good cultivation.

PLAN B.

THIS SHOWS THE SYSTEM OF GOOD CROPPING.

E.

Broad Beans.
Parsnips.
Peas.
Carrots.
Peas.
Beet.
Dwarf Beans.
Turnips.
Runner Beans.
Onions.
Peas.
Cabbages
Lettuces and Radishes.
Potatoes.

N.

S.

W.

Reasons why good—

1. Because the length of a row will provide sufficient vegetables for use without waste.
2. The short rows facilitate frequent and successional sowings.
3. Because the rows run north and south.
4. By the crops being sown in rows the weeding, thinning, &c., are much better done, and the yields are heavier and the quality better.
5. The arrangement of a dwarf and then a tall crop admits light and air to the plants, making them more resistant to insect and disease attack.

NOTE.—Other crops grown would follow in similar order, i.e. a tall-growing crop like peas would have a dwarf crop on each side of it, like Onions and Turnips. A dwarf-growing crop would have on each side of it a tall-growing crop, like Beans and Peas.

ROTATION CROPPING

A change of ground is considered for some crops, such as potatoes, cabbages, and winter greens, to be absolutely necessary. But since trenching or deep and thorough cultivation is so frequently done, and the use of chemical manures has become more common, it is not considered so necessary for onions, peas, and other crops.

For those allotment holders who wish to adopt rotation cropping the following guiding rules may prove helpful:

Rule 1. Plants of the same kind or belonging to the same family should not be grown for two or more years in succession on the same piece of ground.

Rule 2. Plants of the same habit of growth, or having the same part of the plant edible, should have a change of ground each year.

Rule 3. Plants requiring the same method of cultivation should have new ground each year.

Rule 4. Plants requiring the same 'dominant' foods should be changed.

Rule 5. Plants subject to the same insects and diseases should not be grown two years running on the same piece of ground.

Rule 6. First year, plant potatoes; second year, grow peas and beans; third year, grow cabbages and other green crops; fourth year, grow onions, leeks, and shallots; fifth year, beet, carrots, parsnips, and turnips; sixth year, light crops, such as herbs, salads, and seedlings.

If celery is grown, the trench may be made early and used as a seed bed before the celery plants are large enough to put out.

AREA OF CROPS

It is impossible to lay down hard and fast rules as to what shall be grown and the area of each crop, but on a sixteen-pole plot the following proportions may be helpful as showing what area is necessary for each crop, if well cultivated, to provide a family of six persons with vegetables all the year round. Potatoes four to six poles; legumes (peas and beans), one to two poles; green crops (cabbages, &c.), two to three poles; onions, shallots, and leeks, one to two poles; beet, carrots, parsnips, and turnips, two to three poles. The remainder of the ground for salads and herbs, and seed and nursery beds.

WINTER CROPPING OF AN ALLOTMENT GARDEN

<i>Vegetable</i>	<i>Variety</i>	<i>When sown</i>	<i>Approximate time to mature</i>
Dwarf Beans	Canadian Wonder	July	10 to 12 weeks.
Peas	Green Gem	July	10 to 12 weeks.
Turnips	Snowball	July & Aug.	8 to 10 weeks.
Beet	The Globe	July	10 to 12 weeks.
Carrots	Early Gem	July	10 to 12 weeks.
Onions	Ailsa Craig	July & Aug.	To stand the winter.
Cabbage	Flower of Spring	July & Aug.	To stand the winter.
Cauliflower	Magnum Bonum	Aug. & Sept.	Requires protection through the winter.
Lettuce, Cabbage	Earliest of All	July	8 to 10 weeks.
„ Cos	Winter White	Aug.	To stand the winter.
Spinach	Round	July & Aug.	6 to 8 weeks.
„	Prickly	Aug. & Sept.	To stand the winter.

Plant out into permanent quarters in June and July: Broccoli (heading and sprouting), Kale, Brussels Sprouts, Savoys, Celery, Leeks, and Cabbage.

NOTE.—Sow Mustard on vacant ground for green manuring when it is too late to put in any other crop.

Adopting the methods outlined, so far our results show an unusually good yield—far better than the

average in the neighbourhood. The following table shows the actual yields of crops grown on a ten-pole plot in 1916.

Length of plot from east to west, 50 yards; length of rows 16½ feet from north to south.

<i>Crop</i>	<i>Variety</i>	<i>No. of rows</i>	<i>Yield</i>
Jerusalem Artichoke	Sutton White	1	112 lb.
Vegetable Marrows	Mixed, long	4 plants	20
Turnip	Early Snowball	2	40 lb.
Spinach	Round	2	1 bushel
Runner Bean	A 1	1	30 lb.
Pea	Hundredfold	1	12 lb.
Potato	King Edward VII	5	112 lb.
Five rows of seeds ¹			
Potato	Stirling Castle	5	112 lb.
Dwarf Bean	Haricot	1	20 lb.
Potato	Eclipse	5	392 lb.
Cabbage	Earliest	1	16
Leek	Musselburgh	1	32
Lettuce	Superb White Cos	1	32
Parsley	Imperial Curled	1	1 bushel
Spinach	Round	2	1 bushel
Dwarf Bean	Haricot	1	15 lb.
Parsnip	Tender and True	2	60 lb.
Beet	Sutton Globe	2	48 lb.
Turnip	Snowball	4	100 lb.
Dwarf Bean	Canadian Wonder	1	30 lb.
Carrot	Favourite	6	112 lb.
Runner Bean	A 1	1	40 lb.
Onion	Improved Reading	6	56 lb.
Pea	Early Giant	1	10 lb.
Potato	Reliance	5	432 lb.
Pea	Early Giant	1	15 lb.
Potato	Centenary	5	156 lb.
Pea	Early Giant	1	16 lb.
Potato	Harbinger	5	384 lb.
Potato	Golden Wonder	1	28 lb.
Parsley	Imperial Curled	1	½ bushel

¹ Kale, Sprouting Broccoli, Savoy, Cauliflower, and Brussels Sprouts. These were planted between the potatoes and after the early potatoes were got up.

Leeks were dibbed in between the rows of Onions.

Lettuces were transplanted between any of the crops where there was room.

SOWING AND PLANTING

Having prepared the garden, and having decided the crops to be grown, it is necessary to decide what kind of seeds and what quantities to get.

To assist in this selection a list of the vegetables which have been grown in gardens under our personal observation will now be given.

Jerusalem Artichoke. This useful vegetable, as the stems grow very tall, should only be grown on the east as a screen to hide unsightly objects and as a shelter for more tender plants from the north-east winds.

Plant the 'tubers' in March in rows 3 feet apart, each tuber being 15 inches from its neighbours in the rows, and from 4 to 6 inches deep.

The yield is much improved if the ground is deeply dug and well manured before the tubers are planted.

One gallon of seed tubers (7 lb.) will plant 60 feet run, and the amount of yield that may be expected is at least 4 bushels (32 gallons). The produce should be worth, approximately, 3*d.* per gallon.

If, when the plants are from 12 to 18 inches high, the tops are 'pinched out' they can be dwarfed.

Varieties to grow : 'New Pearly White' and 'Sutton White'.

Broad Beans. Broad beans should be grown in retentive heavily manured soil.

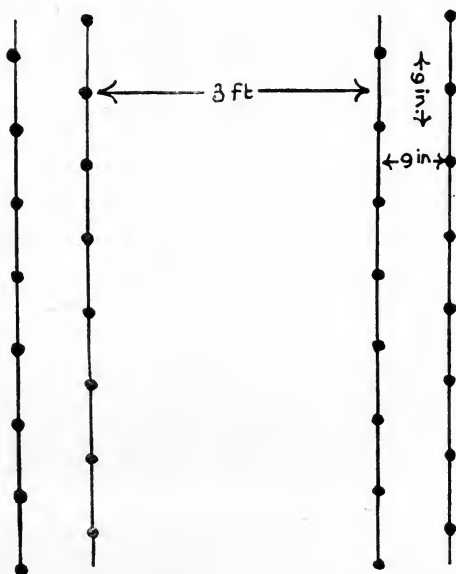
Make successional sowings or plantings from February up to, but not beyond, April. The seed should be planted 3 inches deep in single rows 2 feet apart, the seeds being 4½ inches apart in the row, or they may be planted in double rows, each pair of rows making a

double row, being 3 feet apart from the next double row, and the seeds 9 inches apart in and between the rows.

Single row thus :



Double row thus :



Double Rows of Broad Beans.

One pint of seed will plant 60 feet run, and if everything is favourable the yield should be about 1 bushel. For successional crops 'Early Mazagan', or 'Dwarf Cluster', 'Seville Longpod', and 'Green Giant' are suitable.

