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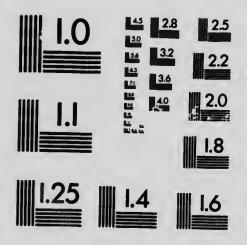
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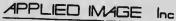
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THE ALLOTMENT by H.H.Thomas

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THE ALLOTMENT





A Row of Peas in an Allotment

THE ALLOTMENT

Its Preparation, Planting and Management

BY '

H. H. THOMAS

Editor of " The Gardener"

Illustrated by Photographs and Sketches

Cassell & Company, Ltd Londor New York, Toronto & Melbourne First Published September 1917

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THE ALLOTMENT

PREPARING THE GROUND

During schooldays we all learnt that 301 square yards make one rod, pole, or perch, but few of us had much idea of the extent of ground actually represented. Nowadays everyone is familiar with the size of a rod of ground, for all who have an opportunity are cultivating a plot of five or ten rods in area. A ten-rod plot does not look very big until one attempts to dig the ground, but before the work is finished one is forced to the conclusion that it is larger than it seemed. proportions which the allotment assumes in one's imagination depend very largely upon the way in which the work of digging is earried out. this is done methodically, it will be finished more quickly than if performed in a haphazard fashion. A man can dig two poles of cultivated land in a day, but if it is pasture land, and the turf has first to be stripped off, he will searcely dig more than one pole. Let the amateur remember that the wider his plot the more slowly will he appear to progress; for example, one whose plot is

5 yards wide by 20 yards long will find the digging less tiresome than another whose plot is 10 yards in width and depth.

The Best Method of Digging.—This is one reason why you should, on taking possession of an allotment, decide carefully upon the best way of digging. If the plot is more than 5 yards in width, stretch a line down the centre from end to end and make a small furrow with the spade alongside the line. Then, having stripped off the turf or part of it so that digging can be commenced, take out a trench 2 feet wide at the end of one half and place the soil at the same end of the other half. You will dig backwards until you come to the end of the first half, and the last trench there will be filled with soil taken from the far end of the second half. Working in the opposite direction on the second half, you will finish with an open trench near the soil first taken out, and the latter is used for filling it. Thus the labour of moving soil from one end of the plot to another is avoided, and the comparative narrowness of each half makes the task seem less laborious than when a wide piece of ground is tackled.

How to Take Off Turf.—Which is the best way of stripping off the turf? Few allotment

B B B B Preparing the Ground

holders possess a turfing iron, therefore they must use a spade. Unless this work is carried out properly, it is a heart-breaking business; but if done thoughtfully it is not very formidable. The method I adopt is to cut the turf into strips the width of the spade and 2 feet long; the edges must be cut cleanly to a depth of from 2 to 3 inches. The spade is thrust under one end, and the turf, as it is raised, is rolled back upon the turf in front of it until the whole of the 2-feet length is lifted; it can then be carried away on the spade with convenience. The turf ought to be stacked up neatly, grass side downwards: if it is taken off in autumn or winter, or even early spring, it will be partly decayed by April, and can then be chopped up without difficulty for the purpose of forming a bed for Vegetable Marrows.

Simple Trenching.—Many allotment holders are content merely to dig over the soil to the depth of the spade, or what is known as "one spit deep." That is all very well, and probably on good soil fair crops will result. But the correct method is to "half-trench" the ground. It takes longer than ordinary digging, but it pays, and, after all, that is what the amateur who means to make the most of his allotment

has to consider. It pays because the roots of the vegetables have another 10 inches or so of loose soil in which to "run," and it brings this increased depth of soil into a fertile state. The way to proceed is to take out a trench 2 feet wide and one "spit" deep, placing the soil where



In late autumn dig up the ground as roughly as possible in ridges as shown

the digging will finish. The bottom of the trench is then dug over and, if possible, manure is mixed with it; if stable or yard manure is not available, use should be made of leaves and garden refuse that does not contain sticks or other woody matter. The next 2-feet width of top soil is then placed on top of the manured portion, and the second trench thus opened is dealt with in a similar manner. It is worth while making special efforts to obtain manure of some kind

B B Marrows on Turf Heap

for mixing with the lower spit of soil, because this is then rendered so much more suitable for the roots of plants.

The proper time to earry out trenehing or digging is early autumn, before the rains set in and make the land difficult to work. October and early November are the best months; but trenehing may be practised during winter and spring when the soil is not too wet. In dealing with pasture land it is a great advantage to get the turf off before winter, so that the soil may be exposed to the cold weather. If it is thrown up in the form of shallow ridges, a greater surface will be exposed to the action of frost, snow, and rain.

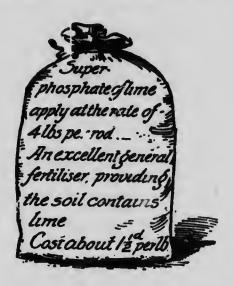
What to do with the Turf.—Many gardeners advise that the turf should be dug in the bottom of the trench instead of being stripped and stacked. My experience leads me to eounsel the reader not to do this, chiefly owing to the danger to be feared from wireworm. Moreover, the turf will decay quite well if stacked in a head and chopped up in spring; by the follow autumn or winter it will be in a fit condition to be dug in the ground. Meanwhile, it serves a useful purpose as a Marrow heap. If fresh stable manure is available in such quantity that the

heap can be made up in alternate layers of turf and manure, the heat generated will kill the This is the kind of letter one receives soil pests. from those who have dug in the turf instead of taking it off: "During this month (May) I lifted one of my Potatoes, planted five or six weeks ago, and found it full of wireworms. What can be done to save the crop?" Well, very little can be done to save vegetables that are planted on ground infested by wireworms. not only wireworms, but leather-jacket grubs, chafer grubs, and others are also to be feared. These pests are found chiefly in the 3 or 4 inches of fibrous soil immediately below the surface, although they appear to go deeper in cold weather. The best way to get rid of them is to dig or fork over the soil as frequently as possible, and to kill all that are seen. The use of one of the advertised soil fumigants, or a mixture of soot and lime, is also beneficial.

Use Lime on Fresh Ground.—Having dug the land, the next question is how to bring it to a fertile state in as short a time as possible. One of the chief aids to this end is found in the use of quicklime. If the lime is in a lumpy state it should be put on the ground in the form of small heaps and covered lightly with soil; it

e e e e e Artificial Fertilisers

will soon fall to a powder, and may then be spread over the surface and forked in. In autumn or winter lime may be used at the rate of ½ lb. per square yard (15 lb. per rod), but if put on in early spring half that quantity is as much as



can be used with safety. Having manured the lower spit of soil or the bottom of the trench when digging, and limed the surface, the amateur may await the coming of suitable weather for seed sowing and planting with confidence.

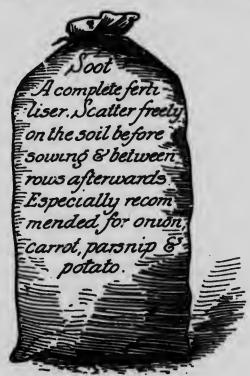
Artificial Fertilisers.—A week or two before either seeds or plants are put in he may, with advantage, apply superphosphate of lime at the rate of 2 52 per square yard (4 lb. per rod),



and sulphate of ammonia at the rate of 1 oz. per square yard (2 lb. per rod), lightly forking these fertilisers beneath the surface. This application, together with another similar one when the vegetables are growing freely, in June, will do much good. The use of a little sulphate of potash in summer, either as a liquid fertiliser (½ oz. in a gallon of water) or scattered on the soil at the rate of 1 oz. per square yard, will help towards the production of satisfactory crops. Sulphate of potash is, however, expensive, and should be reserved for Peas, Beans, and root crops. In preparing for certain vegetables—such, for example, as Celery, Leek, Peas, and Beans—special manuring is necessary. As a general

B B B B B B Artificial Fertilisers

fertiliser the superphosphate and sulphate of ammonia cannot be beaten. They may be mixed and put on together. Basic slag, applied in autumn at the rate of 6 or 8 oz. per square yard, is an excellent fertiliser, especially for heavy land. Soot is of considerable value to the allotment holder, and he is advised to make good use of this common substance. It ought not to be used among seedlings or plants unless it has been exposed to the air for two or three weeks, but on vacant ground it may be used fresh from



2 2 2 The Allotment

the chimney. I mentioned sulphate of potash as a valuable fertiliser for Potatoes, Peas, Beans, and root crops; a much cheaper supply of potash is found in wood ashes from the garden bonfire. Not only are the ashes valuable as a fertiliser, but burning all rubbish keeps the allotment clean and tidy, and incidentally destroys many pests and prevents the spread of plant diseases. There is no reason why there should be only one great clearing up in the garden; whenever there is a small collection of rubbish it ought to be burnt and the ashes scattered on the land.

