

Diseases of Celery

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There are several diseases which attack celery, but only a few may be mentioned. "Damping" is caused by a fungus which follows careless watering while the plants are very small. It attacks the stems of the seedlings at the point where they emerge from the soil, bringing about decay. This disease may be avoided by starting the plants in trays in a shallow trough containing about one inch of water, allowing the water to enter through the drainage holes in the bottom of the trays. In this way the surface of the soil will remain slightly dry, while the roots will receive plenty of moisture. It will always be necessary to water very carefully and to avoid extremes of drought and moisture, also to provide plenty of heat and ventilation. During extremely dry weather it is best to prevent too rapid evaporation by partial shading with lath screens of thin muslin.

The disease known as "blight" or "leaf spot," is caused by a fungus. It is very prevalent and destructive. It makes its appearance at any time, usually after the plants have been set in the open field. The first visible indication of the disease is in the form of grayish spots upon the leaves, changing to a brown or burned appearance in a day or two. If conditions continue suitable to the development of the disease, it will spread to all parts of the plant, the stems will droop and the entire plant assume the appearance of having been scalded. The heart of the plant will continue to throw up new leaves, but when once badly infected, it never sufficiently overcomes the disease to produce a marketable product. When this disease makes its appearance, it is already too late to attempt to eradicate it, as much of the injury has been done before the existence of blight is perceptible.

CELERY BLIGHT

Celery blight generally appears during or immediately after a period of sultry weather, when the atmosphere is filled with moisture and the nights warm. Bright sunshine and a clear atmosphere during the day, with cool nights, are favorable for the prevention and control of blight. Any check in growth will so weaken the plants that they are liable to be attacked by disease. On the other hand, if the plants can be kept in a vigorous growing condition during unfavorable periods, they will be in a much better condition to withstand disease. Owing to close selection and constant inbreeding, the self-branching varieties have become constitutionally weakened, and suffer more from disease than the hardier green sorts.

Under favorable conditions spraying has in many instances proved beneficial in checking blight. Severe loss from

blight is noted only where large quantities of celery are grown and handled together. Growers will not be greatly troubled if the plants are kept in a vigorous condition throughout the growing period.

This may be greatly helped by partly shading the plants up to the time when they are set out into the open field and by planting the crop on land that is rich enough to keep up a rapid and uninterrupted growth. The most satisfactory shade for the plant bed consists of a screen made of plastering laths. The size of an ordinary hot bed sash is the most convenient for these screens.

Growing Tomatoes

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When growing tomatoes in the greenhouse pollination should be carefully attended to, as insufficient pollination causes misshapen fruit. When the flower is mature the stamens are the longest. But as the flower opens to be pollinated, the pistil gradually elongates until it is much longer. Being longer, and the stigma larger than the style, it tends to ward off pollen. Pollen grains adhere and germinate easily. The more pollen, the more perfectly shaped fruit. Pollinization is effected by tapping flowers, jarring uprights, or using a brush. Using a spoon and stick and tapping carefully each flower is the best method. It should be done at least every other day. The pollen is most abundant on bright days. The plants and atmosphere must be dry.

DISEASES

Leaf blight or scab (*Cladosporium fulvum*) appears as rusty brown spots on the under surface of the leaf. It is caused by too damp atmosphere. Give better ventilation and allow less water on the leaves. As soon as noticed, use Bordeaux mixture, spraying thoroughly both sides of the leaf. If the disease is well established, it is best to remove the crop, then sterilize or renew the soil.

Blossom End or Black Rot is caused by insufficient moisture at roots as the plant matures. The plant has become dry and when watered the sudden filling of the cells of the fruit causes the skin to burst and allows the entrance of bacteria. Mildew appears as purple or brown spots on the leaf, which withers where attacked.

The best remedy is to vaporize sulphur in the house.

STERILIZATION

There are two methods of sterilizing the soil—steaming and formalin. If you have sub-irrigation, you can simply connect your steam pipes by hose to the upright and force steam through the soil until it rises in a cloud. Another method is to make a pan, which is forced down over the soil and steam connections made on top. The steam is then turned

on at a pressure of twenty pounds for twenty minutes.

To use formalin, the following is the strength: Eight pounds formalin to one gallon water; one and a half quarts of mixture to fifty gallons of water. Then use one gallon to every square foot of surface and leave for ten days. Then dig over and plant.

Possibilities of a Greenhouse

I have a small greenhouse, 16 x 35 feet. It is heated by hot water. I want to run it this winter, and as I am only an amateur I would like to know what may be grown in it most profitably and what are the possibilities of such a house. I have four acres of land one and one-half miles from what is considered a good market, but as I have to hire a man to keep a horse, I find the expense greater than the returns and would appreciate a few practical suggestions? Mrs. Amateur, Ontario.

It is very difficult to reply to a question of this kind where so many factors have a bearing on the matter. In the first place, the small greenhouse mentioned would not be sufficient to occupy one person's time and give remunerative results. As a side line to some other business it might be useful. As to what could be grown in the house mentioned, a great deal would depend upon the market for the produce. That could be decided only by someone who knows the requirements of the place.

To go into the plant and cut flower business to make any kind of success it would require at least three or four houses of the capacity of the one mentioned, as there is not room enough for a collection of plants and flowers for a general florist's stock. If there is a good market for cut carnations, these could be grown. It would be necessary at this late season of the year to purchase plants from some large firm growing these flowers, such as the John Dunlop Co., Toronto, Gammage & Co., London, or other large firms, as it is too late now to start the plants for winter flowering. Field grown plants could be secured and planted about the end of August. It is too late to think of growing Chrysanthemums for the present season. Lettuce, radishes, and onions could be grown during winter. All of these, if properly handled, are good paying crops.

As to the four acres of land mentioned, it is a useful property to have in connection with greenhouses; but as you say you cannot run it to make returns, it would be better to dispose of it, although if properly run and suitable for a market garden it should work in very nicely for early vegetables from plants raised in the greenhouse in early spring. Much depends, however, upon the ability of the person running a greenhouse or garden as to the success attained.