

Adaptive Area Wide Management of Qfly using SIT 2016 #3

Expert workshop – where are the flies?



The Adaptive Area Wide Management project includes a component matching our knowledge of fly biology to its physical environment. This involves looking at the landscape, and matching it with current knowledge of Queensland fruit fly ecology in order to predict where and when Qfly will occur in your regional landscape using a habitat suitability model. This will not only inform where to target Area Wide Management efforts, but also inform the future use of SIT.

To that end, the project recently engaged a number of Qfly experts to provide input on the current understanding of fly behaviour (such as distance travelled, host preferences, overwintering ability) during a 2 day Qfly workshop. The workshop was facilitated by Justine Murray and Rieks van Klinken (CSIRO) who both have extensive experience in applying this approach to a wide range of other invasive organisms. Twelve participants attended the workshop held in Brisbane in February 2016. The participants represented a diversity of knowledge and experience, and included those working in tropical Queensland all the way down to the Goulburn Valley and Sunraysia in Victoria and across to the Riverland in South Australia. There were also AWM project members present as observers so that they could learn from the experts during the workshop and have a good understanding of Qfly to take into other aspects of this comprehensive project.

The experts were able to interact with each other and productive discussions continued throughout the workshop, even throughout the lunch breaks. Participants combined their knowledge and experience of Qfly behaviour with both consensus views and individual values captured. During the workshop, Qfly was discussed in relation to climatic stress, host availability, and roosting site availability. The model then started to take into account the likelihood that a commodity will be struck by Qfly, and the likelihood that larval development can occur within the commodity. The model brings together habitat suitability, long-distance dispersal pressure, management effectiveness, seasonal fly abundance, host quality (host preference and maturity), climate and fly activity. The models will be linked to relevant spatial (landscape) data to produce regional maps of areas at risk. The models will subsequently be refined for individual regions by field tests. Later in the year, the modellers will visit regions to assess how well the model fits with regional knowledge and experience, make adjustments if necessary, and then be used to predict where and when flies will occur in the landscape in the future. Risk maps within each area can be generated to identify potential hot spots. The first regions that maps will be generated for will be in southern Australia.

Will developing a habitat suitability and risk model for Qfly in your region help? Undoubtedly - this will help us know where Qfly are hiding in the landscape, and where to focus efforts. It will help regional communities undertake effective AWM, be prepared, make informed decisions and be **one step ahead of the fly!**

For further information please contact;

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