

The fact that these useful bedders may be raised most readily from seed cannot be known too widely amongst amateur gardeners.

Bedding Calceolarias which have been wintered in boxes and pans should be planted out on a bed of soil, covered with a portable frame. When this is done, the frame can be removed after the second week in March, and used for more tender subjects, as the protection of a mat will be all that will be required by the calceolarias after that period. The soil should be rich, and the plants put out at a distance of about four inches apart. After they have become somewhat established, nip off the points of the leading shoots, to encourage the development of side-shoots, and thus promote the production of bushy plants.

HOW TO CROP THE KITCHEN GARDEN.

BY A KENTISH GARDENER.



O obtain the greatest amount of profit from the kitchen garden a proper system of cropping must be resorted to—a system by which a change of crop will, as far as is practicable, be made every year, and the space provided for the respective crops when the time arrives for sowing or planting them. That is to say, the quarter that was occupied with one class of vegetables last year should be planted with a totally distinct class this year, and the planting so arranged that as the time arrives for planting one crop a vacant plot shall be ready for it. If this is not done, the cultivator will at one period be unable to provide accommodation for all the crops he is anxious to grow, and at the other the garden will be half empty. I am perfectly aware that it is not possible to carry out a perfect system of rotation in small gardens, for the space will not admit of its being done; but much more might be done than is the case at present in that direction. Having had a very lengthy experience in cropping the kitchen garden, I have ventured to offer a few hints on the subject, which I trust may prove useful to the amateur, for whose information they are penned.

In the first place, allow me to observe that in commencing operations in the spring—for that is when the real work of the kitchen gardener begins—the mind must be carried somewhat in advance of the work, for we have not only to look at the effect of present arrangements, but we must endeavour to foresee how it will run in with the after-crops, and for facilitating the changing of the crops another year. Those who have neither mind nor eye to do so will soon get into a confusion, and render a systematic progress impossible for that year. With only a moderate amount of forethought, the cultivator can see one whole season before him; and with only a little preparation, can select the sites for his crops another year. He should avoid distributing his crops in a haphazard manner, such as sowing his onions in small patches in various parts of the garden,

and his carrots and beetroot the same, but should endeavour to place them side by side on one quarter of the garden, and the parsnip beds with them; he then will be able to see that when the onions are removed in August the ground will come in well for a bed of spring cabbages, to be planted in the autumn; and when the other crops are removed, and the ground well manured and trenched during winter, it will serve for an early crop of cauliflower the next spring, and the first batch of Brussels sprouts; or it might be used for an early crop of potatoes, to be followed as soon as taken up in July by winter and spring broccoli. In either case, such an arrangement will be a distinct change in crops, and will secure those belonging to the cabbage tribe being together. If the quarters are large, and will admit of the peas for the season's supply being one of them, it should be set aside expressly for them, commencing at one side with the first crops, and continuing them so throughout. But rather than crowd them, it is advisable to distribute peas over all the garden, for they will always pay for their room. Six feet apart is the least distance for tall peas, but twelve feet is better for such varieties as the Hundredfold, British Queen, Ne Plus Ultra, and a few others; and such distances admit of a fair average crop of any other vegetable between, which will suffer nothing, but be rather benefited by the shade. But assuming that they have been sown upon one quarter, our next business is to consider to what other purposes we can put the ground after they have done bearing. Taking the first crop that was sown, there can be sown between the rows a crop of summer spinach or radishes. This crop of peas, and the crops of other vegetables between the rows, will be cleared off the ground about the third week in June, which will be in excellent time to get out a crop of Brussels sprouts, Scotch kale, or a good white winter Broccoli.

As the second crop of peas is removed, there will be more room given for spring broccoli, which should be planted as fast as possible up to the middle of August. Supposing the broccoli has filled up half of the quarter, there will still be vacant spaces between the later peas; and here I would put out the main supply of celery, one trench between each two rows of peas. As soon as these are off, and there is more space between the celery trenches than is wanted, let it be filled up with coleworts for autumn use; these will come away in ample time for the earthing of the celery. Such, then, is the cropping of one quarter of the garden for a year. If the reader will take the trouble to consider it over, he will find that by working out this rotation two crops are secured in one year. It will be seen, too, that by this arrangement the crops are uniform, and follow each other well, for the quarter is in full work all the summer, and in the autumn it is well stocked with winter subjects, and they altogether, not in patches in various parts of the garden, which would sadly interfere with the necessary operations of pulverizing the soil.

