

made three or four small leaves at the joints of the old stems. If the young roots have well started, each plant may be potted singly in a mixture of half sand and half potting soil. Use three-inch pots. The time for this change usually comes late in January or early in February. Two months after, re-pot in good potting soil in pots two sizes larger.

Another method of treating old geranium plants, recommended by Mr. Wm. Hunt, of the Ontario Agricultural College, is to put the boxes or pots with the plants treated as already described, in the cellar or basement at once instead of growing them on. If this method is adopted, the sand must be kept much drier as the plants must not be allowed to start into growth until February or March. When that time comes, pot them in sand and place them in the window as recommended for the other method.

FALL CARE OF VEGETABLES

When the tops of asparagus are sufficiently dried so that they can be broken down by a rake, gather and burn them. Give the surface of the bed a top-dressing of well-rotted stable manure which should be worked into the soil this fall. Manure left on the surface until spring will prevent early growth.

Take up some parsley roots from the garden and grow them in a box or pot in a more or less shady place, not too warm. This will give a winter supply.

In some localities, radish and lettuce may be had for Christmas by sowing the seed in a mild hot bed. Protect them against heavy frosts or freezing.

Bank up the winter celery. Most of it should be stored by the end of the month.

Pull and store cabbage and dig beets, carrots, parsnips and such crops, and at once put them in the cellar. Some parsnips and salsify may be left in the ground for digging in the spring.

The old rhubarb patch may be renewed by digging the roots, dividing them and starting a new plantation. Some roots should be left on the surface of the ground or placed in a cold frame until well frozen. Later, place these in the cellar on the floor or in a barrel where they will produce stalks for winter use.

Start a mushroom bed this fall. Look up back issues of THE CANADIAN HORTICULTURIST for information. Another article will appear in an early issue.

Clean up the vegetable garden and burn all rubbish. Apply a dressing of manure and dig or plow it in. Rearrange the location of the crops for next year. A rotation of crops always gives best results. Grow shallow-rooted plants next year where deep-rooted ones were. This is only one of the factors to be considered. An article on this subject will be published soon.

Forcing Tomatoes*

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IT IS doubtful whether tomato forcing as a distinct business can be profitably conducted in Canada. They can often be profitably worked in, however, as a spring crop, after some of the commonly grown greenhouse crops are past their best. It was with this thought in mind that work with tomatoes under glass has been taken up at the Macdonald College. For much of the data presented in this paper, I am indebted to my former assistant, Prof. V. R. Gardner, now horticulturist of the Maine State College, and especially to our efficient greenhouse manager, Mr. A. H. Walker.

The winter forcing of tomatoes is much more difficult than the spring forcing. The tomato loves light and heat and to ripen its fruit during the dark days of midwinter, when sunlight is not only scarce but not strong enough to clear the glass of its heavy coating of frost, is no easy proposition. For this reason it is doubtful to what extent winter forcing can be carried on. This point we aim to work out and experiments to that end are now in progress. Our first planting was made into permanent beds in August, hoping to have our fruit well formed by December, depending largely upon heat alone for ripening. This phase of the question, however, is not the purpose of this paper, and therefore the spring forcing problem and how it can be worked to follow other crops is what I wish especially to deal with.

Our houses are of the King construction, twenty-one and one-half feet span, seven feet to the gutter. The plants should have four and one-half to five feet of head room, at least; therefore, the crop cannot be worked into some low houses profitably. Our houses run east and west. We have a four-span house. These houses are divided by a glass partition, and a walk runs cross-wise of the house, with glass partitions at each side. We have in all four thirty-eight feet and four fifty-eight feet houses each under control. Briefly our aim is to develop crops on a commercial scale in these houses, and at the same time work out problems similar to the one under discussion.

The soil used for tomatoes was made up of a medium light loam sod, piled in summer, into which one-quarter its bulk of stable manure was put, and the whole cut down and mixed before putting into the benches. The soil in the benches was six inches deep.

STARTING THE PLANTS

The plants for house No. one were started from seed sown September 16, into flats. These were pricked off into three and one-half inch pots three weeks later, and carried in these pots to November 22, or nine weeks, when they were set into the permanent bed, being about twelve inches high at that time.

The plants for house No. two were started December 15, in flats, and pricked off a month later into three and one-half inch pots, and on February 20 were again shifted to five-inch pots, and set into benches March 12. The plants at

that time were eighteen inches high. It will be seen that these plants were carried three months before benching. It is safe to say, therefore, that the period between sowing the seed and pricking off will be from three to four weeks. The plants can then be carried in three and one-half inch pots from four to five weeks, but if a longer period is required a shift to a five-inch pot is necessary in order to keep the plant growing and healthy. It is also well to bear in mind that while it is possible to carry a plant in a three and one-half inch pot during the early part of the winter, yet owing to a much more rapid growth towards spring, this would be impossible without stunting the plant. In no case is it advisable to carry the plants longer than three months before benching.

THE FRUITING PERIOD

Plants set in benches in No. one house on November 22, gave their first ripe fruit the middle of March. The time required for the plants to come into fruiting was 113 days. These continued in fruit until the middle of May, or seventy-one days. Those set in benches in No. two house on March 12, gave their first fruit on May 12, or in sixty-one days, and continued in fruit till the end of July, a period of seventy-seven days. It will be seen that the plants occupied the benches in No. one house about fifty-two days longer than those in No. two house, before coming into fruiting. The fruiting period was of about the same duration in both houses. Allowing, therefore, that the plants set in house No. one

*Portion of a paper read at the convention of the Canadian Horticultural Association held at Niagara Falls, Ont., in August. It will be continued in next issue.