Stable Manure.—Unfortunately, this has become increasingly difficult to obtain during recent years, but if it can be got it should certainly be used, not so much for the plant foods it contains—for those can be supplied by artificial fertilisers—but because of the humus it provides when decayed. Further, it improves the mechanical condition of the soil, the strawy portion of the manure assists drainage, and the result is that the land is more easily worked. Stable manure contains all the necessary plant foods, but not in the correct proportions, and crops cultivated by the aid of stable or yard manure alone are not likely to give such good returns as when this material is used in con-16

E E E E E E Enriching the Soil

junction with suitable artificial fertilisers. When stable or yard manure is stacked in a heap it soon begins to heat, and vapour is given off; thus much of the nitrogen is lost, while some of the fertilising elements of the manure are also lost in the liquid which drains away from the When the manure reaches the allotment, and especially by the time it is dug into the soil, it is ill-balanced as a plant food, and to enable the grower to make the most of his land, recourse ought to be had to artificial fertilisers to make up The use of artificial fertilisers the deficiencies. alone is not likely to give the best results, because they add no humus to the soil, and unless stable manure or decayed garden refuse is dug in, the land will become poor, and will dry out quickly in the summer months. The ideal preparation of the ground is to mix stable manure with the lower spit of soil when digging or trenching, and to apply artificial fertilisers to the surface soil a week or so before sowing or planting, and again during the season of growth. A fair rate of application is to use two to three barrowloads of stable manure to the rod of ground. The proper time to apply fresh manure to the ground is in autumn, so that it may be well decayed by sowing and planting time the following spring. If stable

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manure is dug in the ground in spring it ought to be partially decayed.

The Value of Garden Rubbish.—Allotment holders who are unable conveniently to obtain stable or yard manure should make full use of all vegetable refuse-such, for example, as cut grass, stumps of Cabbage, Broccoli, Kale, and Brussels Sprouts, Potato tops, weeds, the dead stems or haulm of Peas and Beans-in fact, every bit of refuse that becomes available as the season progresses. If a pit is dug in some out-of-theway corner, and the refuse is put into this as it is gathered, in the course of a few months there will be a rich store of plant food, especially if household slops, road scrapings, soot, etc., are added to it. It is advisable occasionally to sprinkle it with lime for the purpose of keeping away soil pests. An alternative method of utilising garden rubbish is to burn it and scatter the ashes on the soil.

How to Crop the Allotment.—It is a mistake to erop the ground in haphazard fashion. A good deal more produce will be obtained if the available space is earefully mapped out and the positions are assigned to the chief crops before sowing or planting takes place. The most important of the allotment vegetables is the Potato,

B B B B Cropping the Ground

and it is usual to devote half the area to this erop. Two-thirds of the Potato plot ought to be planted with mainerop and second early varieties and one-third with earlies. The first earlies will be ready to take up in July, thus allowing various winter greens to be planted as a succeeding crop. The second earlies will be ready to dig up in August; they will keep until after Christmas. They are not so vigorous in growth as the mainerop sorts, and they mature earlier, thus giving an opportunity of interplanting with winter crops. The mainerop varieties will not be ready to lift until late in September or even early October, and it is then too late to sow anything except winter Spinach, or Turnips to provide Turnip tops.

Endeavour so to arrange the method of planting that the second year's crops of the same kind of vegetable are not grown on the same portion of the allotment. It is a simple matter to do this providing the subject is thought out beforehand. However, when half the plot is devoted to Potatoes, it is not possible to arrange such a satisfactory rotation as if the space occupied by the various crops was in more uniform proportion. As a matter of fact, Potatoes can be grown upon the same plot of ground for years in

succession without apparent detriment to the crops, providing the land is well manured and that a change of seed is obtained in alternate years. It is chiefly in planting the various greens that care is necessary; they ought to have a change of soil as often as possible. For this purpose Turnips must be regarded as in the same category as Cabbage, Brussels Sprouts, Kale, and other greens, for they belong to the same family or Natural Order—namely, Brassicae. some precautions are taken to avoid cultivating these plants continually on the same ground, they are liable to become affected by club root, a malady that has serious effects and can be got rid of only by liming the land and not planting it with Brassicas for several years. Thus it pays in the end to adopt a reasonable rotation of crops.

Intercropping or Intensive Cultivation.—
The amateur should endeavour to make the utmost of his land by keeping it cropped continually. Only by sowing or planting again, as soon as the first crop is off, can he hope to get full value from his plot. Thus the practice known as intercropping should have close attention; it consists in sowing or planting vegetables that turn in quickly between those that take a longer

2nd YEAR

	365 1211X			
PEAS (followed by Cabbage and Brussels Sprouts).	JERUSALEM ARTICHOKE			
	CELERY			
FIRST EARLY POTATOES (followed by Colewort and Savoy Cabbage).	LEEK			
	ONION (Sow winter Spinach In August.)			
SECOND EARLY POTATOES (followed by Kale and Winter Turnip).	PARSNIP			
	CARROT			
MAINCROP POTATOES	TURNIP (Sow in March and April.) SWEDE (Sow in early July.)			
	MAINCROP POTATOES			
TURNIP (Sow in March and April,) SWEDE (Sow in early July, CARROT				
PARSNIP ONION	SECOND EARLY POTATOES (followed by Kale and Winter Turnip).			
(Sow Winter Spinach in August.)				
LEEK (Plant in July.) (Sow Lettuce and Radish in Spring.)	FIRST EARLY POTATOES (followed by Colewort and Savoy			
	Cabbage).			
CELERY (Plant in July.) (Sow Lettuce and Radish in Spring.)				

Rotation of Crops in the Allotment

time to mature. For example, if Spinach seed is sown between the rows of mainerop Potatoes when the latter are planted, the Spinach will be ready for picking before the Potatoes need earthing up. Similarly, if the trench for Celery or Leek is made in good time in spring, as it ought to be, a crop of Lettuce or Turnip can be taken off the ridges. Radish, Turnip, Spinaeh, and Lettuce can be grown between the rows of Peas: they will be well advanced before the Peas are very high, and the slight shade east by the Peas is often to their advantage than otherwise, especially in a hot, dry summer. The great value of intereropping is that it enables one to utilise odd spaces for vegetables of lesser value, though still indispensable, and to allocate special portions of the ground to erops of chief value. Summer and autumn Cabbages may be planted wherever there happens to be room—for example, at the ends of rows, or where blanks occur among other vegetables. If a few seeds are sown at intervals from the middle of March until May, and the seedlings are duly transplanted, there will be many welcome Cabbages during late summer and autumn, even though no special plot is devoted to them. Lettuce should have similar attention. It is a mistake to sow a large quantity of seed of the

E E E Planting Winter Greens

eateh erops named; sowing a little at a time and at frequent intervals is far more economical.

Planting Winter Greens.—A matter which may conveniently be discussed in this connection is the planting of winter Greens, which are among the most valuable of all the crops of the allot-The usual plan is to plant them as soon as the early Peas and Potatoes are lifted, but it sometimes happens that the latter are not ready when the Greens are, and therefore the ground is not vacant when the Greens are large enough to put out. There is really no need to wait until the first crops are cleared before commencing to plant the Greens, though this task is more conveniently accomplished when the ground is vacant. It is far better to put out the seedling Greens between alternate rows of the withering stems of the Potatoes and between the rows of Peas in pod, than to allow them to remain in the seed bed until they become weak and "drawn" through being overcrowded. Unless strong seedlings are available for planting, they are not likely to give a good account of themselves. Many allotment holders take very little trouble with their seedlings of winter Greens; they sow them in May and let them remain where sown until they cannot neglect them any longer with-

out spoiling them utterly; then they put them between the rows of late or maincrop Potatoes while the stems or haulm of the latter are still fresh and green. What is the result? The Greens become weak, spindly and lanky, lose their lower leaves, and never develop into satisfactory plants. Kales resent this treatment less than Brussels Sprouts, Broccoli, and Savoy Cabbage, and if Greens must be put among the late Potatoes owing to lack of room, then let it be the Kales.