Keep hoeing between the rows to keep down weeds and to promote rapid growth. If the black aphid

appears pinch off the tops affected and burn them. The topping of broad beans increases the size of the pods and beans and hastens maturity. In hot dry seasons a light 'mulching' of strawy manure and occasional syringing overhead is always beneficial.

Dwarf Beans. Dwarf or French beans should be planted or sown on well and deeply worked soils which have been manured in the winter. A dressing of lime is beneficial to all legumes.

Successional sowings should be made from May 1 to the middle of July. Sow in rows 2 feet apart and from 2 to 3 inches deep. When the plants are well above ground thin them out to 10 or 12 inches apart in the rows. Hoe the ground frequently and well. When the pods are formed a mulching of strawy manure can be given in hot dry seasons.

Periodical syringing overhead will keep the plants free from 'red spider' and will promote healthy growth.

Of the many varieties grown and recommended we have not found a better than 'Canadian Wonder'.

One pint of seed will sow 160 feet run, and the yield in a good season has been 4 bushels (256 lb.)

Plants mature in about twelve weeks; in good seasons we have gathered beans ten weeks after sowing of 'Williams's Early Dwarf' and 'Ne Plus Ultra' varieties, and we have also gathered from the same plants for ten weeks.

Runner Beans. A rich loam dug up roughly in the winter and re-dug in the spring mixed, where the seed is to be planted, with plenty of good well-rotted manure suits runner beans well. Plant the seed during May and June in rows 12 feet apart, with the seed 9 inches apart if the beans are to be 'staked', and a dwarf crop, such

as beet, should be grown between the rows. If, however, the beans are to be 'pinched' and grown without sticks, then plant in double rows 2 feet apart and 12 inches from seed to seed, planting the seed 3 inches deep.

We have found very little, if any, difference in the total yield from a given area between runner beans staked and not staked, but as the latter matured earlier a better price was obtained for them.

Hoe, mulch, feed with liquid manure, and syringe the crops freely in dry seasons if you desire good results.

To maintain a continuous supply keep gathering the pods as soon as they are ready, since the ripening of the pods takes all the energy of the plant which otherwise is employed in forming fresh pods.

One pint of seed will plant a 100-foot row, and the yield in a good season should be about 10 bushels.

The crop takes about fifteen weeks to mature.

Of a very great many varieties we have grown, 'A 1' and 'Best of All' have given us the best results.

Should there be an over-abundance of either runner or dwarf beans and no sale, it is desirable to pickle them for winter use, as this is very easily and simply done. Take an earthenware jar, clean it thoroughly, and then dry it. Place in it a layer of salt, then on this a layer of the picked beans, neither too old nor too young, then another layer of salt followed by another layer of beans, and so on till the jar is full. Fasten the jar down so that the cover is air-tight, and keep it in a cool dry place.

Beet-root. This important root requires a deeply worked soil, and the oftener the ground is moved during the winter the better. No farmyard manure should be mixed with the surface soil or the roots will probably be forked. This crop should follow a crop like peas, celery,

onions, or cauliflower, for which the ground was well manured.

Before sowing the seed rake over the bed and get a fine even tilth, clearing away all rough stones.

Sow the seed in drills, or channels, 1 inch deep and 12 inches apart. The sowing should be done from April to the end of June. Hoe frequently and thin out the plants to 6 inches apart. For early and late sowings, for immediate consumption, sow the 'Globe' or 'Egyptian' turnip-rooted varieties which will mature in about twelve weeks.

For winter use sow tap-rooted varieties about the middle of May if quality is wanted.

After trials of over twenty varieties we can recommend 'Pine Apple' and 'Blood Red'.

One ounce of seed will be ample for a row 100 feet long, and the produce should weigh from 2 to 3 cwt.

When 'lifting', that is, digging up the roots, be careful not to bruise the skin nor to break off the roots. Do not cut, but twist off the leaves. Lift the roots before the frost comes and store in dry sand or 'pit' them, i. e. place them in a heap in the garden, cover them with straw and then with a layer of earth 4 to 6 inches thick, placing a wisp of straw through the top of the soil for ventilation purposes.

Broccoli. The varieties of broccoli are so numerous that one can have (weather permitting) broccoli for ten months in the year.

Quarter of an ounce of seed will provide plants for a 400-foot row at 2 feet apart. For autumn crops sow under glass in February, or in the open in March; for spring crops sow in the open at the end of April or the beginning of May. Sow the seed thinly in a fine tilth in

drills 12 inches apart, covering the seed very lightly (not more than $\frac{1}{2}$ inch deep) with fine soil. Transplant from the seed-bed or frame into a nursery-bed before the plants get 'drawn' and 'leggy', and finally transplant into their permanent quarters which, for autumn crops, should be a well-manured soil; but for spring crops the soil must not be too rich, since a luxuriant and succulent growth before the winter would render the plants too delicate to stand severe cold winds or keen frosts.

Plant in drills 2 inches deep and 2 feet apart each way, and when the plants have got a good start earth them up and give them plenty of water to promote growth and to give a certain amount of protection against strong winds. Shade the plants from the sun's scorching rays.

The varieties we can generally recommend are 'Michaelmas White', 'Autumn Protecting', 'Satisfaction', and 'Late Queen'.

Borecole or Kale. This very useful winter vegetable requires well-cultivated ground, but not over-manuring. It is often planted between rows of potatoes at 2 feet apart from plant to plant. A quarter of an ounce of seed will provide hundreds of plants. Sow the bed in April and May very thinly and transplant, before the plants get 'drawn' and spindly, soon after the potatoes are earthed up.

Both the plain and curled-leaved sorts are suitable for allotment gardens. Variegated kales should be grown in poor and calcareous soils.

Brussels Sprouts. To get very early crops make a sowing of the seed in August, pricking out the plants to 6 inches apart and transplanting in the spring into rows 2 feet apart and the plants also 2 feet from one another

in the row. In some seasons these plants are apt to run to seed. Where facilities, such as greenhouses or hot-beds, are obtainable make a sowing in February, prick out the plants early into boxes, and transplant into their permanent quarters in April.

As these sprouts are an important crop the ground intended to receive them should be ready for them as soon as the plants in the seed-bed or boxes are ready to be transplanted.

Successional sowings can be made in the open in March and April. Prick out the plants, when large enough to handle, in rows 12 inches apart, and the plants 6 inches apart in the row. Then, not later than June, plant out in ground in good condition and well manured for the previous crop. This final planting should be in rows 3 feet apart and the plants should be from 2 to 3 feet apart in the row. Where ground is limited plant between every two rows of potatoes after they are earthed up. The plants require a long period, approximately twenty-four to thirty weeks before maturity.

Sprouts should be gathered systematically from the base upwards, leaving the head until the sprouts are all gathered.

Varieties: 'Dwarf Gem' on good fertile loams but not for shallow soils or exposed localities. The tall-growing varieties are 'Exhibition' and 'Matchless', these seem to do well anywhere.

Our experiments have proved that there is an advantage in pricking out the plants at least once before the final planting.

Cabbage. To get early 'spring' cabbage', i.e. in April, May, and June, sow the seed between the 7th

and 14th of August ; prick out, when large enough to handle, 4 inches apart each way, and plant out in October, or later during open weather, on firm ground which had been well manured for a previous crop. The rows should be 18 inches apart and the plants 15 inches from each other in the row.

In spring hoe the ground freely, but not very deeply, and give the plants in showery weather a light dressing of sulphate of ammonia ($1\frac{1}{2}$ lb. to a pole), but in applying it be careful not to let the manure touch the foliage, then mulch with half-rotten stable manure.

'April' and 'Flower of Spring' are good early varieties. Cabbage is not in great demand through the summer, it is wanted in the autumn and early winter. Most varieties that are sown in spring will be ready for use in from fourteen to sixteen weeks from the date of sowing. Sow thinly, prick out early, and plant in rows 2 feet apart and the plants 18 inches apart in the row.

'All Heart' and 'Improved Nonpareil' are good varieties for general or autumn and early winter use.

Red Cabbage should either be sown in August, or 'in heat' in early spring. The plants when thinned out should be in rows 2 feet apart and 2 feet from plant to plant in the row.