By looking ahead still farther, we shall find this same quarter the next summer, or that portion where the celery grew, cropped with onions, parsnips and carrots, for which the extra moving of the

soil necessarily attending the cultivation of celery has rendered peculiarly fitting. On the other part, a good gardener would only grow what I may call a short crop after the spring broccoli is over, because he would be anxious that during the next winter it should be vacant, that he might by ridging or trenching expose it to the action of the frost. A crop of potatoes, or dwarf kidney-beans, would fill up the space well, and leave the ground about the same time as the other half would be ready for a winter's rest. Thus we see what can be easily effected by management and forethought, for we have this same quarter that was cropped heavily the last winter quite empty this, which a winter's rest will greatly benefit.

Let us now turn our attention to a second portion of the garden, which we will suppose is cropped with early and second early potatoes. These will be used up by the end of August, and we still find it work in well according as the potatoes are dug up for cauliflower and Walcheren broccoli; and if there should be room, there will still be waiting for a spot the sprouting broccoli, cottager's kale, and other kales. In view of this arrangement, a piece of ground of the required breadth should have been left unoccupied in the spring, by the side of the potatoes, for savoys, that when the other winter greens are planted they may be all together. In the case of savoys, to have them large, plant in June upon soil that has not been previously exhausted by a crop; hence the importance of resting a piece of land for them. Probably upon the same quarter would be planted the first and second crops of spring cauliflowers; in that case they would come off in excellent time for the soil to be trenched up for a bed of winter spinach. Here, again, we find another quarter at the close of summer devoted entirely to winter crops, and all the arrangements as complete as circumstances will allow them, and this secured only by an ordinary degree of forethought. If I might still secure space, I would call the reader's attention to what are generally considered permanent crops; amongst these I may include asparagus beds, strawberry beds, plantations of rhubarb, seakale, and the globe artichoke. These the cultivator should endeavour to have near together, for some of them are untidy subjects, and if dotted here and there about the garden they render it both unsightly and unmanageable. But with the rhubarb, seakale, and artichokes, if there is an odd corner to spare, let them occupy it with the bush fruits, such as raspberries, gooseberries, and currants; they ought not to occupy positions all over the garden, as they are not only less productive when continually bruised and knocked about by wheelbarrows and spades, but they are ever in the way, and frequently interfere with important operations; and as these are subjects that delight in a cool strong soil, they ought to be planted at the north end of the garden.

In every garden, and to supply the wants of most families, there will be required a greater variety of vegetables than I have as yet enumerated. But as these are chiefly summer crops, they ought to have a quarter devoted to their use upon which the stronger growing broccolis, etc., grew the last year, as this will be an agreeable change of subjects for the land; early turnips in March, and dwarf

kidney-beans in April, we may reckon as the first; then, amongst others, there will be Scorzonera and Salsify, vegetable-marrows, ridge cucumbers, broad beans, as well as the scarlet-runners. The early turnips and some few others amongst the above will be off the ground in time for another crop the same year, and to follow them, lettuce or any other salading will do to keep the ground from being idle, and will be sure to be found useful.

The culinary herbs, although trivial subjects to some cultivators, are to others of some importance, and should not, therefore, be treated as if they were of no consequence, which is sometimes the case, and then people wonder why they fail to do well. Many of them require a warm, well-drained border, and carefully transplanting every spring. For such as spearmint, fennel, and tarragon, a less favoured spot will serve; but for sage, thyme, savory, and majoram, the warm border should be given them.

ON SPRING FLOWERS.

BY GEORGE SMITH.



ONLY those who have enjoyed it can have any conception of the gratification to be derived from a well-selected, well-filled flower-garden during the months of March, April, and May. Probably, in spite of all that has been said, some of our readers are strangers to that style of gardening. I propose to pen a few notes which may be serviceable to them, especially as the season of spring flowers is near at hand. There are hundreds who, if they only knew how charming a flower-garden may be made to appear through the spring months, would not hesitate for a moment, and would cheerfully give the requisite labour to accomplish so desirable an end. According to the amount of zeal displayed, with of course a little skill, there will be a corresponding amount of pleasure insured at a time when the majority of gardens present nothing but the naked earth in the beds, and when every flower is hailed with pleasure. My own experience of spring-flower gardening is such that, although I only imperfectly worked it out, afforded much more pleasure to those for whose gratification it was done than the summer display of flowers in the same beds afterwards.

In my own case, a portion of the old soil is taken out of the beds every year, when the spring flowers are taken up, and its place supplied with fresh rich soil, which is well incorporated with the old staple. This plan must be adopted by those who wish to cultivate with success spring and summer plants in the same beds, and unless any one can do this, they must be prepared to see their summer bedders make but a poor display. One objection is, it takes a lot of labour to work up and keep the stock in good condition, especially as the principal trouble occurs at a season when the gardener is

March.