The Best Crops for the Allotment.—The best-that is to say, the most profitable-vegetables for the allotment are Jcrusalem Artichoke, Broad, French and Runner Bean, Beetroot (a short row), Borecole or Kale, Sprouting Broccoli, Brussels Sprouts, Cabbage, Carrot, Celery, Vegetable Marrow, Kohl Rabi, Leek, Lettuce, Onion, Parsnip, Pea, Potato, Rhubarb, Savoy Cabbage, Spinach, Shallot, Swede, and Turnip. A few others-such, for example, as Salsafy, Scorzoncra, Horseradish, ordinary large-headed Broccoli, and Cauliflower-may be grown for the sake of variety. The Tomato can scarcely be left out of a list of profitable vegetables, but it is necessary to raise the plants in warmth under glass in order to have them ready for planting out of doors in

E E E Crops for Various Soils

early June, and they require a good deal of attention in the way of staking, disbudding. etc. Let us now consider briefly how these various vegetables are grown.

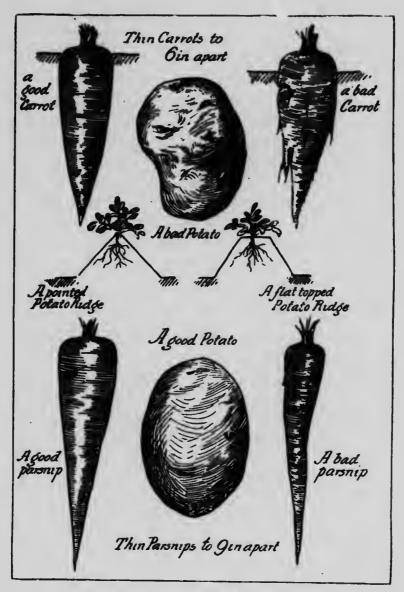
Root Crops, such as Carrot, Parsnip, and Beetroot, can be grown with success only in land that is deeply dug and free from clods and fresh manure. It is thus usual to sow them on ground occupied during the previous season by a crop for which the soil was freely manuredsuch, for example, as Peas, Beans, Celery, or Leeks. The roots will then have a good depth of rich and well-tilled soil below them, and the finest produce may be anticipated. If Onions arc sown on land recently dressed with fresh manure, they become "thick necked" and do not keep well. If roots which penetrate the soil deeply-e.g. Parsnip and Carrot-come in contact with fresh manure they become forked and otherwise misshener.

Crops which Need Rich Soil.—Among vegetables which can be grown to perfection only in well-manured soil are Peas, Beans, Celery, Leeks, Onions, and the various Greens. Potatoes also need a moderate amount of manure, though less than the other vegetables named; if the ground is made too rich for Potatoes, growth

is luxuriant, but the crop of tubers is not correspondingly satisfactory.

Turnips develop quickly and are consequently of better flavour if a little decayed manure is dug in the soil about 10 inches or so deep, just beneath where they are sown. Lettuces too appreciate similar attention.

Sowing Seeds.—The chief things the amateur wishes to know when he begins the important work of seed sowing are, how far apart the scedlings must be eventually, and what is the distance to allow between the rows. He will find these details here set out in table form, so that the information may be gained at a giance. First of all, however, he must learn to sow the seeds thinly. There is a great temptation to sow thickly, especially when dealing with small seeds; so great, in fact, that a special seed sower has been devised to enable the seeds to be distributed thinly. But one of the simplest ways of achieving this purpose is to put the seeds in an envelope and make a hole at one corner slightly larger than the seed to be sown. The seeds will then trickle out in small numbers. Another plan is to mix the smallest seed—such as that of Carrot-with sand, and to scatter both together in the drill. It is not only a great waste of seed



Same of the most valuable root crops

to sow thickly, but it gives the gardener a lot of labour afterwards in thinning out the seedlings; this is, in any case, a laborious task, and if it is carelessly performed, the remaining seedlings will suffer. Above all things, sow thinly, providing you have good seed-and it is false economy to buy any but the best. It is a good plan to take a few seeds from each packet and sow them in a flower-pot of soil, or even on a piece of flannel placed in a warm room; both soil and flannel must, of course, be kept moist. If the seeds germinate satisfactorily, then the bulk may be known to be sound, and thin sowing can be practised with confidence. If germination is rather poor, it will be as well to sow rather more thickly to allow for blanks.

DISTANCE TO ALLOW BETWEEN SEEDLINGS IN THE ROW

Artichoke, Jerusa- lem Bean, Broad	inche		Cabbage, Large Carrot, Small Carrot, Medium		inch 20 2	
Bean, French or Dwarf Bean, Climbing	6 to	8	sized Carrot, Large		to to	
French Bean, Runner	6 to 6 to		Cauliflower, Early Cauliflower, Late Celery		15 20 8	
D 11	8 20 to	24	Horseradish Kohl Rabi	7	10 or	8
n	20 to 20 to 15		Leek Onion Parsnip	3 8		6 9

E E E E Sowing and Planting

DISTANCE TO ALLOW BETWEEN SEEDLINGS IN THE ROW (cont.)

	inches	inches
Peas, Early Peas, Midseason Peas, Maincrop and	1 to 2 2 to 3 Savoy Cabbage Small Savoy Cabbage	12 to 15
Late	4 Large	20
Potato, Early Potato, Second	Scorzonera Shallot	7 or 8 6 to 8
Early Potato, Maincrop	12 Spinach 12 to 15 Tomato	8 15
Rhubarb Salsafy	24 to 36 Turnip 7 or 8	4 to 6

DISTANCE TO ALLOW BETWEEN ROWS OF VEGETABLES

	inche	5		1	incha	rs
Artichoke, Jerusa-			Kohl Rabl		15	
lem 30	to	36	Leek (between each			
Bean, Broad 15	to	18	single row)		8	
Bean, French or			Onlon		10	
Dwarf 18	to	24		15	to	18
Bean, French Climb-			Pea Distance			
ing	36		greater tha			
Bean, Runner	48		of Peas.			B
Beetroot	12		Potato, Early	18	to	20
Borecole or Kale	24		Potato, Second			
Broccoll	24		Early		24	
Brussels Sprouts	24		Potato, Maincrop		30	
Cabbage, Small sorts	15		Rhubarb		36	
Cabbage, Large sorts	24		Salsafy		15	
Carrot, Small sorts	8		Savoy Cabbage,			
Carrot, Medlum slzed			Small		18	
sorts	10		Savoy Cabbage,			
Carrot, Large sorts	12		Large		24	
Cauliflower, Early	15		Scorzonera		15	
Cauliflower, Late 18	3 to	24	Shallot		12	
Celery (between each			Spinach	12	to	15
single row)	8		Tomato		24	
Horseradish	12		Turnip	12	to	15

ROOT CROPS

These are indispensable to the average household, especially in winter, and the allotment holder should endeavour to succeed with them. The most important of the root crops are Potato, Parsnip, Turnip, Carrot, Onion, and Beetroot, while others worth mentioning are Salsafy, Scorzonera, Chicory, and Seakale, though it is the blanched shoots of the two last-named that are used-not the roots. The first essential to suceess with those root vegetables that grow beneath the soil is that the ground shall have been deeply dug and be free from clods, stones, and fresh manure. The usual plan is to cultivate them on land that is in a fertile state from manure applied to a erop grown there the previous season; thus the general eustom is to put root erops where Celery, Leeks, Peas, or Beans were planted the year before, and for which the soil was well manured. Onions need rich ground, though the manure ought to be applied in autumn, unless it is in a partly decayed state, when it may be dug in the soil in early spring.

