

## Final Report

**Proposal Title:** MyIPM: An Innovative Resource for Pest Identification, Pest and Resistance Management, and Pesticide Risk Assessment

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**Objectives:** Update and refine MyIPM for Apple and Android platforms for mobile devices to aid in the identification of both diseases and pests of small fruits and to provide background information on pesticides, resistance management, environmental impact, and pesticide safety/toxicity.

**Justification and Description:** Rapid, accurate identification of small fruit problems is desired by growers. Often management decisions need to be made ‘on the spot’, while other duties make it difficult to find sources of information and wait for answers concerning management decisions. The MyIPM app employs very clear and defined pictures of common diseases and pests and provides information on crop protection tools available for management of the problem, resistance risk assessment tools, FRAC and IRAC codes, and (new to the merged app) pesticide risk assessments from the IPM Institute in Madison, WI. The app content is updated by the contributors. New updates are pushed to the phone when the user tabs on the update icon on the front screen. The investigators listed above have collaborated with a larger team of small

fruit entomologists and pathologists around the southeastern and northeastern United States to provide app content from experts in the field. Since 2014 the apps were downloaded 1,134 times on average per year. A total of 8,071 updates have occurred in this three year period, indicating that many users are updating for new content. Most downloads came from the United States with Mexico being a distant second. In all, downloads occurred in 23 countries around the world. The team of contributors has worked via e-mail, Skype, Zoom, and at meetings convened at other venues such as horticulture and plant pathology meetings to produce much of the app content. However, designated workshops have been most productive in the past. Discussions for improvements have led to a vision for the **MyIPM series to become a supplement to the spray guides and a primary resource for producers and agents**. To accomplish this vision the group decided to go well beyond the current content of disease and pest diagnostics, biology, management.



#### **Accomplishments of 2017:**

- finished programming to merge all current apps to make one master app (producers will be able to use just one single app and filter by crop and by discipline)
- added features to promote fungicide and insecticide resistance management principles
- worked with the IPM Institute in WI to incorporate 15 risk assessments for trade name products
- added more pests and diseases to existing crops
- added blackberry diseases
- added apple insect pests

#### **Accomplishments of 2018:**

- released merged master app and fixed bugs
- updated information for all crops and disciplines
- added bunch grapes (diseases and insects; **Table 1**)
- added pear (diseases and insects: **Table 1**)
- the funding was also used to organize and conduct a 2-day workshop in October 2018 at Clemson University to update and add content and to discuss strategies to achieve future goals and grower needs. We provided travel expense reimbursements to some of the 14 participants and increased attendance at the workshop.

**Table 1.** Crops and Disciplines now covered by MyIPM.

Screenshot 1 (6:33)	Screenshot 2 (6:34)
 <p>6:33</p> <p>Enter active ingredient or trade name</p> <p>Apple (Disease)</p> <p>Apple (Insect)</p> <p>Blackberry (Disease)</p> <p>Blueberry (Disease)</p> <p>Blueberry (Insect)</p> <p>Bunch grape (Disease)</p> <p>Bunch grape (Insect)</p> <p>Cherry (Disease)</p> <p>Cranberry (Disease)</p> <p>Peach (Disease)</p>	 <p>6:34</p> <p>Enter active ingredient or trade name</p> <p>Bunch grape (Insect)</p> <p>Cherry (Disease)</p> <p>Cranberry (Disease)</p> <p>Peach (Disease)</p> <p>Peach (Insect)</p> <p>Pear (Disease)</p> <p>Pear (Insect)</p> <p>Pecan (Insect)</p> <p>Strawberry (Disease)</p> <p>Strawberry (Insect)</p>