THE CONTROL OF RASPBERRY ANTHRACNOSE IN NOVA SCOTIA[1]

K.A. Harrison[2]

Abstract

Bordeaux 10-5-100 was better than Elgetol as a delayed dormant spray for the control of raspberry anthracnose. Erad and Cyprex were less effective.

Introduction

The usual recommendation in Nova Scotia for the control of red raspberry anthracnose, caused by Elsinoe veneta (Burkh.) Jenk., has been a delayed dormant spray of Elgetol or lime sulphur in early May, followed by an application of ferbam in early June, and, in severe outbreaks, by another application of ferbam in August after the removal of the fruiting canes, Elgetol and lime sulphur are no longer easily obtained in Nova Scotia because they are now rarely used in orchard pest control. In 1959, a large plantation of raspberries of the variety Washington became severely and uniformly infected with E. veneta and it was used for fungicide tests in 1960.

Methods

Twenty-five plots, each 33 feet long, were arranged along 5 center rows in the field in a Latin square and a delayed dormant spray application was made on May 5. The fungicides used and their rates per 100 gal. were:

1. 1/2 gal. Elgetol (19% sodium dinitro-o-cresylate)
2. 10-5 Bordeaux (10 lb. copper sulphate, 5 lb. hydrated lime)
3. 1/2 pt. Erad (10% phenylmercuric acetate)
4. I lb. dodine (65% n-dodecylguanidine acetate)
5. Check (no fungicide)

The fungicides were applied to run-off at 200 lb. pressure with a single-nozzle gun. The remainder of the field was sprayed with Elgetol at 1/2 gal. per 100 gal. of water. On May 31, when the turions had reached a height of 7-9 inches, the entire plantation, except the checks, received an application of ferham at 2 lb. per 100 gal.

On July 19 the number of anthracnose lesions was counted on 10 fruiting laterals from each plot. On the check, the lesions frequently coalesced and estimates were made when necessary. The figures 25 and 50 were used when it was obvious that the number of lesions exceeded either of these figures. None of the treatments was phytotoxic.

---

[1]Contribution No. 1101 from the Research Station, Canada Dept. of Agriculture, Kentville, Nova Scotia.

[2]Plant Pathologist.

Results and Discussion

The mean numbers of lesions per plot from each treatment were: Bordeaux, 5; Elgetol, 22.6; Erad, 38.6; dodine, 57.6; check, 327.4. L.S.D. (P = 0.05) 34.0 without check, 158.0 with check. The numerical differences are high but the only statistically significant differences are between all fungicide treatments and the check and between Bordeaux and dodine. In the past Elgetol has given practical control of anthracnose but its performance was poor in this experiment. It is a good eradicant but a poor protectant fungicide and therefore did not protect the canes from the large amount of inoculum spreading from the checks during most of the month of May. This opinion was supported by counts rnade in the area sprayed with Elgetol and ferbam outside the Latin square. A mean of 13.8 lesions was found on laterals from each of 5 rows. It was not possible to carry the observation further as the grower abandoned the field because of weeds and the lack of a crop. It is obvious that Bordeaux was better than the other fungicides tested and that it should be recommended as a dormant spray for control of raspberry anthracnose in Nova Scotia.

CANADA AGRICULTURE RESEARCH STATION,
KENTVILLE, NOVA SCOTIA.