Artichoke, Jerusalem.—The tuberous roots of this vegetable prove very useful in winter, either in soups or when cooked. The tubers are

E E E E E E E E E Beetroot

planted in February or March, about 4 inches deep and 15 inches apart. No attention is required during summer beyond hocing to keep



down weeds, though in the event of very rough weather it may be necessary to support the tall, leafy stems by means of wire, or strong string, stretched between stakes. The roots are lifted in winter as required. Three varieties are grown

in gardens, having purple, white, and pinkish roots respectively.

Beetroot.—A row of Beetroot, although not of such value as the Parsnip, for example, is nevertheless very useful, and ought to be included in the crops of the allotnient. Seed is sown early in May in rows 12 inches apart, the seedlings being thinned to 8 or 9 inches from each other; the drills are made 1 inch in depth. There are two types of Beetroot, the Globe and the Longrooted; the former may be sown again late in June or carly July, and will provide acceptable roots for winter; it matures more quickly than the Long-rooted sorts which are sown only in May. It is advisable, though not essential, to lift and store the roots in autumn. Carc must be taken not to bruise them when lifting, or they l." Cheltenham Green Top, Dell's Crimson, and Volunteer are good varieties.

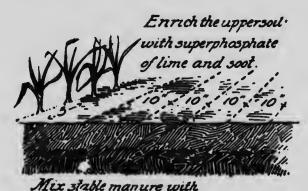
Carrot.—April is the month for sowing the main crop of Carrots to provide roots for storing for the winter, and small Carrots for use during summer, when the rows are thinned. The seed-lings first removed will be of no value, but those taken out later will be large enough to use. The Carrot thrives best on fairly light, well-drained loamy soil, but satisfactory crops are obtained

on heavy land providing it has been well tilled. To obtain the finest Carrots on land of this description, holes 18 inches deep should be bored and filled with sifted soil with which wood ashes, soot, and a scattering of superphosphate hav wen mixed; a few seeds are then sown on top and the seedlings are subsequently thinned until only the best remains at each hole. The usual way of growing Carrots is in drills ½ inch deep and 10 to 12 inches apart, the seedlings being thinned out to from 3 to 6 or 8 inches apart, according to the variety and the size of root required. Frequent applieations of soot are beneficial to this erop, and a mixture of sifted soil, wood ashes, and soot may with advantage be strewn in the drills before sowing. Carrot fly is often troublesome during summer, but the use of soot tends to prevent its



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attacks. The soil between the rows ought to be hoed every week or so, but that, together with thinning the seedlings, is practically all the attention this crop needs. In October the roots are generally lifted and stored, though they may be left in the ground and dug as required. A succes-



the bottom spit of soil

How to prepare an Onion bed

sion of young Carrots is obtained by sowing seeds of a Shorthorn variety every three or four weeks from April until mid-July; the last sowing will provide excellent little roots for winter, and they may be taken up from the ground as wanted. Seeds of a stump-rooted variety, sown in June, will provide a useful winter crop. Good varieties for the general crop are James' Intermediate, Sutton's Searlet Intermediate, both long-rooted,

E E E E E E E E E Onion

and Standard, a stump-rooted variety. Carrots which produce unusually long roots are Red Elephant and Long Surrey. Searlet Horn is suitable for sowing at intervals for producing small roots.

Onion.—It is a great advantage to select the

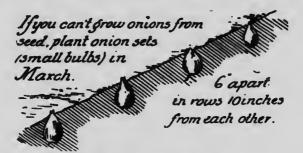


Keeping Onions during the winter

site for the Onion bed in autumn, so that the ground may then be half trenehed and manure mixed with the lower soil; it should be thrown up in the form of ridges for the winter. In March it is levelled, and as soon as the surface is dry enough to be broken up finely, seeds are sown in drills $\frac{1}{2}$ inch or so deep and 10 inches apart. Passing a rake over the drills will pro-

vide sufficient eovering for the seeds. advisable to seatter a mixture of sifted soil, wood ashes, and soot in the drills, and to sow the seeds in this. When the object is to grow Onions for home consumption only, it is not necessary to thin out the seedlings severely; some of them may be pulled for salads during the summer, but most of the remainder, if sowing has not been unreasonably thick, ean remain. As they develop they will make room for themselves. Bulbs of moderate size keep better than large ones, as a rule. The Onion likes firm soil; when any seedlings are pulled out, eare must be taken to tread the soil down again. The Onion fly is less likely to attack bulbs grown in firm ground than in that which is loose. Soot is an excellent fertiliser for Onions, and may be seattered between the rows and lightly hoed in the soil every ten days or a fortnight after the seedlings are well through. Syringing oceasionally with weak quassia water, together with the use of soot or a mixture of lime or soot, tends to keep away the dreaded fly. About the middle of August, if the tops are still green, bend them over with the object of hastening the ripening of the bulbs. A week or two later the Onions ought to be ready to be lifted. They must be thoroughly dried before being

EEEEEE COnion Sets



Planting Onion sets



A typical lot of Onion sets

stored for the winter. It is usual to place them on a gravel or other hard path in a sunny position for a week or ten days, but if the weather is wet they must be placed in a sunny window or greenhouse. The most convenient way of keeping them is to tie them in long bunches and hang them up in a dry room. There are many varieties of Onion in cultivath some of the best for the allotment holder being Rousham Park Hero, Bedfordshire Champion, James' Long Keeping, Improved Banbury, and Sutton's Globe.

Onions may be sown in the second week of August instead of in spring; they are left undisturbed during winter, and in March or early April some of the spedlings are transplanted to make other rows, the remainder being left at 6 inches apart. Autumn-sown Onions produce finer buibs than those sown out of doors in spring, and they are so well advanced by early summer as rarely to suffer damage from attacks of the Onion fly. When this pest renders Onion growing, from seed sown in spring, rather troublesome, it is a good plan to try Onion sets; these are miniature bulbs raised from seed in the previous year; they are planted in March, merely being pressed into the soil until half covered. If, as may happen, some of them produce flower stems, these should

be pinehed off. Onions grown from sets are ready for lifting earlier than those raised from springsown seed.

Potato Onions are very useful and produce larger bulbs than Shallots; they are grown in exactly the same way as the latter. The bulbs are pressed into the soil until half covered, in March, at 6 or 8 inches apart. Other bulbs will develop round the original one, and the crop will be ready to lift in July or early in August.

Parsnip.—There are few winter vegetables of greater value than the Parsnip, and no allotment is turned to the best account that does not contain a few rows of this root crop. Seed may be sown from the middle of February until mid-April, according to the state of the soil and the weather; but, if possible, sowing should not be delayed beyond the middle of March. Parsnip seed germinates slowly; the seedlings are not likely to show through the soil in less than a month or even 5 or 6 weeks, and while they are small, the seedlings do not make rapid progress. It is therefore essential to sow as early in spring as the conditions of soil and weather will allow; it is not good practice to sow until the ground surface is sufficiently dry to be broken down into fine partieles; it is equally unwise

to sow during cold weather. Wait for one of those warm, genial days, of which there are always a few, when the soil surface crumbles nicely and the seeds can be covered with fine soil. Parsnip seeds are sown in drills about 1 inch deep and 15 to 18 inches apart; some gardeners put groups of a few seeds at intervals of 8 or 9 inches, eventually leaving only one plant at each point; while others sow thinly all along the row and thin the seedlings to 8 or 9 inches apart. No attention is required during summer beyond hoeing once a week to keep the soil loose. If the leaves are damaged by the grubs of the Parsnip fly, as they are almost certain to be, the badly damaged parts, containing the grubs, should be picked off and burnt; sprinkling the plants frequently with soot and spraying with soft soapy water helps to keep away the fly. The roots may be left in the ground, to be dug during winter as required; during frosty weather it is, however, impossible to get them up unless some of the roots have been covered with straw in anticipation of this difficulty. Tender and True, Hollow Crown, and the Student are good varieties; the first-named is considered to be of the finest flavour.

