

putting one plant to a pot or box, or spacing the plants 4 inches apart in the flat. Here they remain until ready for planting out, when they are removed and set to the open soil, without disturbing the roots more than is possible. The plants are taken out of the pots by tapping the edge of the pot on something solid, and from the strawberry boxes by cutting the box. They are cut from the flats in squares.

The plants are usually spaced 4 x 4 feet apart. If the intention is to stake the plants and train to one stem, they may be set 3 x 1½ feet apart. The stakes may be 1½ inches square lumber, or round, small saplings. They should be 5½ feet long, and cost about 1 cent each. At the above distance, about 10,000 plants could be put on an acre. As the plants grow, they are tied to the stake, this being necessary four or five times during the season. All lateral growths which start up from the axil of the leaves are pinched out as they appear, and only the one branch allowed to develop. When the plant reaches a height of five feet, it is pinched off, and no more growth allowed to form, thus throwing all the energy into the formation of fruit. The leaves should not be pinched off, however, as the maturity of the fruit will not be hastened by such a practice.

ONIONS.

Onions do best on a light loam soil rich in plant food. Light loams can be worked to better advantage than heavier loams, and do not dry out so badly during summer. An abundance of available plant food is necessary if profitable crops are to be obtained, and consequently a soil that has been manured for several seasons previous should be selected. The land should be free from stones and weed seeds.

Onions may be grown in the same land year after year, and it cannot be made too rich. Well-rotted barnyard manure, applied in the fall and plowed in shallow, about 4 inches deep, is one of the best fertilizers. Fifteen tons per acre annually is a good application. If the soil is well supplied with vegetable matter, successful crops may be grown with commercial fertilizers applied at the rate of 1,000 pounds per acre. This is sown broadcast, and harrowed in just before seeding.

The ground can be prepared best with the disk, springtooth and smoothing harrows, and should be well pulverized to a depth of four inches.

The seed is sown in rows on the level ground 12 to 14 inches apart, at the rate of 3½ pounds per acre, and ½ inch deep. A hand seeder is usually used. A seeder and a wheel hoe combined can be purchased from any seed merchant at a reasonable rate. Seeding should be done as soon in the spring as possible, so that the plants may get well established before the dry, hot weather of summer.

Maintenance tillage is done principally with the wheel hoe, and consists in keeping the surface ground loose around the plants and all weeds from starting.

The falling down and withering of the tops indicate maturity, at which time the onions should be pulled. They are left for a week to dry, after which they may be topped and put into slatted crates, or put into these crates without topping, taken to a shed, and allowed to cure for two or three weeks, after which they are prepared for market. The advantage of the crate is that there is a small bulk of onions, together with plenty of ventilation, which is very necessary for proper curing for storage or shipment. They should not be stored in bags or in large piles in bulk. They may be stored in slatted bins arranged one above another, 10 to 12 inches deep. If stored, the temperature should be kept as low as possible, and the air be dry.

Onions may be started in flats or in soil in the hotbed or greenhouse 10 to 12 weeks before ready to plant to the open ground, early in May. They will transplant easily, and good large plants will prove most satisfactory. An inch-wide lath, pressed into the soil one-fourth inch deep, with center of rows 2 to 3 inches apart, and the seed sown to get 10 or 12 plants to the running inch of row, is about right. If the seed is sown more thickly, good large plants cannot be expected; 1½ to 2 pounds of seed will give sufficient plants to set an acre, spacing the plants 4 inches apart in rows 1 foot apart. The disadvantage is the expense of transplanting. For securing early onions of large size, this practice is advisable.

CABBAGE.

Any good garden soil will grow cabbage. A warm well-drained sand loam, very rich in plant food, is best for the early varieties. A northern exposure is best for late cabbage, and a heavy soil may be used. The cabbage is a gross feeder, and there is no danger from making the ground too rich. Twenty tons or more per acre of manure can be used, and this may be supplemented with from 500 to 1,500 pounds of commercial fertilizer for an acre. Commercial fertilizer is especially advisable for early cabbage where the object is to develop marketable cabbage quickly.

