2017 UMass RIMpro Advisory Service

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During the 2017 growing season, a UMass RIMpro Advisory Service was launched. RIMpro is a cloud-based "interactive Decision Support System (DSS) for pest and disease management in fruit and wine grape production" (RIMpro website: http://rimpro.eu)

RIMpro pest and disease model outputs provide both chart and table interfaces to understand the current risk level for a given pest problem. For example, see Figure 1. RIMpro-Venturia (apple scab), where the RIM Infection Value represents the risk of infection by apple scab. RIM Infection Values in the graph are represented by the red line, while shaded areas show different stages of spore development: ejection, germination and development in the leaf. This is a detailed picture of each infection period. This can be helpful in detailed timing of sprays. For general purposes, the RIM Value is the critical piece of information.

The 2017 UMass RIMpro Advisory Service was co-funded by the New England Tree Fruit Research Commission and participating growers. The annual cost of RIMpro in 2017 was RIMpro is €200 ($240) plus €50 ($60) for weather data, either provided by on-site weather stations through NEWA, or using Meteoblue, a Swiss-based virtual weather service. Growers in New England were offered the RIMpro Advisory Service through UMass for $150, with the objective of having ten growers, with at least one from each New England state. In the end, 21 growers signed up for our Advisory Service! (Figure 2)

Participating growers were given a web page to access the RIMpro output for their specific orchard. In addition to apple scab, RIMpro also includes advisories

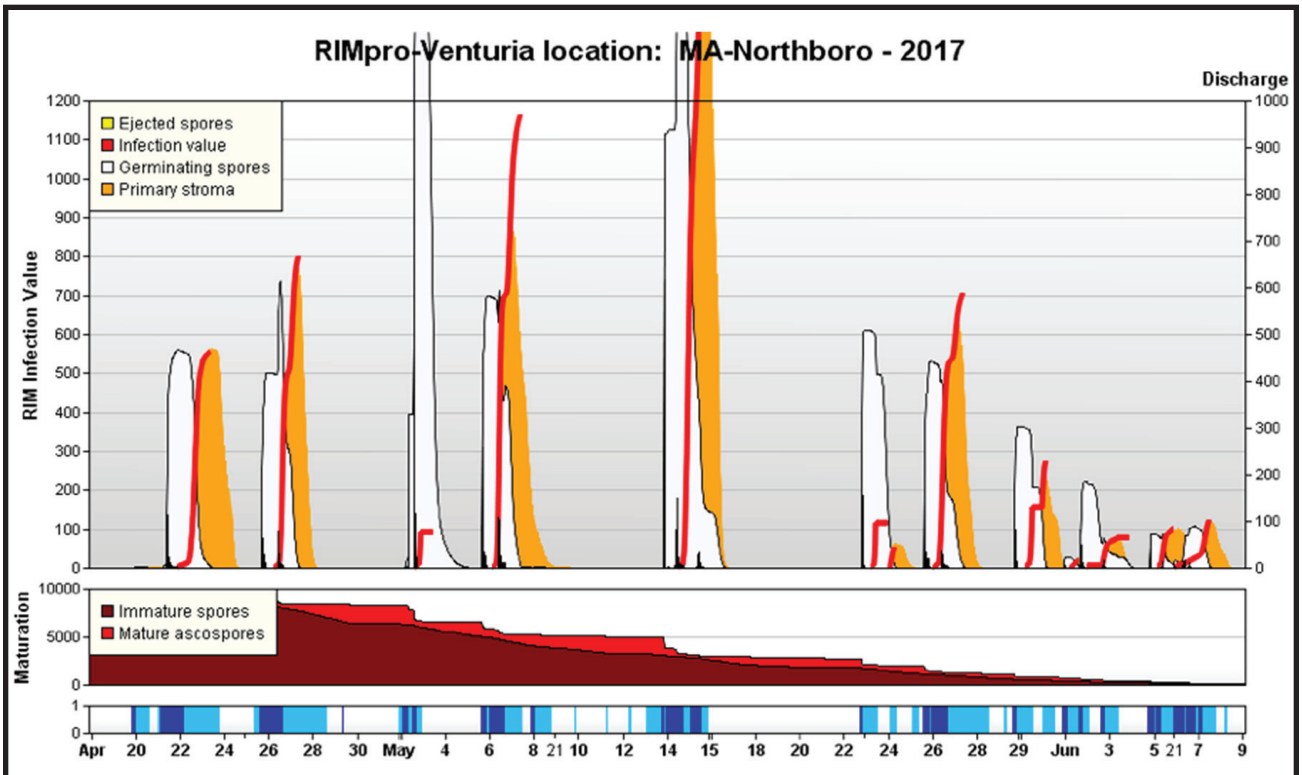

Figure 1. Example of RIMpro output for apple scab from Northborough, MA 2017.