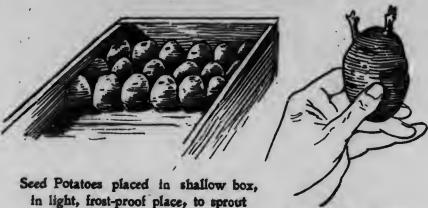
Potato.—This is the most important of all



Potato Acquisition, an excellent second early variety

The Motment & & & & & & &

root ops, and occupies, rightly, more space in the adotment than any other vegetable. The chief aids to successful cultivation are to obtain good "seed" tubers in early spring—in January or February; to put them to sprout in boxes in a light, frost-proof room or other suitable place; to plant in well-dug and moderately



Sprouted seed Potato ready for planting

manured ground in March and April; to allow proper space between the rows; to earth up correctly; and to spray with Bordeaux mixture in summer for the purpose of preventing an attack of Potato disease. The most suitable Potatoes for planting are those weighing about 2 oz. each, preferably rather more than less; they will, other things being equal, give a heavier yield than small ones. If the "seed" tubers are

E E E E E Planting Potatoes

put on a table near the window of a room, they will, in the course of two or three weeks, start into growth from the "eyes" on the tubers. By planting time, which extends from March until the middle or even the end of May according to the weather and the district, the sprouts on the Potatoes will be from \(\frac{1}{2}\) inch long. Most of these should be removed before the tubers are put in the soil; not more than one or two ought to be left on each of the early and second early Potatoes, and two or three on each of the mainerop or late sorts.

It is important to keep the seed Potatoes in a light position, otherwise the sprouts will be white and brittle. They are planted at such a depth that there is 5 or 6 inches of soil above them. The rows of early Potatoes ought to be 20 inches apart; those of second earlies 2 feet, and those of mainerop sorts $2\frac{1}{2}$ to 3 feet apart. The distance between the Potatoes in the row varies from 10 inches for the earlies to 15 to 18 inches for the second early and late sorts. Some varieties are more vigorous than others, but it is far better to allow too much space between the rows than too little, otherwise earthing up eannot be earried out properly.

The way to prepare the ground for Potato planting is to spread yard manure on the surface in autumn or early winter, and to throw up the land roughly in the form of ridges, the manure in this way being mixed with the soil. Or the manure may be dug into the soil and the surface of the ground left quite rough. In spring, a week or two before planting is contemplated, the soil is levelled and broken up as much as possible, and a mixture of sulphate of amnionia and superphosphate of lime is scattered on the surface. and forked in. Two parts of superphosphate and one of sulphate of ammonia are used, and the mixture is distributed evenly at the rate of 8 oz. per square yard. A further application of a similar mixture when the Potatoes are about 6 inches high is also strongly to be recommended.

When the Potatocs are about 8 inches high they should be earthed up by drawing the soil from between the rows towards the plants; the latter are thus in the centre of a ridge, and the rows are separated by furrows. Another earthing up is usually necessary in three or feur weeks' time. The chief objects of earthing up are to prevent the Potatoes being exposed to the light and to support the haulm or growth. Once the Potatoes are finally earthed up there is little

E E E E E Earthing up Potatoes

more that one can do to help them; it is advisable not to walk between the ridges, otherwise



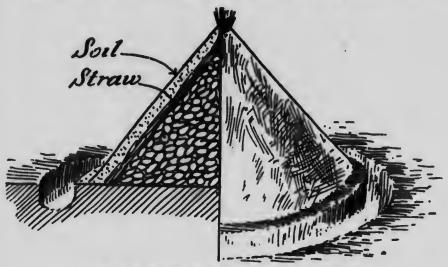
some of the shoots may be broken and the foliage bruised.

The next item of importance is spraying, for the purpose of preventing the Potato disease. Spraying should be done late in June or early in July, and again on one or two subsequent oceasions at intervals of three weeks. The solution used is Bordeaux mixture or Burgundy mixture. The former is made in the following proportions: Sulphate of eopper, 12 lb.; quieklime, 8 lb.; and 100 gal. of water; or a lesser quantity in similar proportions. Burgundy mixture consists of these ingredients: Copper sulphate, 2 lb.; washing soda (pure), 21 lb.; and water 10 gal.: this quantity of Burgundy mixture is sufficient to spray approximately 13 poles or rods. quantity of Bordeaux mixture required per pole is about 1 gallon. In spraying it is important to direct the spray so that it reaches the lower as well as the upper surface of the foliage, and, in order to distribute the mixture in a mist-like spray, a knapsaek sprayer should be used, or, failing this, a syringe fitted with a very fine spraying nozzle.

Early Potatoes planted in the open garden are usually ready to dig from the middle of July onwards; second earlies are ready in August; and the mainerop should be lifted late in Septem-

E E E E E E Potato Growing

ber or very early in October. Before the Potatoes are stored it is important that they be dry, otherwise they are liable to decay in winter. For this reason it is wise to lift them in fine weather, if possible, and to leave them on the ground for



A Potato clamp or winter store out of doors

an hour or two so that the skins may get dry. Failing a proper storehouse, Potatoes may be stored in boxes in any frost-proof shed or room; if space cannot be found for all of them under cover, the remainder must be clamped out of doors. A clamp is made by selecting a dry portion of ground and raising the selected site by digging a small trench all round it. A convenient width for the clamp is 4 feet; the latter

may be either round or oblong. Place a layer of ashes on the bottom of the clamp and proceed to build up the heap of Potatoes; do not store



Kohl Rabi, an excellent substitute for Turnips in summer. Sow in May in drills 12 inches apart.

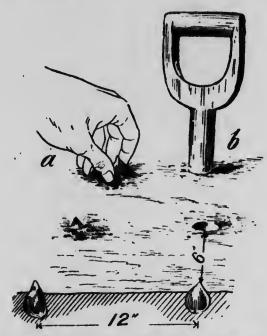
Thin the seedlings to 7 inches apart

any diseased or damaged tubers. When the heap has reached the required height, cover the Potatoes with a layer of straw. At intervals along the heap if it is an oblong one, or at the apex if it is a circular one, wisps of straw should be pulled

E E E Varieties of Potatoes

through for purposes of ventilation. The whole clamp is finally covered with a layer of soil.

Good Varieties of Potatoes for the allotment are: Early (ready to dig in July, though



Planting Shallots. Press the bulbs in the soil (a); do not use a dibber (b)

they may be kept until Christmas), May Queen, Ringleader, Midlothian Early, Sharpe's Express. Second Early (ready to dig in August, or may be stored until early spring), British Queen, Satisfaction, Stirling Castle, Windsor Castle, New Guardian, and Acquisition. Maincrop (to be

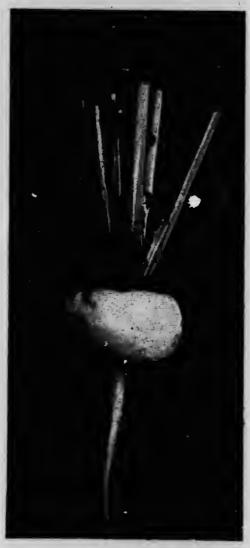
lifted in late September and stored for winter and spring), Drummond Castle, King Edward VII., White City, Langworthy, Golden Wonder, Arran Chief, Great Seot, and The Factor.

Salsafy and Scorzonera.—A short row of these root erops, which are not at all commonly grown, may be recommended to the allotment holder, as they afford a change from the more popular vegetables. The cultivation is perfectly simple. Deep, well-tilled soil, free from fresh manure, is needed; the seeds, which much resemble pieces of cut grass stems, are sown in drills 1 inch deep and 15 inches apart in early May. The soil is hoed frequently during summer, and the seedlings are thinned out until they are 7 or 8 inches from each other. The roots are lifted in autumn and stored, preferably in sand, for the winter.