Savoy or Dutch Cabbage. This cabbage is usually sown much too early. April and May are the proper months for sowing. Some varieties may be obtained fit for use at the end of September, but there is no particular advantage in having savoys so early in the season, as their chief recommendation is their great hardiness which renders them available for use during the winter months when other vegetables are difficult to obtain. The varieties we have found most advan-

tageous to grow are 'Sugar Loaf' and 'Best of All'. The former is unique in its habit of growth and can be planted in rows 18 inches apart, and the plants need not be more than 12 inches apart in the row. Savoy's can be planted out after early potatoes and in ground well manured for the previous crop.

Carrots. The soil for carrots should be well trenched or dug in during the winter and if any stable manure is applied it should be well rotted and should be placed at the bottom of the trench. An ideal soil is a sandy loam of great depth. The roots cannot be grown successfully in lumpy soil. Lumps must be broken up and a fine tilth obtained before the seeds are sown. Should it be impossible to obtain this condition it is advisable to make holes with an iron bar in rows a foot apart and with the holes 8 inches from one another in the rows. These holes should be from 12 to 18 inches deep. A fortnight or so before sowing the seed the holes should be filled in with a compost made of ordinary garden soil, leaf mould, sand, and wood ashes, sifted through a half-inch mesh sieve. Sow only three or four seeds in each hole and on thinning out leave only one plant in each hole. Sowings of carrots can be made out of doors from the end of March till the end of June. For a *late* crop sow an *early* variety late in June. A great mistake is often made by sowing carrots for winter use too early. (The same may be said concerning beet and parsnips.) The crop matures in sixteen to twenty weeks. May is a good time for the main sowing.

Sow in rows 12 inches apart at a depth of about half an inch. Half an ounce of seed will sow a row 100 feet long and the yield should be approximately $1\frac{1}{2}$ bushels. Mix the seed with fine dry soil, or sand, to sow thinly.

When the plants are growing thin out to 3 inches and then to 6 inches apart in the row. We have found 'Early Gem', 'Favourite', and 'New Red Intermediate', satisfactory varieties to grow.

The roots should be 'lifted' before the frost comes, and then the roots should either be 'pitted' or stored in dry earth or sand.

During summer the hoe should be kept going steadily. A light dressing of sulphate of ammonia, $\frac{1}{2}$ oz. to each yard run, during showery weather, is helpful.

Cauliflower. The cauliflower requires a well-cultivated and rich soil. Unless there is convenience for sowing indoors for the early crops it would be advisable to buy the plants required. If 'heat' can be had sow early in February. Prick out into boxes as soon as the plants are large enough to handle, and plant in the open about the beginning of April in rows 18 inches apart and 15 inches from plant to plant. At the end of March or early in April sowings can be made outside, sow thinly and prick out early, 6 inches apart from plant to plant, in richly-prepared ground; finally plant out when large enough in rows 2 feet apart and 18 inches from plant to plant. The time the crop takes to mature is from sixteen to twenty-four weeks.

The varieties we can recommend are 'Purity', 'Early Giant', and 'Autumn Mammoth'.

To keep the heads a good colour tie up the leaves or break them down over the 'flower'.

Celery. Celery should be grown in a rich soil retentive of moisture, but with no stagnant water. For early crops sow in March under glass, but for the main crop sow outside on a warm border where the young plants can be protected from cold winds during April. When

the seedlings are large enough to handle, prick out from the early sowing to 6 inches apart into a frame in which good rotten dung, leaf mould, and loam have been well mixed together and laid to a depth of several inches ; water and shade them for a few days, encourage 'stocky' growth in the plants by giving them air on all favourable occasions. High temperature and sudden changes tend to produce 'bolting' of the plants. During the growth of the plants the trenches into which they have to go must be prepared. Many systems are recommended. We find that if trenches are marked out 3 feet apart, about 15 inches wide and 12 inches deep, and 6 inches of this is filled in with a mixture, thoroughly made, of rotten manure, leaf mould, and surface soil, the results are as satisfactory as with more elaborate methods. When transplanting into the trenches one must first see that the soil in the trenches, as well as that in which the plants are growing, is nice and moist. If there seems a tendency to dryness give a thorough soaking the day before planting out. Lift the plants carefully with a trowel and plant about 8 inches apart in the trench. After planting out give the plants a good watering and shade for a few days. During the summer the plants should be well watered, and liquid manure, both farm-yard and chemical, should be supplied. Do not begin to 'earth up' the plants until the growth is practically completed. The edible part of the celery is the blanched leaf-stalk. The 'blanching' or 'earthing up' is done either by putting and pressing finely powdered soil round the plants, taking care that none of it gets into the heart of the plant, or by putting strong paper round each plant. It takes from six to eight weeks to properly blanch the leaf-stalks.

The varieties grown satisfactorily are 'A 1' (red), 'Solid White', 'Leicester Red', and 'White Gem'.

Cucumber. The open-air cultivator must either dig out a trench 2 feet wide and 1 foot deep, or must make holes 2 feet across and 1 foot deep, the holes being 4 feet apart. The trench or the holes must be filled with some 'heating manure' which must be lightly trodden down and covered with about 4 inches of soil. This should be done early in May. Towards the end of the month the seed should be sown 12 inches apart in the trenches, eventually thinning to 3 feet apart. Where holes are made three seeds should be planted in each hole, eventually thinning out to one plant in each hole.

Protect the plants from cold winds and frosty nights whilst young.

After they are established and growing freely pinch or stop the plants. Water and feed with liquid manure through the summer.

'King of the Ridge' and 'Stockwood' are good serviceable varieties.

Leek. The leek should have a long season of growth, from twenty-four to thirty weeks.

There are many methods of cultivation adopted, but the simplest and probably the best is to sow the seed in March and April rather thickly; allow the plants to grow till 8 inches high, then plant out with a dibber into rows 12 to 18 inches apart and the plants 8 inches apart in the row, making holes 6 inches deep and dropping a plant into each hole up to the base of the leaves.

During the summer keep the hoe going freely; water and feed with natural and artificial manures as necessary. As the plants grow earth up to the base of the leaves. To get large exhibition leeks sow the seed much

earlier, prick out, and afterwards plant into trenches enriched with plenty of farmyard manure ; feed freely and earth up as required.

Some excellent leeks can be had the following April and May by dibbling in plants on an onion bed as soon as the onions are lifted in the autumn.

Little growth will be made till spring, the plants will then grow freely, and if attended to by hoeing, earthing up, and feeding they will do well.

Good varieties to grow are 'Prizetaker', 'Favourite', 'Musselburgh', and 'The Lyon'.

Lettuce. To get early spring lettuces sow the seed in August and September. Plant out when large enough into rows 12 inches apart and the plants 6 inches apart in the row.

To stand the winter they should have as much protection as possible from damp and frost, therefore planting under trees and fences is advisable.

Sowing outside can commence in March and be continued at intervals till the autumn sowing in August or September. For early work sow the cabbage type which turns in quickly. 'Commodore Nutt', 'Malta', 'Continuity', and 'Tom Thumb', are good.

To obtain large exhibition cos lettuces plant in richly manured ground and feed. Plant in rows 12 inches apart and the plants 9 inches apart in the row.

Now there are so many self-folding varieties the tying up of the leaves when the plants are three parts grown is not much done.

Good varieties are 'Superb White Cos', 'Mammoth White', and 'Peerless'.

Onion. The successful cultivation of the onion requires a deep rich soil and a long period of growth.

The ground should be trenched 2 to 3 feet deep in the winter, in the bottom trench add garden refuse, road-side quarterings, &c. ; to the top spit add plenty of good stable manure, and if the soil is retentive add 7 lb. basic slag, 5 lb. wood ashes, and when raking down the bed for seed sowing add 5 lb. of soot to each pole of ground. Burnt soil and lime are good for heavy soils. To a light soil give a mixture of 4 lb. superphosphate and 4 lb. kainit, adding, when raking down the bed for seed sowing, 3 lb. of salt and 5 lb. of soot—these quantities to each pole of ground.

During March, on a nice dry day and when the soil is workable, break down the lumps of earth, rake off the stones, level the ground, and tread to get a firm surface.

Draw drills at 1 foot apart and about $\frac{1}{2}$ an inch deep.

Sow the seed thinly, making an ounce do a 200-foot row. When the plants are up in the row hoe to loosen the surface soil, but do not hoe deeply.

Thin as required for use, finally leaving the plants 6 inches apart in the row.

Feed with guano, nitrate of soda, and soot. For quantities see table.

In a hot dry summer mulch with short manure.

When the tops show signs of ripening bend them over, this will have the effect of swelling and ripening the bulbs. Before storing have the bulbs well ripened by laying them out on a gravel path, hurdles or corrugated iron.

The varieties for sowing outside are 'A 1', 'Improved Reading', 'Nuneham Park', 'White Spanish', and 'White Globe'.