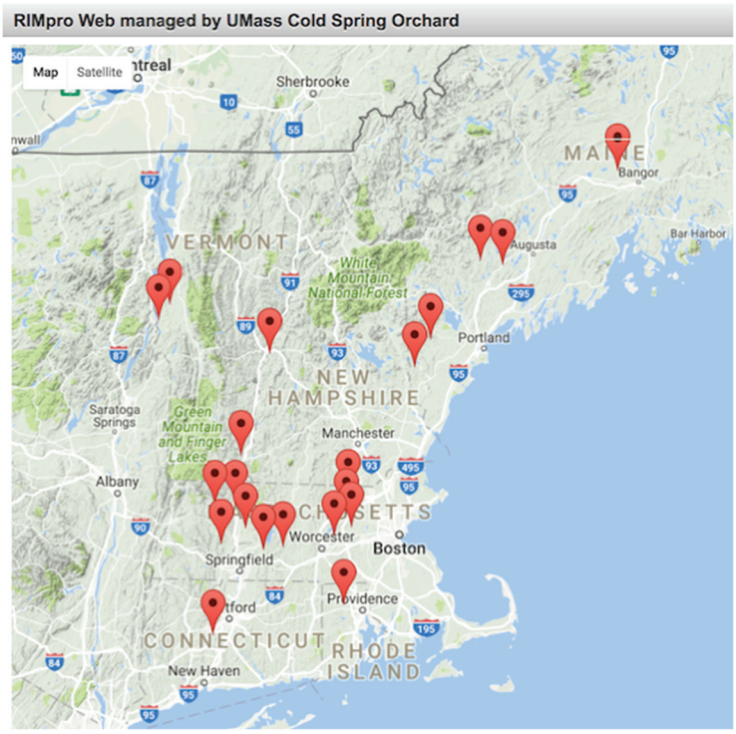

Figure 2. UMass Rimpro Advisory Service locations in 2017.

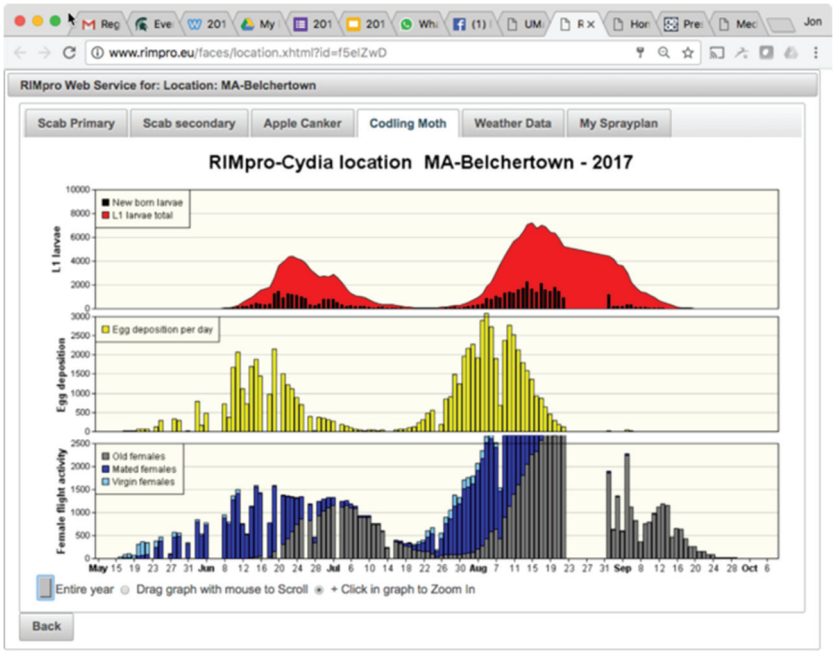

Figure 3. Example RIMpro codling moth output as seen by grower.

for fire blight, sooty blotch, codling moth, and European apple sawfly (Figure 3). Real-time, forecast, and historical risk model output is available for these pest and disease models, though only scab has been validated under North American conditions

Because the output is not intuitively easy to understand, several times during primary apple scab season, an e-mail was sent to UMass Advisory Service participants explaining how to interpret the charts. In addition, individual visits with each grower was made during the month of May. While we did not specifically ask growers, it was apparent that the one-on-one discussions were very useful in helping growers learn to interpret the apple scab output.

An end of season survey of Advisory Service participants indicated that over 90% said they were "confident making orchard management decisions based on RIMpro output" and 80% said they "will continue to use RIMpro in the future."

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