2017 UMass Rimpro Advisory Service

Jon Clements, Dan Cooley, and Elizabeth Garofalo
Real time information and forecast of pest and disease development

- RIMpro Cloud Service is an interactive Decision Support System (DSS) for pest and disease management in fruit and wine grape production.
- For many growers and consultants RIMpro is their essential tool for effective crop protection.
- Connect your weather station to the system in minutes. Get valuable real-time information to manage your crop protection in integrated, low-input or organic production systems.
<table>
<thead>
<tr>
<th>Date</th>
<th>DD0</th>
<th>LW(h)</th>
<th>Rain(h)</th>
<th>Immature</th>
<th>matureas</th>
<th>maturesp</th>
<th>ejectable</th>
<th>Ejected</th>
<th>Germaini</th>
<th>RIMvalue</th>
<th>Prim.Stro</th>
<th>Incubation</th>
<th>Lesions</th>
<th>Conidi</th>
<th>Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>21/05/2017</td>
<td>751</td>
<td>0.0</td>
<td>0.0</td>
<td>1907</td>
<td>188</td>
<td>777</td>
<td>641</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3177</td>
<td>362</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>22/05/2017</td>
<td>762</td>
<td>11.5</td>
<td>5.0</td>
<td>1870</td>
<td>193</td>
<td>771</td>
<td>627</td>
<td>778</td>
<td>769</td>
<td>3</td>
<td>3</td>
<td>3107</td>
<td>405</td>
<td>0.93</td>
<td>0.33</td>
</tr>
<tr>
<td>23/05/2017</td>
<td>777</td>
<td>11.5</td>
<td>0.0</td>
<td>1715</td>
<td>283</td>
<td>223</td>
<td>162</td>
<td>0</td>
<td>765</td>
<td>525</td>
<td>524</td>
<td>3274</td>
<td>479</td>
<td>2.0</td>
<td>0.96</td>
</tr>
<tr>
<td>24/05/2017</td>
<td>792</td>
<td>6.0</td>
<td>0.0</td>
<td>1473</td>
<td>390</td>
<td>313</td>
<td>254</td>
<td>0</td>
<td>76</td>
<td>28</td>
<td>240</td>
<td>3481</td>
<td>577</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>25/05/2017</td>
<td>804</td>
<td>12.0</td>
<td>9.0</td>
<td>1245</td>
<td>384</td>
<td>360</td>
<td>359</td>
<td>467</td>
<td>466</td>
<td>4</td>
<td>4</td>
<td>3453</td>
<td>651</td>
<td>0.98</td>
<td>0.54</td>
</tr>
<tr>
<td>26/05/2017</td>
<td>816</td>
<td>24.0</td>
<td>19.0</td>
<td>1098</td>
<td>281</td>
<td>143</td>
<td>102</td>
<td>212</td>
<td>461</td>
<td>516</td>
<td>487</td>
<td>3379</td>
<td>734</td>
<td>2.0</td>
<td>1.74</td>
</tr>
<tr>
<td>27/05/2017</td>
<td>831</td>
<td>24.0</td>
<td>0.0</td>
<td>962</td>
<td>194</td>
<td>189</td>
<td>134</td>
<td>0</td>
<td>157</td>
<td>675</td>
<td>514</td>
<td>3834</td>
<td>855</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>28/05/2017</td>
<td>847</td>
<td>9.0</td>
<td>0.0</td>
<td>806</td>
<td>198</td>
<td>310</td>
<td>232</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>19</td>
<td>3838</td>
<td>1029</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>29/05/2017</td>
<td>858</td>
<td>11.0</td>
<td>7.0</td>
<td>664</td>
<td>191</td>
<td>343</td>
<td>338</td>
<td>405</td>
<td>405</td>
<td>2</td>
<td>2</td>
<td>3684</td>
<td>1162</td>
<td>0.84</td>
<td>0.43</td>
</tr>
<tr>
<td>30/05/2017</td>
<td>871</td>
<td>15.5</td>
<td>0.0</td>
<td>585</td>
<td>128</td>
<td>125</td>
<td>91</td>
<td>0</td>
<td>402</td>
<td>398</td>
<td>396</td>
<td>3551</td>
<td>1308</td>
<td>2.0</td>
<td>1.12</td>
</tr>
<tr>
<td>31/05/2017</td>
<td>886</td>
<td>15.5</td>
<td>4.5</td>
<td>497</td>
<td>114</td>
<td>143</td>
<td>150</td>
<td>103</td>
<td>102</td>
<td>0</td>
<td>310</td>
<td>3716</td>
<td>1549</td>
<td>2.0</td>
<td>0.58</td>
</tr>
<tr>
<td>01/06/2017</td>
<td>903</td>
<td>10.0</td>
<td>1.5</td>
<td>410</td>
<td>118</td>
<td>149</td>
<td>119</td>
<td>103</td>
<td>11</td>
<td>11</td>
<td>3566</td>
<td>1768</td>
<td>2.0</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>02/06/2017</td>
<td>917</td>
<td>9.0</td>
<td>4.5</td>
<td>336</td>
<td>125</td>
<td>155</td>
<td>144</td>
<td>165</td>
<td>165</td>
<td>2</td>
<td>2</td>
<td>3360</td>
<td>1991</td>
<td>0.95</td>
<td>0.52</td>
</tr>
<tr>
<td>03/06/2017</td>
<td>930</td>
<td>9.5</td>
<td>0.0</td>
<td>283</td>
<td>123</td>
<td>66</td>
<td>50</td>
<td>0</td>
<td>161</td>
<td>23</td>
<td>23</td>
<td>3136</td>
<td>2217</td>
<td>1.59</td>
<td>0.8</td>
</tr>
<tr>
<td>04/06/2017</td>
<td>944</td>
<td>10.0</td>
<td>6.0</td>
<td>236</td>
<td>118</td>
<td>85</td>
<td>88</td>
<td>109</td>
<td>109</td>
<td>2</td>
<td>6</td>
<td>2931</td>
<td>2438</td>
<td>0.9</td>
<td>0.44</td>
</tr>
<tr>
<td>05/06/2017</td>
<td>958</td>
<td>18.5</td>
<td>8.0</td>
<td>195</td>
<td>85</td>
<td>74</td>
<td>53</td>
<td>7</td>
<td>106</td>
<td>110</td>
<td>110</td>
<td>2712</td>
<td>2648</td>
<td>2.0</td>
<td>1.3</td>
</tr>
<tr>
<td>06/06/2017</td>
<td>967</td>
<td>24.0</td>
<td>19.5</td>
<td>161</td>
<td>53</td>
<td>83</td>
<td>51</td>
<td>100</td>
<td>97</td>
<td>10</td>
<td>87</td>
<td>2567</td>
<td>2767</td>
<td>2.0</td>
<td>0.86</td>
</tr>
<tr>
<td>07/06/2017</td>
<td>981</td>
<td>24.0</td>
<td>4.5</td>
<td>143</td>
<td>32</td>
<td>26</td>
<td>20</td>
<td>0</td>
<td>92</td>
<td>94</td>
<td>97</td>
<td>2500</td>
<td>2954</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>08/06/2017</td>
<td>996</td>
<td>11.5</td>
<td>0.0</td>
<td>118</td>
<td>36</td>
<td>37</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>36</td>
<td>2404</td>
<td>3094</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>09/06/2017</td>
<td>1013</td>
<td>0.0</td>
<td>0.0</td>
<td>97</td>
<td>36</td>
<td>53</td>
<td>43</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2275</td>
<td>3259</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>10/06/2017</td>
<td>1032</td>
<td>0.0</td>
<td>0.0</td>
<td>78</td>
<td>32</td>
<td>65</td>
<td>53</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2077</td>
<td>3387</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>11/06/2017</td>
<td>1056</td>
<td>0.0</td>
<td>0.0</td>
<td>74</td>
<td>20</td>
<td>68</td>
<td>61</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1982</td>
<td>3481</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
2017 UMass Rimpro Advisory Service