The varieties to grow for exhibition, and to be sown under glass in January and February, and planted out

in April in rows 18 inches apart and plants 12 inches apart in the row, are 'Ailsa Craig,' 'Cranston's Excelsior,' and 'Southampton Champion'. Lift and plant with a trowel.

Autumn-sown onions are larger and earlier than spring-sown and are considered almost proof against the fly.

The approximate time for sowing is the first week in August.

Sow thinly in rows 1 foot apart, do not thin out or transplant till the following March; then thin to 3 inches apart, afterwards to 6 inches apart, using the thinnings for home use.

In regard to transplanting of autumn-sown onions, the results of a number of experiments showed the yield in weight to be as four to five in favour of non-transplanting. But the percentage going to seed was considerably less in the transplanted than the non-transplanted, being as two to three.

A good crop would be from 4 to 6 bushels from a pole of ground.

The following out of thirty varieties sown in the autumn gave good results: 'James's Long-keeping', 'Deptford', 'White Spanish', 'Cranston's Excelsior', 'Giant Rocca', 'Giant Zittau', and 'A 1'.

Almost any variety of onion can be grown for pickling if the seed is sown thickly close up to a row of peas and not thinned.

Parsnip. The ground for parsnips should be well trenched or deeply dug in the winter; and if any stable manure is added put it at least 12 inches deep in the trench.

Before sowing the seed, which can be done from

February till end of April, rake down the soil and get an even surface, draw the drills 15 inches apart and about 1 inch deep. Sow the seed very thinly, making an ounce do a 200-foot row. Thin the plants early, first to 5 inches apart and then to 10 inches apart ; keep the hoe going freely through the summer. A few roots can be lifted as required for use, but the bulk of the crop should remain in the ground as long as possible. When lifted store in sand or dry earth or else ' pit ' them. In very heavy soil the land can be ' barred ' for the crop, i. e. holes can be made in the ground as for carrots, or some of the roots can be grown in small drain-pipes.

' Tender and True ' and ' Hollow Crown ' are good varieties to grow ; the former does particularly well on a shallow stony soil and the latter on a well-cultivated loam.

Pea. For very early crops sow round peas, not wrinkled, on a south border in October and November, as these are hardy and of a dwarf habit of growth. Usually February is soon enough to make the first sowing of peas outdoors.

Choose a nice warm border and sow a dwarf-growing variety like ' William Hurst ' in drills 2 feet apart. Successional sowings can be made in the open till the end of June, sowing an early variety for the late crop. The ground for peas should be well dug or trenched in the winter, mixing with the soil lime rubble and bone meal, or in place of these a quantity of basic slag 4 oz. to the square yard.

At sowing time level down the ground and dig a trench one spit deep ; mix with the soil at the bottom of the trench, if sweet and good (if not, throw it out and replace with surface soil), plenty of rotten manure,

then add 3 inches of surface soil; sow the peas on this and cover 2 or 3 inches deep.

Instead of sowing the peas together, row after row, we find it an advantage to have a dwarf-growing crop like beet or carrots between each row; this would make the rows of peas say 6 to 12 feet apart.

Before staking peas they should be earthed up. Then place some bushy birch twigs at the bottom to protect and support the young plants, afterwards the ordinary sticks. Staking peas should be done carefully; first, the sticks should be in line; secondly, they should be placed in a sloping direction in opposite ways on each side of the line; thirdly, the tops should be shortened to give a finish to the work.

For general crops sow the seed much more thinly than for early crops. One pint will sow 80 to 120 feet.

The approximate time of maturity of the crops sown in spring and summer will be from twelve to sixteen weeks.

The following have proved good varieties to grow: 'Early Giant' (3 feet), 'Gradus' (3 feet), 'Thomas Laxton' (3 feet), 'Duke of Albany' (5 feet), 'Autocrat' (4 feet), 'Ne Plus Ultra' (6 feet).

The approximate heights of growth are given, but their height will depend to a great extent on the soil, situation, and season.

Potatoes. The successful cultivation of the potato depends on very many things: first the soil must be deeply dug or trenched during the winter and left rough, for the atmospheric agencies to pulverize and aerate it.

We may here point out that some varieties will give four times the yield of other sorts, though grown in the same soil and under the same methods of cultivation.

This shows the necessity of having in each field of allotments a trial plot, with a view of finding out the most suitable varieties of potatoes and other vegetables for that particular locality.

The varieties which were grown on a heavy loam with a clayey subsoil, and which yielded from $10\frac{1}{2}$ lb. of seed tubers planted a crop of 7 bushels weighing 392 lb. from one pole of ground, with very few small or diseased tubers, were Harbinger, Eclipse, and Reliance.

On a sandy loam with a gravelly subsoil similar results have been got with Sutton's Seedling, Acquisition, Edinburgh Castle, and Satisfaction varieties of potatoes.

The following is a description of the way in which we got 7 bushels of potatoes from one pole of ground in 1916 :

The potatoes bought for planting were guaranteed Scotch grown, and were specially grown for seed purposes.

The price paid for them was from one to two shillings a gallon (weighing 7 lb.). The potatoes were got in January, and as soon as they arrived they were unpacked and set out in shallow boxes with the 'rose' or 'crown' end upwards, and placed, till the time for planting, in a well-lighted, airy, and frost-proof room.

A weekly inspection of the boxes was made, with a view of taking out and burning unsound tubers, if any showed signs of decay, and also, if necessary, of changing the positions of the boxes so as to get a uniform growth of sturdy and well-coloured shoots on all the tubers.

The tubers, weighing from 1 to 2 oz. each, were only allowed to develop two shoots each, whilst the tubers weighing over 2 oz. were allowed to develop three

shoots each. Most of these tubers were cut at planting time.

Preparation of the heavy ground.—The potatoes were planted on ground which was previously deeply cultivated for root crops. As soon as the crops were lifted, which was in September, the ground was rough dug to a good depth, and then 14 lb. of powdered quicklime was scattered over the surface.

In the following February and March, when the ground was not too wet, it was again turned over.

A trench was taken out one spit deep ; the second spit was turned over and well broken up, but kept at the bottom of the trench. Nothing more was done to the ground till planting time.

Manuring and planting.—The planting of the potatoes was done from the beginning to the end of April.

On a fine day, when the soil was fairly dry, the rows were measured off at 2 feet apart (from left to right) and sticks placed at the ends of the rows.

Beginning with the first row a line was stretched from one end to the other and a trench one spit deep (about 10 inches) was dug out. Into the trench was put $\frac{1}{4}$ cwt. of half-rotted stable manure with a quantity of decayed vegetable refuse and the ashes of burnt garden refuse. This was thoroughly mixed (using a fork) with some of the soil of the second spit and some of the surface soil which was thrown out in the making of the trench. After thoroughly mixing, the compost was spread evenly in the bottom of the trench, which was now about 6 inches deep and ready for the seed tubers.

The tubers were carefully examined before they were planted ; those weighing from 1 to 2 oz. and with not more than two shoots, had a small piece cut from the

heel end of each tuber. The cut part of the tuber was then dipped into powdered quicklime.

Sets weighing over 2 oz. each, and with three or four shoots, were cut lengthwise, the cut parts being similarly treated to the above.

The sets were laid carefully out in the trenches at an angle of about 45 degrees, and one way. The distance from set to set was approximately 16 inches, or 96 sets from one pole of ground.

They were then covered about 2 inches deep with soil from the edges of the trenches, taken off in a slanting manner and broken up into fine even particles, so as to get a thoroughly aerated surface soil directly touching the tuber to encourage its start. The trenches were finally filled up and levelled off with the soil which was left when the trenches were first dug.

A dressing of superphosphate was then scattered over the soil, a quantity of 2 oz. to the square yard, or 4 lb. per square pole of ground.

Nothing more was done till the plants were up in row, which was in about three or four weeks' time.

Manuring and hoeing.—As soon as the plants were up in row, advantage was taken of the first fine day when the soil was fairly dry to flat-hoe between the plants and between the rows.

On the first showery day after the hoeing, a dressing of equal quantities of sulphate of potash¹ and sulphate of ammonia at the rate of 1 oz. to the square yard, or 2 lb. per square pole of ground.

Care was taken not to sprinkle the manure on the leaves.

¹ When sulphate of potash cannot be bought, wood ashes are a good substitute.

The ground was flat-hoed once a week from the time the plants were up in row till the time they were earthed up—a matter of three to four weeks.

Earthing up.—The earthing or moulding up of the late sorts of potatoes was done twice, at an interval of about a fortnight.

