

much brighter on the sprayed vines than on the unsprayed. At Grimsby the Black Rot was found on the vines which had been unsprayed, and, as at Winona, it was found that practically no damage had been done by the mildew, which was quite evident on the unsprayed rows and absent from the sprayed rows.

At Beamsville the check rows were the only ones that had Black Rot to any extent, and the owner of the vineyard was one of the first to recognize the fact that the spraying had kept the Black Rot away from his vines. At Jordan the row which only had the blue stone treatment in April showed considerable mildew. There was, however, one row of Moyer grapes which had been sprayed with Bordeaux five times during the season and which showed more Black Rot than any other row. The owner states that last year the grapes on this row were completely ruined by Black Rot.

At St. Catharines the results were very similar to those observed at Grimsby and Winona, the unsprayed vines showing the most Black Rot and mildew. An interesting lesson by way of comparison may be drawn from a study of a neighboring vineyard which had never been sprayed. Although this is a very favorable season for grapes, yet this graperies showed a great deal of Bird's Eye Rot, Mildew, and Black Rot.

PETRIFIED GRAPES.

At Niagara-on-the-Lake, Mr. Jarvis reports, the sprayed vines were very clean, but the unsprayed vines showed considerable Black Rot and Bird's Eye. At Stamford, Mr. Jarvis also reports, there was practically little difference between the sprayed and unsprayed vines—both being

very free from disease. At Queenston a splendid object lesson was observed in a vineyard of Niagaras. On the check (unsprayed) vines "petrified" grapes and Downy Mildew were in evidence, but were entirely absent from the sprayed vines. The owner states that the Delawares which were sprayed were much better and cleaner than those which had been left unsprayed.

A very interesting side experiment was carried out in a vineyard along the Niagara river road. Only a portion of this vineyard was sprayed, but the grapes on the unsprayed portion were shelling very badly, and many of them were "petrified." Downy Mildew was very abundant in the unsprayed portion, and there seems to be no doubt that the "petrified" grape is due to the attack of that disease. The sprayed part of this vineyard had but one application, in July, but even with but a single application the difference between the sprayed and unsprayed vines was very evident.

In most of the orchards considerable injury was done by the Grape Berry Moth. Should this insect continue to trouble us for another season, it may be necessary to add some arsenic solution to the Bordeaux, especially during the June and July sprayings.

On account of the unsatisfactory condition of the season for spraying experiments the Government will be urged to conduct the same series of experiments in the same vineyards for another season at least. Grape growing is a very large industry in the Niagara region, and it is very important that the grape grower should have definite information as to the best ways of controlling diseases on the grape in the most unfavorable seasons.

The power sprayer possesses the following advantages: 1st, the same number of men will cover two to three times the tree surface; 2nd, only about one-half the quantity of spraying mixture is needed; 3rd, the work is much better and more effectively done.—(W. H. Brand, Vinemount, Ont.)

It will not do to over-estimate the results of spraying, but I am satisfied that, with one or two exceptions, the growers about Ingersoll, in whose orchards we used the government power sprayer, were well pleased with the results.—(J. C. Harris, Ingersoll, Ont.)