

## Growing Tomatoes Under Glass

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**P**OSSIBLY the greater number of the readers of The Canadian Horticulturist have more or less knowledge of how the crop is grown under glass. This article is intended more for those who are not so well versed and just feeling their way. At the same time there may be some phase of this subject of interest to all.

During the past five years a large number of experiments have been conducted here with tomatoes. Those which I deal with are perhaps of more value to the grower than any other.

Experiments were conducted for three years to determine whether it were possible to have tomatoes from October until July without a break, and, if it were possible, whether fruit would be had in sufficient quantity to make it pay. We found, however, that while we had excellent fall and early winter and spring crops, our plantations intended for a winter crop were failures from a paying standpoint, therefore I have no hesitation in saying to those interested in tomato growing never to attempt planting with a view to commence picking fruit say by the middle of January, because you will surely be disappointed. The weather conditions during November and December are such that it is next to impossible to get any fruit as all growth is weak and drawn through lack of sunlight or even good daylight at times. Consequently the flower trusses, or rather what would have been flower trusses at a different season, were weak and the flowers, if any, imperfect, the result being a crop of foliage which so far there is no demand for on the market.

### GROWING TWO CROPS

Experience has shown me that two crops can easily be taken from the same house in the year when handled in the following way. Seeds sown not later than July 1st will give plants fit to bench up from 3½ inch pots by August 1st, setting the plants 18 inches apart each way. "Nothing is gained by closer or wider planting." The first fruits are ripe by the second week in October, and the crop lasts until the middle of January. In the meantime another sowing has been made on October 25th, and the plants carried over in 3½ inch pots, and by the time you have the house cleaned out and benches in shape for replanting these plants are just the right size, averaging one foot in height. Ripe fruits are obtained from this planting by the third week in April, the crop lasting almost until fruit is obtainable from outdoors. Handled in this way the house is under crop almost the full twelve

months. The spring crop finishing up in July sometimes gives time to clear out the old soil and bring in the new.

Too rich a soil is not desirable as too rank a growth will be made. On the other hand good results are not obtained from a poor soil, especially when you intend to take both fall and spring crops from the same soil. What I would consider the best possible soil would be rotted sod, "loamy." Add to this a good sprinkling of bone meal. Such a soil will carry the crop through in excellent shape. For the spring crop simply dig in a fairly heavy dressing of well-rotted manure and another sprinkling of bone meal. Such a soil will carry your second crop nicely.

The question is often asked me: Does it pay to grow tomatoes under glass? I am not prepared to say at this juncture just what money there is in this crop per

square foot of bench area, as there are so many items to be considered, such as express charges, commission, crates, boxes, etc., but I will give the accurate weight of fruit taken from one house, the crop being just finished, the bench area of which is 725 square feet. The fruit weighs close to 1,900 lbs., being a little better than 2½ lbs. per square foot. The wholesale prices obtained were from 20 to 25 cents a pound. The spring crop from the same house should be just as heavy, with prices much about the same. This should give a total weight per square foot of something like five and a quarter pounds. I leave the reader to judge how this compares with other greenhouse crops.

In conclusion, I may say that I did not consider it necessary to explain all the details in connection with the handling of this crop. Should any one desire fuller information I will be glad to give such privately or through The Canadian Horticulturist.

## How to Make and Handle a Hotbed

John Gall, Weston, Ont.

**I**N making a hotbed, the first step is to choose a good situation on the south side of a building, wall or close board fence, where the cold winds from the north will be broken and all the sunshine possible will be obtained. After deciding on the site, the frame should be made. A simple frame may be made out of two-inch planks. It should be constructed in such a manner that it can be raised if necessary should the plants get too close to the glass. The frame should at least be six inches higher at the back than at the front, in order that the rain will run off readily and that the plants get more sunshine. The sashes generally used are three feet by six. The most satisfactory material for use in hotbed sash is double thick, second quality glass: sashes composed of this material suffer comparatively little breakage.

A hotbed may be made either above or below ground. If above ground, it may be made in any situation where the water is not likely to lie. The one below ground is usually preferable if it can be made where the land is high and well drained. To make the latter, the soil should be taken out to the depth of about two feet and about three feet wider than the frame so that there will be room for banking.

The banking is a very important part of the construction of a hotbed, as the conservation of heat in the bed depends very much upon it. Much labor will be saved where the necessary excavation for the frame has been dug in the fall when there is no frost in the ground.

Horse manure is the best to use in making the hotbed, and it should be quite fresh, not cold and rotten, and not

already heated. It should be piled near where the hotbed is to be, and when it begins to heat it should be turned to make it of more uniform consistency. Five or six days after turning it should be quite hot and ready for use.

The bed is started from one end and the manure shaken in from a fork so that the long and short manure may be well mixed. When one layer is made it should be tramped well and then another layer started, and so on, tramping each layer well until the manure is the required depth. After the manure has been put in, the frame should be placed on, and then from four to about six inches more manure put in and banked well around the sides of the frame, both inside and out. Outside, the manure should be banked to the top of the frame and from twelve to fifteen inches in width. The bed is now ready for the lights. The frame should be so constructed that they will fit snugly. Shelters made of one-inch lumber, the same size as the sashes, are useful for covering them, as they help to conserve the heat in cold weather.

### THE SOIL TO USE

In two or three days the sash should be removed, the manure given a tramp all over, making it level where necessary, and then the soil put on. To get the best results, the soil should be of a rich character so that it will not bake. The soil should be from five to six inches in depth over the manure, and it is better to have it a little deep than too shallow. The soil when it is put in should come near the top of the frame at the lower side, as the manure will sink considerably, and the nearer the