Great care was exercised in doing it. (1) A fine day was chosen when the soil was in a workable condition ; (2) the soil was brought up from midway between the rows of potatoes so as not to cut off or injure the plants or roots ; (3) the soil was broken up evenly and into moderately sized particles—not brought up and left in large and irregular lumps ; (4) the tops of the ridges when finished off were roughly semi-circular in shape.

By this method of earthing up, very few tubers grew out of the soil ; and potatoes earthed up in this way are very much less subject to disease.

If, after a heavy rain, the soil on the ridges had been beaten down and was likely to become ' caked ', a rake was lightly drawn over them from the bottom of the ridges upwards.

After the final earthing up, the depth of the trenches between the rows was approximately from eight to ten inches. The soil in the trenches or furrows was hoed once or twice till the growth of the potato haulm was too big. Weeds were not allowed to grow at any time. As soon as a weed, likely to interfere with the growth of the crop, was seen, it was pulled out.

Prevention of disease.—A watchful eye was kept for the potato disease. As soon as a diseased leaf appeared, it was at once cut off. Where the haulm was thick it was well thinned out (judiciously of course) to admit light and air. This treatment retarded the development of the disease.

At the end of August the whole of the haulm was cut off.

Lifting the crop.—Some of the roots of the early variety Harbinger were lifted the last week in June.

The whole of the crop of the three varieties was lifted by the end of September.

Particulars of the varieties, with yields :

<i>Variety.</i>	HARBINGER.	ECLIPSE.	RELIANCE.
<i>Season.</i>	Early.	Early.	Late.
<i>Shape.</i>	Round.	Kidney.	Kidney.
<i>Planted.</i>	Apr. 1 to 8.	Apr. 10 to 18.	Apr. 20 to 30.
<i>Quantities planted.</i>	10 lb.	10½ lb.	10½ lb.
<i>No. of sets.</i>	96.	96.	96.
<i>Lifted.</i>	June and July.	Aug. and Sept.	Sept.
<i>Total yield.</i>	384 lb.	392 lb.	432 lb.
<i>Area.</i>	1 pole.	1 pole.	1 pole.

The small and diseased tubers were very few.

Radish. Radishes delight in a rich, moist, warm soil. They should be grown quickly and eaten when young. For early crops out of doors sow in February and March on a south border on beds 4 feet wide ; rake the soil down fine, sow the seed broadcast and cover with about an inch of finely sifted soil, or rake the seed in and cover with straw, which can be raked off after germination and used at nights only in severe weather.

Make successional sowings at intervals of ten days to a fortnight.

Early thinning of the plants is very important, for those crowded make plenty of top but no root.

An ounce of seed will sow 60 square feet.

The plants will mature in from six to eight weeks.

From trials of a great many varieties we can recommend : ' Red and White Turnip-rooted,' ' Scarlet Olive,' and ' French Breakfast '.

VARIETIES OF POTATOES FOR VARIOUS KINDS OF SOILS.

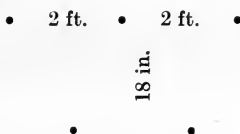
Season	Chalky	Clayey	Ironstone	Loamy	Sandy	Stonebrash
Early	2. Eclipse 1. Epicure 3. Sharpe's Vic-tor	2. Eclipse 1. Harbinger 2. Sir John Llewelyn	2. Eclipse 4. Ninety-fold	1. A 1 2. Gladiator 4. Ninety-fold	1. Epicure 4. Ninety-fold	2. Sir John Llewelyn 4. Sharpe's Express
2nd Early	2. British Queen 2. Edinburgh Castle	2. Ideal 1. Windsor Castle	2. Edinburgh Castle 2. Supreme	1. Acquisition 1. Centenary 1. Windsor Castle	1. Acquisition 1. Balmoral Castle (ling) 1. Sutton Seed-ling	1. Windsor Castle 2. Royal Kidney 1. Warwick Castle 1. Stirling Castle
Main crop	1. Evergood 1* Flourball	2. Abundance 2* White City	1. Evergood 1. Flourball 2. Main crop	2* Abundance 1* Great Scot 5. KingEdw. VII 7. Satisfaction	2. Warrior 2. Cottar 5. KingEdw. VII	2. Abundance 1. Arran Chief 1. Great Scot
Late	2. Reliance 1. Duchess of Cornwall	2. Reliance 1. Duchess of Cornwall	1. Factor 6. Up-to-date	2. Reliance 7. Superlative 6. Up-to-date	1. Scottish Champion 1. The Factor 6. Up-to-date	2. Reliance 6. Up-to-date

Description: 1. White round. 2. White kidney. 3. Round, yellow flesh. 4. Kidney, yellow flesh. 5. Coloured kidney. 6. White oval. 7. White oblong. * Recommended for planting in soils where 'black and corky scab' diseases have been found.

Spinach (Round) should be sown from February to May in deep and well-cultivated and manured ground in rows 12 inches apart. The seed sown in drills 1 inch deep and the plants afterwards thinned out to 6 inches apart. The crop takes 6 to 8 weeks to mature.

Tomato. To grow tomatoes successfully out of doors the seeds *must* be sown under glass, and healthy, strong plants procured for planting out.

Sow the seeds on a hotbed or in a heated greenhouse any time during the first fortnight in March. Prick out the seedlings when large enough to handle and grow the plants steadily, giving plenty of air on all favourable occasions, till about the first week in June, when they can be safely planted outside, either against a south wall or in the open; if the latter, plant in double rows 2 feet apart, the lines forming the double rows being 18 inches apart and the plants 2 feet apart in the lines and planted alternately—thus



The soil must not be over rich for tomatoes, or leaf and branch will take the place of fruit. Plant firmly and tie each plant to a stake about 4 feet in height.

During growth pinch out all side-shoots, and when the plants have reached the top of the stakes pinch out the leader or growing-point.

After the fruit is set and the plants are rooted, mulch with horse-droppings and feed with farmyard liquid manure or a little chemical manure.

The approximate time from the sowing of the seed to

the ripening of the fruit is twenty weeks. From extensive trials during the last thirty years, the following varieties have succeeded well out of doors, viz. 'Maincrop,' 'Earliest of All,' 'Open Air,' 'Eclipse,' and 'A 1'.

Turnip. Turnips should be sown in a rich moist soil. Get a fine tilth, then draw drills 1 foot apart and 1 inch deep; sow the seed very thinly. One ounce of seed will sow a 200-foot row. Thin the plants to 8 inches apart.

Periodical sowings may be made from March till August.

The turnips will be ready for use in about eight weeks from the time of sowing.

'Early Snowball', 'Green Top White', and 'Orange Jelly' are good varieties to grow for successional sowings.

Vegetable Marrow. The vegetable marrow is very easy of cultivation and does not require the elaborate preparations some make in heaping up above the ground-level several loads of manure. Place in some corner of the garden all the refuse possible, on to which put 6 inches of ordinary garden soil.

The first week in May plant in this preparation seeds 12 inches apart and 2 inches deep.

When the young plants come up thin out to 3 feet apart and protect from frost. When the plants are well established and the leaders 2 to 3 feet long, pinch out the growing-points. Stop the lateral shoots one leaf beyond the fruit. Keep the plants well supplied with water and feed liberally with farmyard liquid manure. Cut the fruits when young and tender, which will prolong the fruiting period.

Good varieties to grow are 'White Bush', 'Pen-y-byd', 'Long Green', and 'Long Cream'.

