




22 DOWNY MILDEW WARNING SYSTEMS FOR VINEYARDS CULTIVATED UNDER PLASTIC COVERING - INFLUENCE ON YIELD AND QUALITY



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Monday, 29 September 2014

Salon I (Embassy Suites Cleveland - Rockside)

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In Brazil, the use of disease warning systems and plastic covers are promising alternatives to minimize the occurrence of grapevine downy mildew, which can improve productivity and quality. Although the use of plastic covers is a common technique in other regions, in northwestern São Paulo, Brazil, its use, associated with the disease warning systems, is still inexpressive, which has led to an excessive number of sprays for downy mildew control. Based on that, the objective of this study was to evaluate the effect of using different downy mildew warning systems associated to plastic cover on the productivity and quality of cv 'BRS Morena' grapevine. The experiment was conducted at the Embrapa Grape and Wine - Tropical Viticulture Experimental Station in Jales, SP, Brazil. Three rows of 60 m of the seedless grape cultivar 'BRS Morena', spaced 3.0 m between plants, were conducted. The vineyard was covered with braided polypropylene plastic film installed over a metallic arc-shaped structure (PPT). The experimental design was randomized blocks composed of five treatments, with six repetitions. The treatments were defined by the different grapevine downy mildew management: (TE) Control (no sprays against downy mildew); (CA) Conventional control (calendar); (BA) Warning system named 'Rule 3-10' (BALDACCI, 1947); (MA25) Warning system with moderate-infection efficiency - $i_0 > 25\%$ (MADDEN et al., 2000) and (MA75) Warning system with high infection efficiency - $i_0 > 75\%$ (MADDEN et al., 2000). According to the results, despite the timing of fungicide application in the region require a higher frequency of sprays, the vines presented productivity and fruits quality similar to those sprayed based on the warning systems. Therefore, it is recommend for northwestern São Paulo the replacement of the conventional control scheme of grapevine downy mildew by the management of spraying based on disease warning systems coupled with the grapevine cultivation under plastic cover, since these techniques allowed, on average, a reduction of 70% in the number of sprays for downy mildew control, which represents important savings in the production cost.

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