If the ground has been manured in the fall and plowed, it should be again plowed in the spring, and thoroughly worked to a depth of six inches.

For early cabbage, start the seed about the 15th of March. The seedlings are transplanted to 1 to 2 inches apart three weeks later, and will be ready for the open ground early in May. The plants are usually set on the level in rows 30 inches apart, and 18 inches apart in the row. Late cabbage are usually grown from seed sown thinly in a cold frame early in May, and plants from these are set to the field about the middle of June, spacing the plants in rows 32 inches apart, and 20 to 22 inches apart in the row.

The usual maintenance tillage should be given during the summer, and the ground not allowed to become hard or compact, or dry out.

In the storing of late cabbage, cut the heads during a dry day, and store where good ventilation is possible. The air should be kept dry, and the temperature as low as possible. The heads should be placed on slatted shelves far enough apart to store two or three tiers of cabbage, with a good chance for ventilation under the shelves. A confined atmosphere renders satisfactory cabbage storage impossible.

CAULIFLOWER.

The cauliflower requires a cool, rich loam. A Northern exposure is best. Continuous growth is important, and anything that tends to check the plant in any way should be avoided. Dry weather often results in failure, and, where watering is possible, it may be advisable. For early and late cauliflower, start the seed and handle the same as for early and late cabbage, except that more care should be given to detail in the development of plants. Like the cabbage, it takes about seven weeks to develop a stocky, properly-hardened-off plant. They may be spaced in the field the same as cabbage.

When the heads are 3 to 4 inches in diameter, the leaves should be tied together over the head, in order to develop a good white flower.

Monster Mushrooms.

In your issue of February 8th appeared an item re a monster mushroom, which is evidently a freak of the imagination. Had the writer not mentioned that it belonged to "Agaricus Campestris," I would have placed it as an unknown mushroom; but, knowing our meadow mushroom well, its nature and cultivation, the item left the impression of a fish story. No doubt there are kinds of mushrooms belonging to "Agaricus" and "Boletus" which grow to an abnormal size, and some of the other fungi, as the giant puffball, may attain a diameter of 12 to 18 inches and most delicious eating they are. Some of the order "Fistulina," growing on decaying logs, may attain a weight of six or seven pounds, but a story of a "meadow mushroom" growing to a size of 59½ inches in circumference (19 inches in diameter) and weighing 21½ pounds, has only to be thought over to come to the conclusion that the whole affair is nonsense.

It is seldom that the price of "Agaricus Campestris" is less than 50 cents a pound, which would make this mushroom worth nearly eleven dollars, and if such a strain could be got, I would have no hesitancy in giving a good price for a brick of spawn. But wait; the writer says, "It grew by a spring, which might account for its great size." The meadow mushroom does not grow by the side of running water, nor does it stand much water, and anyone growing them will soon find that if the bed is kept wet the spawn dies; and in our pastures or well-tramped old barnyards, with well-compacted earth and manure, they grow in abundance wherever a start has been made. The ground is never wet.

That a greater effort is not made by the Agricultural Department to enlighten the people of our Dominion on the edible fungi growing wild in our fields and by-ways, I find at a loss to account for. There is a food value and delicacy in most mushrooms which many admire, and not a few look upon as a luxury.

Those who attempt to grow them need not expect such monsters as described in the item referred to. If ounces are got in place of pounds, the grower may be well pleased at growing "monster mushrooms." WM. WELSH, Bruce Co., Ont.

Fruit Injured in Essex.