A USEFUL TABLE

<i>Vegetable</i>	<i>When to sow or plant</i>	<i>Approx. depth to sow</i>	<i>Approx. distance apart to grow</i>	<i>Approx. time to mature</i>	<i>Quantity of seed to sow for a given area of ground</i>	<i>Longevity of seed</i>
		<i>inches</i>	<i>Inches apart</i> <i>Plants</i> <i>Rows</i>	<i>weeks</i>		<i>years</i>
Beans, Broad	Feb. to April	3	5	14	1 pt. for 60 ft. run	2
" Dwarf	April to July	2	24	10 to 12	1 pt. for 160 ft. run	3
" Runner	April to June	3	10	15	1 pt. for 100 ft. run	3
Beet	April to July	1	9	12 to 18	1 oz. for 100 ft. run	6
Borecole or Kale	March	1 1/2	6	36	1 oz. for 1,000 plants	5
Broccoli	March to May	1 1/2	24	22 to 40	" "	5
Brussels Sprouts	Feb. to April	1 1/2	24	24 " 30	" "	5
Cabbages	March, July, & Aug.	1 1/2	24	20 " 26	" "	5
Cauliflowers	April, Aug. & Sept. }	1 1/2	{ 18	{ 24 " 20	" "	5
Carrots	(Jan. in heat) }	1 1/2	{ 18	{ 26 " 30	" "	5
Celery	March to July	1 1/2	6	16 " 20	" "	4
Cucumbers	Feb. and March	1 1/2	8	12 " 20	1/2 oz. for 100 ft. run	8
Leeks	May (Jan. in heat)	1	36	16 " 26	1 oz. for 4,000 plants	10
Lettuce	March and April	1 1/2	10	16 " 20	1 oz. for 800 plants	3
Onions	March to August	1 1/2	6	24 " 30	1 oz. for 1,000 plants	5
	March and August	1 1/2	6	10 " 12	1 oz. for 2,000 plants	2
	(Jan. in heat)	1	8	24 " 36	1 oz. for 200 ft. run	2
Parsnips	Feb. to April	2	15	18 " 20	1 " for 80 ft. run	3
Peas, Early	Feb. to July	2	24	12 " 14	" "	3
" Late	March to May	2	4	14 " 16	120 "	3
Potatoes, Early	Feb. to April	4	12	12 " 18	14 lb. per pole	—
" Late	March to May	6	15	18 " 24	10 1/2 lb. per pole	—
Radishes	Feb. to May	1	—	6 " 8	1 oz. for 60 square feet	5
Savoy	March and April	1 1/2	12	20 " 26	1 oz. for 1,000 plants	5
Shallots	Feb. and March	half bury bulb	9	15 " 18	—	—
Round Spinach	Feb. to May	1	6	6 " 8	—	—
Tomatoes	Feb. and March (in heat)	1 1/2	12	18 " 20	1 oz. for 2,000 plants	4
Turnips	Feb. to Sept.	1	8	8 " 10	1 oz. for 200 ft. run	5
Vegetable Marrow	May (in open)	2	36	14 " 18	—	10

* Autumn sown.

† Spring sown.

VEGETABLE GARDEN PESTS

INSECTS

Black or **Collier fly** attacks the broad beans, especially in hot dry seasons. The insects injure the plants by attacking the young growth, or tops of the stems.



Bean Aphis (*Aphis fabae*—Pupa and Female).

[Copyright S. & S.]

The sap, running from the numerous punctures which they make by inserting their probosces into the soft tissues, accumulates on the stems, giving the plants a dirty-looking appearance. .

Autumn or early spring planting of the best seed, combined with good cultivation, is to be recommended. If, however, in spite of this treatment the tops are attacked, which is very likely, cut them off and burn.

Frequent syringing with soap-suds and soft-soap and water, adding one wineglassful of paraffin to each gallon of liquid, will do good. When paraffin is added keep it thoroughly mixed by stirring when applying.

Green flies are in some seasons found in very large numbers on the leaves, particularly the under side, of cabbages and other plants belonging to the Brassica section. Leaves very badly attacked should be burned.

Dusting the plants with lime or soot and syringing with soap-washes will do good.

Beetles. The Broad Bean beetle is to be found in most seasons.

The maggots live on the fleshy material in the seed.

At planting time the fully-matured insect will often be found in the seed ; the presence of the beetles is



Wireworm (*Elater*).

[Copyright S. & S.]

generally recognized by discoloured patches of the skin about the size of a pin's head, under which they are to be found.

Dipping the seed in boiling water for one minute is said to be sure death to the beetles, without injury to the seed, but it is not so good or safe as hand-picking.

Click Beetles. In the larval or maggot stage the four species of Click Beetles (known as the wireworm, which is said to live in the larval condition from three to five years) do a great amount of injury to carrots, potatoes, and other crops. A dressing of gas-lime, 14 to 20 lb. to a pole of ground, spread on in the autumn is an old remedy. A dressing of kainit applied any time through the winter, at the rate of 2 to 3 lb. to the pole, has in many cases proved effectual in destroying wireworm.

To sow mustard as a catch-crop and dig it in in the spring is a good thing.

A dressing of Homeo Rape Meal after thinning out is an excellent remedy.

Turnip Flea Beetle. In very hot, dry summers it is difficult to get good turnips, owing to the presence of this pest.

Early and late sowing, good cultivation, freedom from weeds, especially those which belong to the same family as the turnip, and high feeding, do much to ensure a crop.

Frequent dressings of soot and finely powdered lime will check ravages of the beetle.

Weevils. The Cabbage and Turnip Gall Weevil is easily recognized by causing the large knobs to form on turnips and swedes, in which, if cut open, would be found the thick, fleshy, wrinkled maggots, and on the stem of cabbages and other Brassica below the surface of the soil, preventing in this case true root formation. By many this knob formation is considered a form of, and is called, Club-root, though really it is not so.

It is advisable to adopt a system of rotation of crops, so as to avoid growing the same kinds of crops on the same piece of ground two years in succession.

Plant nothing but healthy plants free from galls on their stems.

It is a good plan before planting to dip the roots in a mixture of clay and soot.

Pea Weevils, of which there are several species, are in some seasons very injurious by destroying the foliage of young pea and bean plants. Dressings of soot should be frequently given round and amongst the plants.

Encourage rapid growth of the plants by good cultivation. ●

Butterflies and Moths. The caterpillars of these cabbage pests do, in some seasons, irreparable damage.

It is sometimes extremely difficult to keep them in check. Cleanliness is one of the chief factors ; do not allow rubbish of any kind to accumulate wherein the caterpillars can hibernate.

Syringeing or watering the plants with soap-suds prevents the butterflies and moths from laying eggs on them. As the underside of the leaves is generally chosen for this purpose special attention should be given to wetting this part, which it is admittedly difficult always to do.

Hand-picking of the caterpillars, though tedious, is an excellent method for reducing the ravages caused by them.

Pea Moth. In some seasons peas are infested with maggots, though little account is taken of them.

When such is the case burn the haulm or straw and also the peas. When the peas are ready for use gather the pods at once ; do not allow them to get old.

Bury to a good depth the surface soil infested with chrysalids ; in this way the moths are prevented from coming out.

FLIES.

Snowy Fly. This small, frail, four-winged, snow-like fly attacks cabbages, tomatoes, and other plants.

In some seasons it is very plentiful, whilst in others it is not seen.

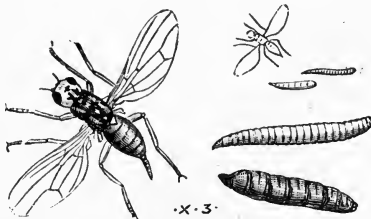
Syringeings with soap-washes, tobacco-water, or quassia extract, soon destroy the flies.

Carrot Fly. The presence of this pest is outwardly recognized by the leaves turning yellow and withering.

On examination of the young carrots, larvae or maggots will be found in and protruding from the roots.

The material thrown out by the burrowing of the maggots into the roots is of a rusty or yellowish colour, from which it gets the name of carrot 'rust'.

Thorough winter preparation of the ground, thin sowing of the seed, and early thinning are preventive



Carrot Fly, *Psila rosae* (with Maggot and Chrysalis).

[Copyright S. & S.]

methods in so far that they encourage rapid, strong, healthy growth.

Add gas-lime to the soil in winter at the rate of 14 to 21 lb. per pole of ground. Allow it to lie on the top after ridging, rough digging, or trenching, at least six weeks before mixing it with the soil.

Use wood ashes with the seed at sowing time. Dressings of soot after thinning the plants will prove effective in reducing the damage which would be caused by the fly.

Celery and Parsnip Fly. This fly punctures the young tender leaves of the plants and lays between the two skins eggs from which larvae or maggots appear.

In some seasons the leaves are tunnelled with these so-called 'miner' maggots.

The pinching of the maggots with thumb and finger when seen on the leaves will, if followed up, keep them well in check.

Dressings of soot and syringings with soap-suds and other washes make the leaves distasteful to the insect.

The celery plants should not be allowed to become dry at the root.

Frequent syringings of the plants in the evenings of hot, dry days will do good, promoting healthy and rapid growth.



Celery Fly and Larva (*Tephritis onopordinis*).

[Copyright S. & S.]

Onion Fly. The injury it does to the young onions at the base of the stem is well known.

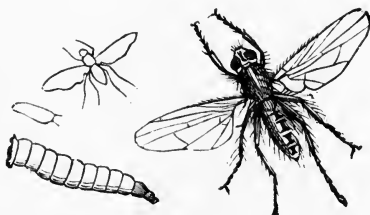
The first indication of its presence is generally shown by the leaves turning yellow and then drooping. To reduce the chances of an attack of this pest to a minimum, well trench and heavily manure the soil, get the best seed, sow thinly, thin early, and feed liberally.