Seakale.—This is correctly classed as a root crop, inasmuch as the plant develops a thick, permanent root, but it is the blanched growths in winter and spring that are valued for the table. In order to obtain Seakale in winter it is necessary to take up the roots and place them in warmth and darkness—a proceeding which is often beyond the means of the allotment holder. But he may, without artificial help of any sort,

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obtain delicious Seakale in spring merely by covering the plants with fine soil as soon as



Turnip Green Top Stone; should be sown in August to provide roots for the winter

growth is seen above ground. The soil covering should be 8 or 10 inches deep, and when the tops show through this the shoots are ready to cut. A bed of Seakale, if not forced, will continue to yield produce for years, but roots which are forced are thrown away afterwards. A Seakale bed is formed by planting pieces of root, about 8 inches long and 1 inch or so in thickness, in March; the tops of the root cuttings should be about an inch beneath the surface. This vegetable needs rich ground, and before planting the soil should be dug 2 feet deep and a layer of manure put in 12 inches or so below the surface. As the plants develop with the advancing season they produce flower stems as a rule, and these should be pinched out. Further, if a root produces several shoots, all except one should be removed, the strongest, of course, being left. The plants need no further attention during summer, except that the soil must be kept loose by hoeing and weeds should be removed. In autumn the leaves will die down and are taken Earlier produce than that obtained by covering the roots with soil is procured by placing a large pot or tub over each root and surrounding it with partly decayed manure or leaves.

Shallot.—This popular bulb is an excellent

EEEEEEEEE Shallot

substitute for the Onion, and is so easy of cultivation that everyone can grow it. The bulbs are planted in February or early March, merely being pressed into the soil so that they are half covered;

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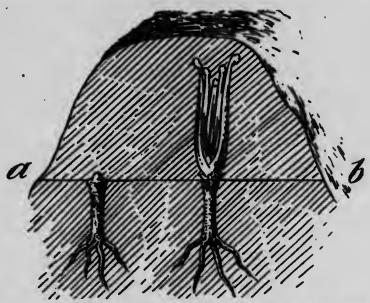
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Showing how Seakale is blanched out of doors by being covered with soil. Dormant root (a); blanched growth (b)

they are arranged at 6 to 8 inches apart, in rows 12 inches from each other. During early summer weeds should be kept down, the soil between the rows being hoed frequently. Each of the bulbs originally planted will have formed a well-developed cluster of bulbs by July, and when the foliage dies down the Shallots are lifted and placed in a sunny

greenhouse or window, or out of doors on a gravel path, there to remain for a few days so that they may ripen well. In late June, when growth has practically ceased, the soil should be drawn away from the bulbs to expose them to sunshine and air. The Russian Shallot is larger than the ordinary sort.

Turnip.—This is a most welcome vegetable when well grown; that is to say, when grown quickly, as can only be done on rich, well-tilled ground. The way to obtain Turnips in perfection is to dig the soil 12 to 18 inches deep, and to put a layer of manure 6 or 8 inches below the surface; to sow the seeds thinly, and to thin out the seedlings in good time, for they develop rapidly. If the object is to get Turnip tops only, then the seed is sown thickly, and the plants are pulled as soon as the tops are ready to eat. If you wish to grow both Turnip tops and roots it is best to make two separate sowings, to thin out the row destined to supply roots, in good time, and finally to such an extent that the plants . are 5 or 6 inches apart. Turnips are most appreciated in early summer, say until the middle of July, for after that time there are, or ought to be, plenty of Peas and Beans. Turnips are again most useful in autumn and winter. Therefore I advise the allotment holder to sow every fortnight from the middle of March until towards the end of May, and again during the second and third weeks of August. For the spring and early summer sowings he should choose such quick-growing varieties as Early Milan, Jersey Navet, Jersey Lily, and Snowball. For sowing in August suitable sorts are Chirk Castle, Greenstone, Snowball, and All the Year Round; the last named is a yellow-fleshed Turnip, all the others are white varieties. The sowing in August is perhaps the most important of all, for it provides most welcome roots from October until Christmas.

PEAS AND BEANS

There are no more acceptable summer vegetables than the Pcas and Beans. So far as their requirements at the hands of the gardener arc concerned they may be grouped together; they can only be grown well in deeply-dug soil cnriched with manure, and if kept moist at the roots in hot, dry weather. The best method is to take out a trench about 18 inches deep and of the same width; partly decayed manure is placed in the bottom, and the soil is returned until the trench is filled to within about 2 inches of the

top. It will have settled to something like its normal level in a week or two, and the seeds are then sown. Those who wish to grow the finest crops possible should mix with the surface soil, a few days before sowing, superphosphate of lime and sulphate of ammonia, the former at the rate of 2 oz. per square yard, the latter at half that rate.

Early and Late Peas.-In a flat, shallow trench 2 inches deep and 9 or 10 inches or so wide, three lines of Peas should be sown, the seeds being from 2 to 3 inches apart for those sown in late March and early April, and from 3 to 4 inches apart for those sown later in April and in May. Of early varieties sown in February or early March, the seeds may be put at from 1 to 2 inches apart, for germination is not likely to be so good, and there may be losses from severe weather, etc. Peas sown in February and early March will produce a crop fit for gathering in June; those sown in April and early May will be ready in July and early August; while for a later crop seeds are sown during the latter part of May. The allotment holder will find it best to get all his Peas sown by the middle of May. Unless adequate means are taken to protect the seedlings from birds they will be ruined.

e e e e e e e e e e Peas

I find the best plan is, as soon as the Peas are sown, or at any rate as soon as they are through



When staking Peas, insert the sticks diagonally, those of one row sloping in the opposite direction to those in the other row

the soil, to put twiggy sticks among them and to put in the taller sticks also; a network of black cotton is then stretched between the latter, and the Peas are safe and will grow without

check. Professional gardeners often recommend that a somewhat extravagant space should be allowed between the rows, but I find a clear space of 18 to 24 inches to be enough for Peas up to 8 feet high, and rather more for those of greater height. I make a point of keeping the soil between the rows forked over once a week or so, and when the Peas are about half grown I apply a mixture of superphosphate of line, sulphate of ammonia and sulphate of potash, the first at 2 oz. per square yard, the two last named at half that rate. This is an excellent fertiliser for Peas.

The following are first-class varieties: Early: Little Marvel, William Hurst, and Peter Pan (18 inches), May Queen (2½ feet), The Pilot (4 feet), Gradus (4 feet). Second early: Sutton's Abundance (2½ feet), Daisy (18 inches), Sourbridge Marrow (5 feet), Rentpayer (2½ feet), Stratagem (2½ feet). Maincrop: Prince of Wales (3 feet), Glory of Davon (4 feet), Senator (8 feet). If a selection from these different varieties is sown respectively in March, April, and May at intervals of ten dans or a fortnight, there should be an unbroken succession of produce from June until late summer.

Dwarf or French Beans.—Seeds of these

are sown in May (and at intervals until early in mid-June if a succession is required). The plants must have proper room for development if they are to prove profitable, therefore the seeds are sown at 3 inches apart and the seedlings are thinned to 6 or 8 inches from each other. The rows should be 2 feet apart. The seeds are covered with 2 inches of soil, and the trenches are prepared as recommended for Peas. The soil between the rows must be kept loose by hoeing, and the plants will benefit if, when half grown, they are given an application of the artificial fertilisers recommended for Canadian Peas. Wonder is a popular variety.

Haricot Beans.—These are grown in the same way as French Beans. The seeds of certain varieties of dwarf and climbing Beans are suitable for use as Haricots in winter. The method of cultivation is exactly the same as for other Beans, but the pods must be allowed to remain on the plants until the seeds are ripe, when the pods are taken off and placed in some dry, sunny place for a week or two. The seeds are then taken out and stored in bags for use in winter. Seeds should be sown early in May so as to allow the plants as long a season of growth as possible. They must be copiously watered in times of

drought. Suitable varieties of dwarf Beans for use as Haricots are Excelsior, Green Gem, and Green Haricot. The Czar and White Dutch, white-seeded Bunner Beans, and Lightning, a climbing French Bean, are others that may be grown for this propose.

French Changing Beaus.—These cannot be considered so probable as Runner Beans on the allotment, but the rods are of more delicate flavour; it has also to be urged in their favour that they do not require such tall sticks as the Runners; they grow 5 to 6 feet high. Rich deep soil is required, and seeds are sown in early May. Tender and True is an excellent sort.

