

SAFEGUARDING AGAINST SILVERLEAF WHITEFLY INSECTICIDE RESISTANCE

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Outline

Silverleaf Whitefly (*Bemisia tabaci*) is a major pest of cotton. This is because it produces sticky honeydew that contaminates lint, reducing the quality of cotton. Silverleaf Whitefly can be controlled with insecticides, but if mismanaged – whitefly will develop resistance. Each year Silverleaf whitefly are collected from cotton production regions and screened for resistance to insecticides, e.g. Admiral[®], Pegasus[®] and Talstar[®]. The results of this research support Insecticide Resistance Management Strategies (IRMS) to prolong the life of the currently used insecticides.

Results

In 2013 and 2014 Silverleaf whitefly (Figure 1) were collected from cotton farms at Emerald, Theodore, St George, Namoi valley, Moree and Macintyre Valley. Dose response bioassays were completed for each of the insecticides registered for whitefly control. Our bioassay results demonstrate that whitefly in the above regions are fully susceptible to Admiral[®], Pegasus[®], Movento[®] and Talstar[®]. Limited testing of Silverleaf whitefly from horticultural crops at Ayr revealed populations there have resistance to Admiral (Figure 2). Results from cotton regions indicate the IRMS for Silverleaf whitefly is



FIGURE 1. Silverleaf Whitefly adults and eggs.

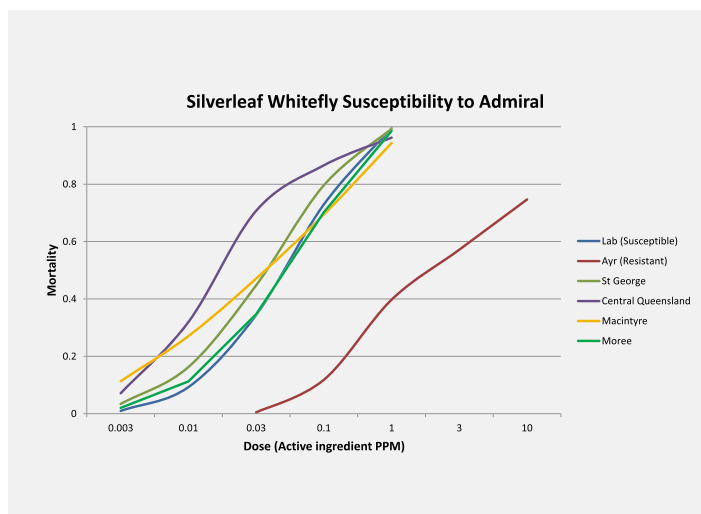


FIGURE 2. Summary of results from Admiral[®] dose response bioassays 2013-14.

working. The results from Ayr demonstrate the potential for resistance with less prescriptive insecticide use control measures.

Benefits of Research

Results from this research provide reassurance to growers and consultants that Silverleaf Whiteflies are susceptible to insecticides registered for their management. Adhering to the Insecticide Resistance

Management Strategy is important for maximising the lifespan of insecticides which remain critical for sound whitefly integrated pest management.

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Further Information

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