If then you fail, sow along with the seed in the drill fine sand soaked in paraffin; and when the plants are thinned, firm the soil by treading; or, where the soil is light and the plants are not too forward, put over it a light wooden roller. Then syringe or water the plants

overhead occasionally with soap-suds or a paraffin emulsion made of 1 wineglassful of paraffin, 1 oz. of soft-soap, and 1 gallon of water ; keep it well mixed when using.

Pull up and burn all plants suffering with the maggot.

If you fail after all these methods have been tried, resort to autumn sowing and transplanting in the following April into well-prepared ground. This system of cultivation is practically proof against the maggot of this fly.



Onion Fly (*Anthomyia ceparum*).

[Copyright S. & S.]

Slugs and Snails, of which there are several species, do a great amount of damage to nearly all young growing crops. The crops they frequent should be kept well dressed with soot, salt, or lime.

They can be trapped by laying about cabbage and lettuce leaves, slices of turnip, &c., which should be examined daily and the pests killed.

Eelworms. Cucumbers and other plants frequently suffer with stem eelworm. The mode of attack is for the eelworms to puncture the roots and then lay their eggs in the punctures.

From these eggs emerge the eelworms which quickly traverse the inside of the stems, causing the plants to

wilt and die. These punctures bring up nodules, warts, or swellings on the roots.

A magnifying glass is required to make these pests visible.

There appears to be no remedy. All the attacked plants should be burnt, and also the soil in which the plants were growing.

Woodlice do a lot of harm by gnawing the tender shoots of plants.

Boiling water will effect a clearance of this pest where it can be used without injury to the plants. They can be trapped by slices of potato, or moss, or old hay, put into pots which should then be inverted and stood about in places they frequent. Examine these traps daily and destroy all woodlice caught in them.

Ants often prove troublesome.

When their nests can be found, boiling water will destroy them.

Dressing the crops with soot or syringing with soap-washes will drive ants away.

Centipedes are considered useful rather than harmful, as they feed on injurious insects and destroy decomposing animal matter.

Millipedes, on the other hand, live chiefly on vegetable matter, doing injury to tuberous and bulbous plants.

Soot and lime should be freely mixed with the soil where these pests are.

They can be trapped by decaying vegetable matter, such as leaves of cabbage, potato tubers, &c.

Rats and **Mice** must be trapped or poisoned by one or other of the many traps and poisons made and sold for the purpose.

Birds, although doing a little harm occasionally, are really useful in a garden in eating insects of various kinds.

They can generally be kept off beet, peas, &c., by putting a few lines of black cotton along the rows.

DISEASES

A disease known by the name of Club-root, producing large swellings of unnatural growth and preventing true root formation, attacks not only the cabbage but other plants, cultivated and wild, which belong to the cabbage-plant order. Some soils are entirely free from the disease, whilst others are thoroughly permeated with it.

Where the latter is the case it is difficult to successfully grow a good crop of any 'brassica' plant.

Weeds should be kept down and diseased plants should be burnt.

Endeavour to starve out the disease by not growing a cabbage-plant on the soil for some years.

A dressing of burnt lime, 28-56 lb. to 1 pole of ground, mixed with the soil in the autumn or early winter, does good.

The Onion Mildew is known to almost every grower. The disease is first recognized by the yellow patches on the leaves, followed by a white, dust-like bloom, which, if not checked, results in the wilting and dying of the leaves.

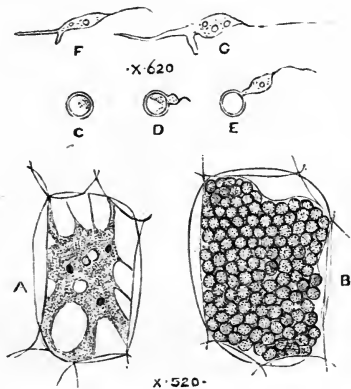
Soils and seasons have their influence on the presence or absence of the disease.

Autumn-sown plants are less liable to be attacked by it, and if attacked suffer in a less degree than spring-sown.

Onions should be grown in an open, airy place and in deeply cultivated and well-manured soils.

Use the best seed only, sow thinly, giving plenty of room between the rows, and thin early to at least 3 inches apart and finally to 6 inches apart. Keep down the weeds and promote quick growth by frequent hoeing.

On the first appearance of the disease syringe the plants with either sulphide of potassium (liver of



Fungus of Finger and Toe Disease (*Plasmodiophora brassicae*).

[Copyright S. & S.]

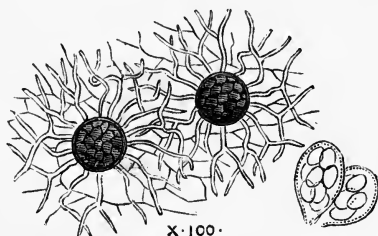
sulphur), $\frac{1}{2}$ oz. to 1 gallon of water,¹ with a little soft-soap dissolved in the liquid to make it adhere to the leaves, or with the 'Bordeaux mixture' which is made from sulphate of copper 1 lb. and lime 1 lb. to 8 gallons of water. Dissolve and mix in a wooden vessel and apply in a very fine spray, by means of a syringe or Eclair, wetting every part of the leaf.

The Potato Disease is in damp, close, sunless seasons often very prevalent.

Its appearance is shown by the brown spots on the leaves, which in a bad attack soon turn mildewy, then black, the leaves curling up, emitting a strong, pungent smell as they decay or die.

Plant strong healthy tubers, as sets, of varieties which have been proved to be the least susceptible to the disease. Give plenty of air-space between the rows and the tubers in the rows.

The 'Burgundy Mixture', if timely applied and the season is not too showery, will keep the disease in check



Fungus of Pea-Mildew (*Erisiphe Martii*).

[Copyright S. & S.]

and promote a long period of growth, thereby gaining an increased yield of crop.

Two and sometimes three syringings may be necessary to really check the disease.

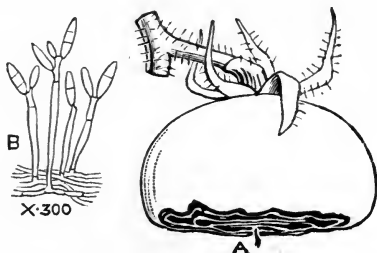
The approximate cost of each dressing, inclusive of labour and materials, is 10s. per acre.

Do not allow diseased haulm and tubers to rot on the ground, but see they are destroyed by burning.

'Burgundy Mixture' is made from sulphate of copper 1 lb., and washing soda $1\frac{1}{4}$ lb., to 10 gallons of water. Dissolve the copper sulphate in a wooden vessel, in 1 gallon of water, and the washing soda in 9 gallons, in

another vessel, and use the mixture as soon as possible after mixing, as it precipitates. The separate solutions keep quite well until mixed.

The Pea Mildew, which works great havoc with late peas, especially in dry summers and on light soils, can to some extent be prevented by sowing the seeds thinly



The 'Black-Spot' Disease of Tomatoes (*Cladosporium lycopersici*).
[Copyright S. & S.]

in trenches in which plenty of half-decayed manure has been worked into the soil.

After the pods form, if the season is dry, give the plants a thorough soaking with rain-water, then mulch the ground with manure or lawn grass clippings after mowing.

If the mildew does appear, syringe with sulphide of potassium, $\frac{1}{2}$ oz. to 1 gallon of water.

CALENDAR OF GARDENING OPERATIONS

JANUARY

Vegetables.—Manure, dig and trench vacant vegetable ground. Dig in mustard crops.

FEBRUARY

Vegetables.—Plant Broad Beans in rows 2 feet apart and the Beans 4 inches to 5 inches apart in the rows ; or plant in rows 3 feet apart, with double rows of Beans 9 inches apart each way.

MARCH

Vegetables.—A sowing of Celery (' White Gem ') for an early crop should be made under glass. Sowings of Brussels Sprouts (' The Wroxton '), Cauliflower (' Early Dwarf Erfurt '), Cabbage (' Earliest of All '), Leek (' Prize-taker '), and Lettuce (' All the Year Round ') can be made in the open.

Sow Parsnips (' Tender and True ' or ' The Student ') in deeply dug soil which was manured last year, in rows 15 inches apart, covering the seed 1 inch. One ounce of seed will sow a 200-foot row.

Sow Radishes thinly on a rich, warm soil, and cover the seed about 1 inch deep.

The Onion bed prepared in the early winter should now be raked down and a firm, fine, even surface

obtained ; then draw drills 1 foot apart and half an inch deep. Sow the seed thinly and, after filling in the drills, firm down the bed and rake over the surface lightly to take out the footmarks. One ounce of seed will sow a 200-foot drill.