Broad Beans.—These are very hardy, and for an early crop seeds may be sown in November if desired. It is, however, scarcely worth the while of the allotment holder to sow before the middle of February, or from then until the middle of March. It is necessary to sow in early spring so that the plants may be well developed before they are attacked by the black fly, which is certain to put in an appearance in summer. Sow the seeds 2 to 3 inches deep, in a double row, the lines of the row 9 inches apart, and the seeds 6 inches apart in the row. When three or four bunches of pods have formed, pinch out the

B B B B B B B B Butter Bean

tops of the plants and burn them if fly has already attacked them. The plants will produce numerous fresh stems subsequently, but it is not worth while allowing them to flower; the ground can be put to better use by planting a second crop of autumn or winter greens. The Broad Bean thrives best in rather heavy soil; if some yard manure can be dug in 12 inches below the surface. so much the better. Almost every seedsman has his own named sorts. The allotment holder can searcely do better than choose one of the Longpod varieties, which produce finer pods containing a greater number of Beans than the Windsor varieties, which, however, are of better flavour. From seeds sown in February and March, Broad Beans are ready to gather in July.

Butter Bean.—The Butter Beans which can be purchased in grocers' shops in winter are imported from Madagasear and other tropical and semi-tropical districts, and it is the seeds which are of value. The Butter Beans referred to in this note are grown for the sake of their pale yellow pods, which are delicious when cooked whole, and form a most acceptable summer dish. There are both dwarf and climbing Butter Beans; the chief climbing variety is called Mont d'Or, while of dwarf sorts Golden Butter Bean, Golden

Waxpod, and Centenary are to be recommended. The cultivation is the same as for the French and Climbing French Beans.

Runner Bean.—The only way to grow Runner Beans well—to have plants that will continue to produce Beans as long as fair weather lasts—is to prepare the ground by digging a trench 15 or 18 inches deep and putting a layer of decayed manure in the bottom. This is covered with soil, and the seeds are sown early in May 3 inches deep and 6 inches apart; if a double row is planted, the lines of the row should be 12 inches apart; there is no advantage in crowding Runner It is of great benefit to syringe or spray the plants in the evening during hot weather; this helps the formation of the pods. The plants must be watered freely during times of drought. Strong, tall stakes or other suitable means of support are necessary, and should be put to the plants in good time-that is to say, before they begin to "run." A favourite plan is to allow Runner Beans to elimb up strings, which are attached to a piece of wood at the ground level, and to another 6 feet or more higher. If Runner Beans are well grown they will reach to a height of 8 or 9 feet. An excellent plan is to set a few seeds at 6 inches apart all round a tall, strong

E E E E E E Runner Bean

pole and 2 feet away from its base. Strings are attached to pegs in the ground and to the top of the pole, thus forming a cone-like arrangement which in the course of a month or two becomes



The Rosette Colewort, a most useful little Cabbage for the allotment

covered with Beans. Runner Beans may be grown with success alongside the garden fence or over a fence or trellis. Again, they can be grown without the help of sticks at all; the tops of the plants are pinched out when they begin to "run," and again a few weeks later. They then form loose bushes and yield quite a

good crop, while the cost and labour of staking are done away with. Hackwood Park Success, Scarlet Emperor, and Prizewinner are some excellent sorts.

WINTER GREENS

The most valuable autumn and winter Greens are Cabbage, Colewort, Brussels Sprouts, Borecole or Kale, Savoy Cabbage, and Sprouting Broccoli. Air are raised from seed sown out of doors on a well-prepared seed-bed in March, April, and May. If only one sowing is made, the best time is at the middle of April, but it is better, in order to ensure a succession of produce, to sow seed in each of the three months named. The allotment holder ought to pay special attention to these crop, for they will constitute his chief vegetables, apart from the root crops, during the winter months. All require similar treatment. Seed is sown on part of the plot which has been prepared as a seed-bed by deep digging, and of which the surface has been well broken down by means of the fork and rake. The seed is sown in drills from 1 inch to 1 inch deep, and 8 inches apart, so that the hoe can be plied freely between them. Before the seedlings become crowded they are transplanted at 6 inches apart

E E E E E Winter Greens

on another part of the seed-bed, and there they will remain until ground is available upon which



Weli-grown Brussels Sprout. Do not cut off the top until the sprouts have been gathered

to plant them finally. They are usually put out on the plot from which early Potatoes and Peas have been taken. It may happen, however,

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that the seedling Greens are ready to plant out finally before the ground is available. It is most important that the Greens be not allowed to get overcrowded and weak in the seed-bed; if that is likely to happen they may be planted among every other row of early Potatoes and Peas, or in the spaces at the ends of the rows before the Potatoes and Peas are over. The Potato tops will die down in July, and the Peas will be almost over, so the Greens will take no harm. It is, of course, much more convenient to wait until the first crops have been cleared, but "ather than allow the Greens to deteriorate I would plant them out between alternate rows while the Peas and Potetoes are still in occupation of the ground. If the land was manured, as it should have been, for the Peas and Potatoes, it will need no preparation beyond that given by stirring with the garden fork.

All the vigorous Greens, such as Kale, Brussels Sprouts, Sprouting Broccoli, and the large Savoy Cabbages, ought to be put at 2 feet from each other in the rows, the latter being 2½ feet apart. Small varieties of Cabbage and Savoy and Colewort may be put 12 inches apart, in rows rather more than that distance from each other. One of the lessons the amateur will soon learn is that

E E E E E E Winter Greens

only a certain number of plants can be grown to advantage in a given space, and it is folly to plant more than there is room for.

This is the way I would proceed to raise winter Greens so as to have a supply throughout autumn, winter, and spring. At the middle of March I would sow a row of an early variety of Brussels Sprouts (suitable varieties are Little Gem and Matchless) to obtain produce in autumn. Then in April I would sow another row of The Wroxton or Pride of the Market, which will provide a succession. In March and again in April I advise sowing seed of Cabbage (Best of All Dwarf and Tender and True in March, and Emperor and Enfield Market in April). A little seed of Tom Thumb Savoy Cabbage, sown in March, will provide some acceptable heads in early autumn, while a further sowing in April of Dwarf Green Curled, and in early May of Norwegian and Late Drumhead, will yield a valuable succession of this excellent green vegetable. Borecole or Kale should be sown about the middle of April. There are many varieties or types, the most useful being the Curled or Scotch Kale and the Asparagus Kale; the latter provides a large number of delicious sprouts in spring. Other Kales to be recommended are Cottager's Kale and Drum-

The Allotment - E E E E E E

head Kale, the last-named of which bears a Cabbage-like head in addition to providing useful leaves for cooking. Sprouting Broccoli should be sown in April; it is one of the most useful of spring vegetables, and yields an abundance of delicious small heads of leaf and flower in April and May, when green vegetables are generally scarce.

The Purple Sprouting Broccoli is a greater favourite than the White Sprouting. Then there are the large-headed Broccoli, bearing a close resemblance to Cauliflower. They are not, in my opinion, so generally useful to the allotment holder as the other Greens mentioned, because they occupy the ground for many months and yield only one large head; further, if the winter proves severe they are not so likely to pass through without damage as the others. However, there is no doubt that the ordinary large-headed Broccoli is one of the most delicious of winter and spring vegetables, and by sowing seeds of autumn, winter, and spring varieties in April a succession throughout those months may be obtained. Those to be recommended are Walcheren for autumn: Winter White and Snow's Winter White for winter; Leamington, May Queen, and Standwell for spring. Perhaps the Colewort requires a

EEE EE EE Celery and Leek

paragraph to itself. It is really a small Cabbage, and from seed sown in May and June the produce will be ready in autumn and early winter. The plants are not very vigorous, and may be put at 10 to 12 inches apart when planted out finally.

All the Greens like fairly rich soil, but it is not advisable to add manure too freely, especially for those that have to stand the winter, otherwise they make soft, rank growth that is liable to damage by frost. If the land was enriched for the crop which the Greens succeed, no further manure need be added. Neither should the soil be dug deeply; it needs merely to be forked over and made firm, then the plants will make sturdy growth that will pass through severe weather unharmed.