- Funded by New England Tree Fruit Research Committee and participants

- 50/50, $150 each, actual cost for individual RIMpro $250, some extra money for UMass

- Original objective was to have ten growers/sites...
● Whoops! We ended up with 21 sites!!!
● and operated at a loss, because each additional site costs $200!
● but that is OK
http://fruit.umext.umass.edu/rimpro/

2017 UMass RIMpro Advisory Service

Jon Clements and Dan Cooley, UMass Amherst

DON'T FORGET to SEND US YOUR FIRST OPEN BLOOM (beginning with PEARS if you have them) DATE!!!

NEW ENGLAND-WIDE USER MAP

YouTube video by Dan Cooley on how to interpret the primary apple scab chart...

Main station links below include Scab Primary, Scab Secondary, Codling Moth, and Weather Data. For fire blight and European apple sawfly, use the links listed below your location.

CT-Southington

- fire blight
- European apple sawfly
- sooty blister

MA-Amherst

- fire blight
- European apple sawfly
- sooty blister

MA-Belchertown

- fire blight
- European apple sawfly
- sooty blister

MA-Belchertown (MB)

- fire blight
- European apple sawfly
- sooty blister
Visuelle Symptome werden sichtbar

Infection threshold: 0.2

Critical level

End Bloom
Comparison of virtual (Meteoblue) vs. hardware/weather station (NEWA)
End of season survey...

Did your RIMpro site use virtual (Meteoblue) or weather station (Rainwise/NEWA) weather data?

11 responses

- 54.5% Virtual (Meteoblue)
- 45.5% Weather station (NEWA)
- Huh?
End of season survey...

Which RIMpro models did you use? (check all that apply)

- Apple Scab: 11 (100%)
- Apple Powdery: 2 (18.2%)
- Sooty Blotch: 3 (27.3%)
- Fire Blight: 10 (90.9%)
- Codling Moth: 0 (0%)
- Apple Sawfly: 1 (9.1%)
End of season survey...

How confident are you making orchard management decisions based on RIMpro output?

11 responses

- 90.9%: Completely, 100% confident
- 9.1%: Somewhat confident, I still consulted other sources for final decision-making
- Need more support on using RIMpro to become confident
End of season survey...

Will you continue to use RIMpro in the future?

11 responses

- Absolutely, I will sign up on my own at $250 annual cost (54.5%)
- Yes, with support from this or similar advisory group and Extension, cost TBD (18.2%)
- No, not very likely... (9.1%)
- Yes, Cost isn't an issue, I did appreciate support from Extension (18.2%)
Thank you to RIMpro growers...