Plant Shallots in rows 1 foot apart, pressing in the bulbs to half their depth at 9 inches apart in the rows.

Make a successional sowing of Broad Beans.

Make two or three sowings of Peas at intervals of ten to fourteen days.

Divide Rhubarb roots and plant them 3 feet or 4 feet apart each way in deeply trenched and well manured ground.

APRIL

Vegetables.—Sow the Globe or Turnip-rooted Beet for an early crop, in drills 1 inch deep and 12 inches apart. Successional crops of Broad Beans, Peas, Radishes, and Lettuces should be sown. Sowings of Broccoli, Kale, and Savoys should be made.

Carrots : ' Early Gem ' and ' Favourite ' should be sown in rows 1 foot apart, in drills half an inch deep, in trenched or deeply dug soil that has been well raked down and a fine tilth obtained.

A sowing of Celery, ' A 1 ' (red), can be made outside on a warm border.

Potatoes should be planted as time and weather will allow. For the early varieties plant in rows 20 inches apart, putting the tubers 4 inches deep and 12 inches apart in the row. For late varieties 2 to 3 feet apart of the rows, tubers 15 to 18 inches apart in the rows and 4 to 6 inches deep can be given.

Early Snowball Turnip should be sown in well manured ground in rows 12 inches apart. Cover the seed 1 inch deep. Sow round Spinach in drills 1 foot apart and 1 inch deep. Thin to 6 inches apart.

MAY

Vegetables.—Sow Blood Red and Pine Apple Beet for the main crop. Sow in drills 1 foot apart and 1 inch deep.

Successional sowings of Peas, Radishes, and Lettuces should be made.

Sow Dwarf Beans ('Canadian Wonder') 2 inches deep in rich sandy loam and in rows 2 feet apart. Thin the plants to 12 inches apart.

Prepare Celery trenches.

Plant out into drills in showery weather Cabbages and Cauliflowers in rows 2 feet apart, and the plants 18 inches apart in the row.

Plant out Lettuces 1 foot apart each way when large enough to handle.

Sowings of Savoys ('Earliest' or 'Perfection'), Kale ('A 1'), and Broccoli ('Late Queen' or 'Latest of All') should be made.

Harden off gradually Tomatoes for planting out early in June. Thin Onions, Carrots, Parsnips, and Beet as required.

Herbs.—Sow Dill, Fennel, Pot Marigold, Sweet Marjoram, Rosemary, and Rue.

Propagate Horehound, Mint, Sage, Pot Marjoram, and Thyme by cuttings.

JUNE

Vegetables.—Make successional sowings of Spinach, Lettuce, Dwarf Beans, Runner Beans, and Peas; ‘Early Giant’ and ‘Gradus’ are good varieties of Peas to sow now.

Plant out in showery weather Celery, Cauliflower, Broccoli, Brussel Sprouts, &c.

JULY

Vegetables.—Make successional sowings of Dwarf Beans, Turnips, Radishes, and Lettuces.

Plant out Celery, Leeks, and winter greens without delay. Fill up the ground after early Potatoes and Peas with crops of a different kind, not having the same habit of growth and requiring the same methods of cultivation.

Tomatoes outside should be liberally fed and mulched with horse-droppings. Keep the side-shoots pinched out.

Vegetable Marrows should have strong vigorous shoots stopped.

Keep down weeds. Water and feed crops liberally.

A sowing of Parsley should be made for winter use.

Herbs.—Cut when coming into flower.

AUGUST

Vegetables.—Make two sowings of Cabbage at an interval of a fortnight. Either ‘Flower of Spring’ or Sutton’s ‘April’ will do. Sow Brussels Sprouts for an early supply of buttons next autumn. Earth up Celery

when the growth is well advanced. Be careful soil does not get into the hearts of the plants.

Sow Winter White Cos Lettuce and Brown Spanish Onion. Sow Turnips : ' Snowball ' for a white and ' All the Year Round ' for a yellow flesh.

SEPTEMBER

Vegetables.—Earth up Celery and Leeks, selecting a dry time for the work. Plant out Cabbages sown in July and August on ground where Potatoes have been dug.

Sow mustard on vacant ground for digging in in January and February.

OCTOBER

Vegetables.—Lift and store in ' pit ' or frost-proof place Potatoes, Carrots, Beet, &c. Lift carefully ; don't fork or bruise the tubers and roots. Select and grade before storing.

Celery and Leeks, when dry and the weather is favourable, may be earthed up if not already done.

When the ground is cleared of Onions, hoe and rake off the weeds, put down a line (18 inches from row to row) ; and with a dibber make holes 12 inches apart and 4 inches deep, then plant or drop a Leek into each hole. These will be useful next April and May.

NOVEMBER

Vegetables.—When the weather is favourable and the plants are dry Celery may still be earthed up if not already done.



See that Onions are well ripened and thoroughly dry before being put away.

Asparagus beds should be cleaned without delay ; cut down the dead stems, remove weeds, lightly point or prick over the surface, being careful not to injure the crowns, and give a good dressing of rotten manure, which should have a thin covering of soil.

Earth up Leeks. Trench and prepare the ground to receive all the benefits possible by a winter's exposure.

As the Broccoli turn in, head the plants to the north, covering the flower with a few leaves to protect from rain, light, and frost.

DECEMBER

Vegetables.—Trench and dig the ground as it becomes vacant, leaving it rough for the winter frosts to break down.

Parsnips can be lifted and stored in dry sand, or they can be pitted.

Cover Parsley with hand-lights for winter use.



PRINTED IN ENGLAND
AT THE OXFORD UNIVERSITY PRESS

amk 7
us net.

AGRICULTURE AND FORESTRY

School Gardening. By P. ELFORD and S. HEATON. With one illustrations and tables, appendixes, &c. Crown 8vo, pp. 2s. net.

A School Garden Note Book. By P. ELFORD and S. HEATON. For use with the above, with spaces for all ordinary and necessary observations, Calendars of Observations, and perforated forms for classification of plants. Crown 8vo, pp. 43 + 16. Limp cloth, 9d.

Forestry for Woodmen. By C. O. HANSON. Based on Schlich's *Manual of Forestry*. With twelve plates and fifteen figures. Crown 8vo, pp. 222. 5s. net.

British Forestry Past and Future, a paper by W. SOYER. Medium 8vo, pp. 20. Paper cover, 6d. net.

A New Series

Prepared by the Institute for Research in Agricultural Economics in
University of Oxford

Agriculture in Oxfordshire. A Survey by JOHN ORR. With a chapter on Soils by C. G. T. MORISON. Demy 8vo, pp. xii + 300. With twenty-nine illustrations and maps. 8s. 6d. net.

'Our rival difficulties cannot really be overcome until the facts are made known to impartial enquirers like Mr. Orr.'—*The Spectator*.

'... Mr. John Orr... has performed his task with intelligence and ability. The book is not a superficial survey of Oxfordshire, but embodies information bearing on the natural conditions and the various styles of farming obtained by personal inquiry at the spot....'—*The Field*.

'Nothing that has yet been done has been so complete, or on anything like the scale of *Agriculture in Oxfordshire*.... It gives us that knowledge of the present actualities of farming which must be the necessary power for any real scheme of practical improvement. Too much praise cannot be given to the remarkable series of maps and diagrams... a volume that every agriculturist will welcome.'—*Land Agents' Record*.

'A most exhaustive and illuminating survey.... The information... is thorough and complete, and the illustrations... strikingly represent the subjects dealt with. Such a survey is required for every county... and this book may be taken as the perfect model for such a work.'—*The Scottish Farmer*.

Allotments and Small Holdings in Oxfordshire.

A. W. ASHBY. 8vo, pp. 198. 5s. net.

'It is no exaggeration to say that this is one of the most instructive books that have been published on its particular subject.... Exceedingly valuable to those with limited experience, and indeed to all those who are eager to learn from others and to improve their own methods.'—*The Field*.

'... The sanest and most informing discussion of the small holding question we have seen. Mr. Ashby is neither unduly optimistic nor needlessly depressed.'—*The Times*.

'To students of rural life the volume can be strongly recommended. The author is a careful and competent observer. He preserves a good balance in statement, and is sparing in theories.'—*Glasgow Herald*.

The Determination of Farming Costs. By C. S. ORR. 8vo. In the press.

Makers
Syracuse, N. Y.
PAT. JAN. 21, 1908

380638

UNIVERSITY OF CALIFORNIA LIBRARY