Celery and Leek.—Other winter crops which may well be considered here are Celery and Leek. Seeds of Celery are sown in a box of soil, in a frame or greenhouse, in early March, the seedlings planted on a bed of rich soil in the open, in May. If put at 6 inches apart they will be good, sturdy plants for planting in the trench in June or July. Celery must have rich soil and abundant moisture when it has passed the seedling stage. A trench 18 inches wide will take two rows of plants; it

need not be more than 12 inches deep, but some well decayed manure ought to be mixed with the soil at the bottom of the trench. Keep the plants always moist at the root. Earthing up, for the purpose of blanching, is completed on three occasions: in September, October, and November, more soil being placed round the plants each time. To prevent the soil falling in the centre of the Celery tie the stems together with raffia.

Seeds of Leek are sown on a seed bed out of doors at about the middle of March; it should be scattered thinly in lines. When the seedlings are 8 inches or so high they should be planted out permanently. The simplest plan is to make holes 6 or 7 inches deep and about 2 inches wide, with a dibber, and to plant one Leek in each hole. Place a little soil on the roots and water thoroughly. When planting is finished, only the tops of the seedlings should be visible. As the Leeks grow they will fill the holes and thus become blanched. Rich soil and a free supply of water to the roots are essential.

SALADS

Lettuce.—The most popular salad plant is the Lettuce, and of this the allotment holder can scarcely have too many. It is very easily raised

E E E E E E E E E Salads

by sowing a few secds at intervals of a fortnight or three weeks from March until August; the sowing in that month is for winter supplies. Lettuce plants are liable to run to seed in hot weather unless they are grown on rich ground and kept moist at the root. From May onwards it pays best to sow seeds thinly where the plants are to remain; they are less likely to "bolt" than transplanted seedlings. Dig a little decayed manure into the soil, keep this moist, and choose a partially shaded spot for the summer sowings, then Lettuce will offer no difficulty. Tom Thumb is a splendid little Cabbage Lettuce that takes up very little space, and can be planted in any odd corner. Webb's Wonderful is an excellent larger variety. Jumbo is a first-class Cos Lettuce. For the winter crop Black Seeded Cos and All the Year Round (a Cabbage Lettuce) are suitable. In growing Lettuce for winter it is advisable to sow in a position where protection can be given by a frame or handlights in case of severe weather; in cold districts it is advisable to lift the plants and transplant them to a bed of soil made up in a frame.

Endive is not a very popular salad among amateurs, but it is useful in autumn and winter. The best time to sow seed is late in July or early

August, in shallow drills 12 inches apart; the seedlings are thinned to 10 inches or so from each other. Superfluous seedlings may be transplanted elsewhere. The plants must be kept moist at the root. Endive must be blanched by covering with a flower-pot or tile about a fortnight before it is required.

Other Salad Plants.—Cucumbers are casily grown on a small mound of loam and leaf soil in a frame. Pinch out the points of the shoots when the seedlings are 6 inches high, and treat the subsequent growths similarly. Give little air for a week or two after planting in May, but during the height of summer ventilate freely. Syringe the plants every day, except in dull, wet weather, and keep them moist at the root. Ridge Cucumbers are grown on a heap of soil or chopped turf out of doors, a pailful of fresh manure being placed 6 inches or so beneath each plant. They should be raised from seeds sown in a greenhouse or frame in April or early May, and be planted out of doors in early June. Globe Beetroot is an acceptable summer salad; seeds may be sown out of doors in early April and at intervals until July. The Long Beetroot, from seed sown in May, is most useful in autumn or winter. Mustard and Cress and Radishes are easily grown in rich

B B B B B Pests and Diseases

soil; they should be sown at frequent intervals from early April until June, in rich moist soil. The Radishes ought to be thinned out properly in good time, otherwise they become very leafy, but the roots do not develop satisfactorily. Chicory is raised from seed sown in May in deep, well-tilled soil, in rows 12 inches apart; thin the seedlings to 6 or 7 inches from each other. In winter the roots are taken up, a few at a time, and potted or placed close together in boxes which are then put in darkness and warmth; when the blanched tops are 6 or 8 inches long they are cut off for use.

Pests and Diseases of Vegetables.—The amateur will soon realise that in order to cultivate vegetables successfully he must continually be on the watch for insect and other pests, and signs of various diseases. They can be kept down fairly easily if remedial measures are adopted when the trouble is first noticed, and this practice ought always to be followed.

The Broad Bean invariably suffers from the attacks of black fly, which smothers the shoots, and particularly the upper parts, if it is not destroyed. When it is first noticed the tops of the plants should be pinched off and burnt; this usually has the effect of getting rid of the trouble;

if it does not, syringe the Beans with the following mixture, known as paraffin emulsion: Dissolve a handful of soap in a little hot water, and add 2 gal. of warm water. Pour in a wineglassful of paraffin and mix thoroughly. Keep the solution mixed by returning a syringeful to the can occasionally.

The caterpillars of the Cabbage butterfly play great havoc with the various Greens from midsummer onwards. If, on the first appearance of the caterpillars, they are removed and destroyed by being placed in a pailful of salt and water, this pest can be kept under. If, however, the caterpillars are allowed to become numerous, it is a difficult matter to get rid of them, and they do enormous damage. Better than waiting for the caterpillars to appear is to search for the eggs of the butterfly, which will be found in clusters on the lower surface of the leaf near the veins or ribs. Sprinkling the plants with soot when they are moist, or syringeing them with paraffin emulsion, helps to keep away the butterflies. The grubs of the Cabbage fly often attack the base of the stems and ruin the plants; the damage is not noticed until the plants are spoilt. To prevent attacks, the roots of the seedling Greens should be dipped in a puddle made of

E E E E E Pests and Diseases

lime, soot, clay and water, mixed to the consistency of paint, before they are planted. Scattering sand impregnated with paraffin near the base of the plants may keep the fly away.



Potato leaf attacked by the Potato disease (See page 46 for remedies)

The various Greens and the Turnip are subject to attacks of Club Root, a most troublesome malady; the roots become swollen and distorted and a mass of decay. This disease can be pre-

vented by following a proper rotation of erops, and by applying sufficient lime to the soil. If Club Root makes its appearance, nothing can be done to save affected plants, but the land must



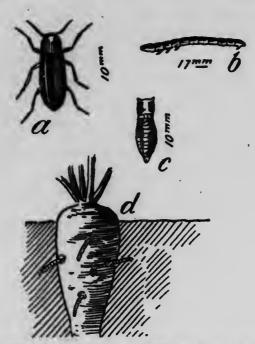
The Celery Fly: Damaged leaf (a), grub (b), pupa (c), fly (d)

be well limed in autumn, and Greens and Turnips must not be grown there for two years.

The Onion fly and the Carrot fly sometimes play great havoc respectively among these valuable crops. Preventive measures are to sprinkle

B B B B B Pests and Diseases

wood ashes and soot in the drills before sowing; to scatter soot alongside the seedlings every week or so until they are about half grown; to syringe them once a week with quassia water



Click Beetle and Wireworm: Beetle (a), wireworm (b), pupa (c), damaged root (d)

or paraffin emulsion. The Onion fly is chiefly destructive to spring-sown Onions; those sown in autumn and transplanted in spring, and others raised under glass in February and planted out in April, generally escape its attacks. Neither are Onions grown from sets attacked.

The Celery and Parsnip are generally disfigured by the grubs of a leaf-mining fly; they tunnel between the leaf surfaces, and insecticide has no effect on them. The grubs can be seen without much difficulty, especially if the damaged leaves are held up to the light, and should be crushed. Remove and burn badly damaged leaves, sprinkle the plants with soot when they are moist, and syringe them occasionally with paraffin emulsion.

The Turnip flea or beetle is best countered by cultivating the plants properly as already advised, and, in addition, by giving them an occasional small dose of nitrate of soda, watering freely, and scattering soot alongside.

Peas, especially late Peas, are sometimes attacked by mildew, but if the plants are sown thinly in deep and well manured soil, and are not allowed to get dry at the root, they do not, as a rule, suffer much from this trouble.

The wireworm is an extremely troublesome pest, especially on fresh ground. It can be greatly reduced in numbers by turning over the soil as often as possible, and killing all that are seen; by setting baits of Carrot or Potato; and by using lime and such soil fumigants as Vaporite, Vossolite, and Napthol.

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