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EX 822 Room

THE PLANT DISEASE SITUATION

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U. S. Department of Agriculture

A radio talk by F. C. Meier, plant pathologist, Extension Service, delivered through WRC and 34 other radio stations associated with the National Broadcasting Company, Monday, June 16, 1930.

This morning I returned to Washington from a trip to farms in northern Ohio and in New England. Judging from the condition of some crops the dry weather of April and May was in one way helpful for it held many of the plant diseases in check. It is during wet weather that fungous diseases such as apple scab, peach brown rot, cereal rusts, and potato blights are usually most destructive. Early season weather is especially critical. However, even if there has not been much early infection, there is still plenty of time before harvest for such troubles to become serious. Furthermore, virus and environmental diseases which are not inhibited by dry weather will be common and by the time the season is over, where farmers have failed to take precautions against them, plant diseases will probably have taken about their average toll. I was talking with Dr. Haskell, our new extension pathologist, the other day. For several years he has had charge of the Plant Disease Survey, a sort of intelligence service on plant diseases maintained by the Department of Agriculture. In speaking of his work he mentioned the results of a special survey which is now under way on tobacco.

Tobacco plant beds and fields are being studied in all tobacco areas to determine more definitely the disease problems with which the growers have to contend. The results received so far indicate that diseases are not very prevalent in the tobacco seed beds this year. Dry weather, resulting in poor germination and uneven stands, seems to have been the most important unfavorable factor.

Today the plant pathologists of the Southern States are closing a four day meeting in the center of the early vegetable section of Mississippi for the purpose of exchanging ideas on their common problems and making observations of demonstrations and experiments on vegetable disease control. The tomato growers of this section are experiencing trouble this year with bacterial canker, a disease which has been increasing in prevalence in several States of late years. Although not entirely complete, the evidence in the case of the Mississippi outbreak indicates introduction of the disease-causing bacteria with seed from sources outside the State. If this is true, strict attention should be given to the securing of disease-free seed for future planting.

Memories of the destruction caused by late blight of potatoes in 1927 should put all commercial growers and home gardeners on their guard against the disease this year. In the northern States July and August are usually the dangerous months.

Since we can not safely predict whether the season will be favorable or unfavorable for this disease, it is well to provide insurance against loss by spraying with the 4-4-50 Bordeaux Mixture at the rate of about 100 gallons per acre for each application. In commercial fields use at least 200 pounds pressure and in the home garden use the best pressure available. Begin spray-



ing when the plants are about one foot high and apply sprays at intervals of 10 to 14 days and even more often in rainy weather. Mr. Kirby, Extension Pathologist in Pennsylvania says that in Pennsylvania the potato yield was increased 10 bushels per acre every time a spray pump passed through the field. Those Pennsylvania potato growers know how to spray.

A lady in Framingham, Mass., who was showing me a very beautiful garden yesterday said to be sure to mention the matter of rose mildew control. She finds that Massey dust, a combination of nine parts of dusting sulphur with one part of arsenate of lead, developed by Dr. Massey, a plant pathologist at Cornell, is particularly good for control of rose mildew and chewing insects. Of course arsenate of lead can be added to Bordeaux mixture if one prefers this spray to the sulphur dust.

Just before starting to the studio one of our Washington watermelon distributors told me over the telephone that considerable anthracnose is showing up in carloads passing through Washington. Some housewives have asked me if anthracnose spotted melons are fit for food. Yes. They are all right as long as the pulp itself is firm and red and has not started to decay. Badly anthracnosed melons create a serious transportation problem, however, and often mean serious loss to the shipper and transportation company. I have seen carloads arrive in such bad condition due to efforts to ship anthracnosed melons that it was necessary for the men who unloaded them to wear hip boots and use scoop shovels.

Stem-end rot of watermelons has not been much in evidence yet this season but shippers should take precautions against this disease. Transit losses from anthracnose and stem-end rot of watermelons can be reduced by carrying out the following suggestion: (1) Load only fresh melons with green stems, reclip stems at the car and apply a disinfectant paste to freshly cut surface. (2) Do not ship severely sun-scalded or stale melons from dead vines. (3) Do not ship melons affected with bad anthracnose pock marks. (4) Never permit labor to handle rotten melons in the field and then work with fruit for shipment, (5) and finally remember that the watermelon rind is a good protection against decay. Every effort should be made to handle melons carefully so as to avoid cuts, breaks, and bruises of the rind which offer points of entrance for the stem-end rot fungus and other organisms of decay.

The campaign to control black stem rust of small grains through the eradication of the alternate host, the common barberry, in the 13 North-Central States, has been in progress for 12 years. The project was initiated in 1918 after the nation had been startled by the stem-rust epidemic of 1916 which caused a loss of wheat estimated to have been worth \$283,600,000. The eradication campaign since that time has resulted in the destruction of more than 18,143,000 common barberry bushes and seedlings.

The graduate removal of this enormous number of common barberry bushes in the eradication area during the 12-year period has been followed by definite reductions in stem-rust losses in the wheat producing regions.

At the present time field work on barberry eradication is actively under way in the North-Central States. If you live in that section, your continued cooperation in the location and destruction of common barberries will be appreciated.

Our time is too short to mention the many plant disease problems that some of you are facing. If you have questions concerning plant diseases and their control see your county agricultural agent or write to your State Experiment Station, or to the U. S. Department of Agriculture.

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