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First Studies on the Epidemiology and Management of Sooty Blotch and Flyspeck of Apples in Southern Brazil.

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Sooty blotch and flyspeck (SBFS) is an important fungal complex that causes blemishes on the apple fruit surface. A 19-year-old Fuji orchard, located in Vacaria, RS, Brazil, was selected to assess

the disease and evaluate control strategies in the 2006-2007 season. Fungicide treatments, beginning 10 days after petal fall, were timed as follows: 1) captan at 14-day interval or after rain (>50 mm); 2) IPM-based grower's decisions focused on control of fruit rot diseases; 3) U.S. SBFS alert system whose threshold for the first fungicide (thiophanate-methyl + captan) application is 175 hours of cumulative wetness duration, starting 10 days after petal fall; and 4) unsprayed treatment. The alert system used was modified so that subsequent sprays after the first threshold-timed spray also were triggered by 175 hours of wetness since the previous spray. The effect of summer pruning on performance of the SBFS warning system was also evaluated. SBFS incidence (% apples with signs) was assessed at 7-day interval from disease onset to harvest. In the unsprayed treatment, SBFS incidence reached 87,8% by the last evaluation. SB fungi had incidence as high as 85,7%, whereas the highest incidence of FS fungi was 2.1%. The first signs of SBFS were observed 120 days after petal fall, when incidence was 50%. Thirty days later, incidence had increased an additional 39%. Five mycelial types in the complex were discerned based on colony morphology; the "punctate" mycelial type was most prevalent (45% of colonies examined). Most SBFS colonies clustered at the peduncle region. All fungicide treatments were equally effective in reducing SBFS incidence by 50% compared to the check. However, 5 sprays were needed following the alert system or grower's decisions, whereas 11 sprays were used in the preventative treatment. No significant effect of summer pruning was observed in improving disease control.

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