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Abstract

The Brown/Sutton/Hartman sooty blotch flyspeck (SBFS) warning system, developed in North Carolina and modified in Kentucky, extends the period between the first cover and second cover fungicide sprays until a total of 175 hours of wetness has been measured in the orchard canopy. After the second cover, sprays are made at 2-week intervals until harvest.

Keywords

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Evaluating Effectiveness of a Sooty Blotch/flyspeck Warning System at Three Commercial Orchards in Central Iowa

RFR-A9061

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Introduction

The Brown/Sutton/Hartman sooty blotch flyspeck (SBFS) warning system, developed in North Carolina and modified in Kentucky, extends the period between the first cover and second cover fungicide sprays until a total of 175 hours of wetness has been measured in the orchard canopy. After the second cover, sprays are made at 2-week intervals until harvest.

We compared the effectiveness in suppressing SBFS and other summer diseases (secondary scab and fruit rots) in three commercial orchards using this warning system compared with a calendar-based spray regime.

Materials and Methods

Three central Iowa cooperators tested the impact of the Brown/Sutton/Hartman SBFS warning system performance in relation to a 14-day interval calendar-based control regime. Trials were conducted with Apple Ridge Orchard in Iowa Falls, IA; Berry Patch Farm in Nevada, IA; and Center Grove Orchard, Cambridge, IA. Two cooperators set aside blocks of five trees of Golden Delicious and

one cooperator set aside one Gala, one Chieftain, and three Golden Delicious trees.

Spectrum WatchDog™ electronic leaf wetness sensors were placed in the lower canopy of an apple tree in each orchard and monitored weekly. Growers were kept informed of the accumulated hours of leaf wetness and advised to spray with Topsin M + Captan when the 175-hour threshold was reached. Following the second cover spray, orchards were sprayed with Topsin-M + Captan every 14 days until harvest.

At harvest, 50 apples from each tree (25 from the upper half of the tree, 25 from the lower half) were evaluated for incidence of SBFS. Percent of apples with SBFS were analyzed using PROC GLM with orchard as block and individual trees as replications.

Results and Discussion

No differences in SBFS incidence were observed between the warning system regime and the calendar based fungicide schedule ($P = 0.6905$). Three sprays were saved using the SBFS warning system with no difference in SBFS control (Table 1).

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Table 1. Comparison of two SBFS treatments based on dates of first and second cover, number of sprays, and the average percent of apples SBFS and number of spray applied to three commercial orchards in central Iowa.

SBFS treatment	Grower	First cover date	Second cover date	Mean # sprays	Apples with SBFS (%)
SBFS warning system	1	5/25	7/11	3	0.8
	2	5/25	7/06		14.6
	3	5/25	7/06		5.8
Calendar	1	5/25	6/8	6	0
	2	5/25			
	3	5/25	6/6		6.0