Reports are coming from many quarters regarding serious damage to fruit trees, but especially peaches, owing to the extremely severe weather experienced during January. To all appearance, the fruit-producing portion has suffered irreparable damage; therefore, the prospects for a crop are not encouraging. In many localities trees have been girdled by rabbits, whose appetites were apparently sharpened by the continued cold snap. Farmers are turning their attention more to growing products for canning, as is evidenced

by a number of factories being erected and shipping points established. Fodder of all descriptions is exceedingly scarce, and prices paid are away beyond the actual value. Essex has been visited with an exceptionally severe winter, and has just experienced one of its worst snowstorms for many years. A. E.

Co-operation and Fruit Growing.

There is no doubt but co-operative societies have done much for the fruit industry of Canada. They have instructed growers in the best methods of cultivation, spraying, packing and marketing their fruit. From an address given by A. McNeil, Chief of the Fruit Branch, Ottawa, at the recent Dominion Conference of Fruit-growers, we select a few good points.

There are in Canada about 80 co-operative fruit associations in good standing, Ontario leading with 42, Nova Scotia has 23, British Columbia 10, Quebec 5, and Prince Edward Island 1. The sales from these associations are now sufficiently large to influence the whole market.

The societies vary greatly in size. Some of the smaller have an output of from 2,000 to 3,000 barrels. A large number have between 6,000 and 10,000 barrels, a few 20,000, but none, so far as Mr. McNeill is aware, reach 50,000.

The price, also, varies greatly, and it is noticeable that the smaller associations do not sell so well as the larger, proving conclusively that union is strength.

Mr. McNeill showed clearly that co-operative apple-selling associations in Canada are not sporadic affairs originating in local and individual causes, and wholly unconnected with world-wide movements. All co-operation owes its origin to the one great cause, namely, the development of modern industrialism, which, in its turn, originated in the development of the steam engine, and later to the developments in connection with electric power.

The apple-selling associations, originating first in Ontario, have been gradually working out their own salvation, and, undoubtedly, the revival in apple-growing can be traced, to a great extent, to the revivifying influences of co-operative associations.

ADVANTAGES OF CO-OPERATION.

1. Large stocks will be controlled by sellers who act as a unit.
 2. Uniform packing, grading and marking will be practiced.
 3. A reputation associated with a permanent brand or trade-mark, will be established.
 4. The cost of picking, packing and marketing, including transportation, will be reduced.
 5. Fruit will be picked and packed at the proper time.
 6. Less common varieties will be utilized.
 7. Storing facilities will be provided for in better shape.
 8. Direct selling at the point of production will be encouraged.
 9. Packages will be bought in large quantities or manufactured on the premises, with a material reduction in cost.
 10. The placing of the purely commercial part of the industry in the hands of competent men, whose interests are connected with those of other members of the association.
 11. Spraying by hand or power outfits, co-operatively, in some cases, will be adopted.
 12. The manager and the better growers among the patrons will have every inducement to stimulate the less progressive members to better work.
- Co-operation has had a great effect as an educator. Wherever an association has been in successful operation for a few years, there has been a wonderful improvement not only in the quality but in the quantity of fruit produced, and this increase, both in quality and quantity, has been almost beyond belief.

Co-operation has some effect on the Inspection and Sales Act. The records show that, occasionally a co-operative association falls from grace, but, for the most part, the work of the co-operative associations with reference to grading and marking is without fault. Many of the associations grade higher than required by law, and do it for the purpose of maintaining a reputation which they have built up, and which they find of financial value to them.

Mr. McNeill believed that, if the whole body of apple-growers were united co-operatively, it would do away with nine-tenths of the necessity for Dominion Fruit Inspectors.

The obstacles which have been in the way of co-operation have been the apple-buyer, the middleman, the diversified character of our rural population, and the diversified nature of their occupations; petty jealousies, the lack of local leaders in rural affairs, and the need of co-operative legislation.

In spite of all these obstacles, the co-operative fruit-growers' associations have made great headway. Success has crowned their efforts in many ways. A few years ago, the storage facilities for apples and fruit generally were very meagre, in-