

## Fighting Onion Mildew

ONION growers in various sections are seriously troubled with Onion Mildew, and frequently whole patches are destroyed. Several means of combatting the disease have been advised, but in most cases the ravage is not materially checked.

Last year, Mr. W. J. Justice, of Barrie, succeeded in saving a large patch of onions grown from sets. In a recent letter to THE HORTICULTURIST, Mr. Justice wrote: "In fighting the Onion Mildew I used lime and sulphur, dry. A few sprayings with Bordeaux mixture were given, but I don't think it is of any use for the purpose. I had been using lime and sulphur for two or three weeks before I wrote to the Ontario Agricultural College for advice, but was not succeeding as I thought I should. I wrote to the College and asked for a remedy, and found that for once I had guessed right. The onions affected were not seed onions; they were sets.

"A package containing specimens of affected onions were sent the College when I asked for the best treatment for the trouble. Professor Lochhead's reply was as follows:

"Onion Mildew is a destructive parasitic disease. As a rule the bulb is not affected, but if the trouble appears early

the bulbs remain very small. After the fungus has secured an entrance into the onions it is difficult to cure. All we can hope to do is prevent it from spreading. In the early stages it can be checked by dusting with powdered quicklime and sulphur—twice as much lime as sulphur. This is best applied with a bellows when the plants are damp. Sulphide of potassium may be used one-quarter ounce to a gallon of water.

"Prevention rather than cure should be aimed at, and this can be assured if the known means are thoroughly carried out. The first appearance of the disease depends on resting spores of the fungus, and they are produced on leaves previously killed by the fungus. Therefore, it is necessary to collect and burn all diseased leaves. If they are allowed to rot on the ground, the resting spores are set free in the soil, and as they retain their vitality for at least two years, there is a constant and certain danger of the disease breaking out afresh. If practicable onions should not be grown on the same land more than once in three years. At the end of that time all resting spores are dead. Damp and shaded situations favor the spread of the summer form of the disease."

## Growing the Celery Crop

AT the monthly meetings held by the Toronto vegetable growers during the winter months celery growing in its various phases was fully discussed. Several gardeners belonging to the Toronto branch association have had many years' experience with this crop, and are looked on as authorities.

The celery king of Humber Bay, Mr. Wm. Harris, said that on good celery ground the plants might be set outside about May 24, but much depended on the season. The earlier they were set out the better would be the crop of celery, as greater growth was made during the long days of summer. Later in the season, when the nights became longer, blight is caused if the soil is not well adapted to this crop. On heavier soil the plants should not be set out until June.

Some gardeners recommended setting the plants in rows 2½ feet apart, but Mr. Harris claimed the best celery is obtained when the rows are three or 3½ feet apart. He preferred planting them in double rows with a four-inch space and eight inches apart, because it saved lumber when the plants were being bleached. If the ground is dry more space can be given between the plants so that enough moisture will be

furnished. He advised mulching with manure after the plants are six or seven inches high. In the best celery land the less cultivation given the better after the plants have reached that height, as black muck dries out freely when stirred. Besides, cultivation on such soil after the plants are about seven inches high, frequently causes blight. He claimed that this troublesome disease remains in the ground, and said that patches on which refuse from tanneries had been used as a fertilizer produced good celery free from blight. It was thought that the salt in this refuse had something to do with the absence of the trouble. Last year celery planted in double rows was affected more by blight than was that in the single rows.

It was claimed by Mr. Harris that black heart is found only on soil that is not adapted to celery growing. He had found it in his crop in odd places where the soil was not deep. Experience had shown him that celery cannot be grown on shallow soil, and that the deeper the soil the better the crop. Paris Golden Yellow is the variety best suited to his soil, and most sought after on the market. Some growers had said that it had a poor heart, but his experience showed

that no other variety filled out as well as does the Paris Golden.

Mr. Courtice said that the supplying of a suitable market until late in the season is as important as the production of an ideal crop. Black swamp soils are suitable for producing celery for the early market, but if celery is wanted to keep late in the season it should be planted on a moderate grade on higher, well-drained soil. This soil must be kept continually cultivated. Celery of better keeping quality can be produced from planting in single rows than by the double row system. It should not be planted too early in the season.

The secret in producing long-keeping quality is to have the crop out as late as possible in the fall. He preferred not to take it in before November 10, and said that every three days it is left out after that time meant three weeks in the keeping quality and also makes it more edible.

The aim of celery growers should be to produce a first-class article. With such it is not hard to hold the trade. Mr. Courtice said he always took his celery to the customers in boxes well lined with paper, and instructed these customers not to leave it loose in the boxes and exposed to the air. If carefully handled and kept away from the air it will keep crisp for a week or longer.

The best keeping celery that he has grown is Evans' Triumph. It has a whole heart and the stocks are crisp. Paris Golden Yellow was much sought after on the market, but it has not as good a heart, and is seldom found free from strings. The length of time that celery can be kept depends on the season. He has kept it as late as March.

It was pointed out by Mr. Joseph Rush that Canadian celery growers have lost the art of keeping that crop. He said that when he first came to Canada he opened a pit on May 17, and sold it as late as June 10. This lot had been stored in a pit with sand in the bottom.

That the market demands a blanched celery, was referred to by Mr. J. McKay. The blanched sorts, he said, do not keep, and the green supply does not sell. If the customers would buy green celery Ontario growers could supply them, and one stick of it would be worth more than half a dozen of the goods now imported from California.

Budding is best performed when there is still sufficient sap beneath the bark to permit of the latter being easily raised with a knife. On the other hand, if the work is done when the tree is still growing vigorously the bud is liable to be "drowned out," or in other words, forced out by reason of too much sap and growth of the stock.—W. T. Macoun, Central Experimental Farm, Ottawa.