PMapp: A Mobile App for Assessing Powdery Mildew
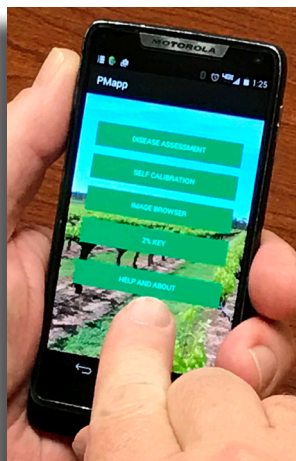
Craig Macmillan, PhD | March 2017
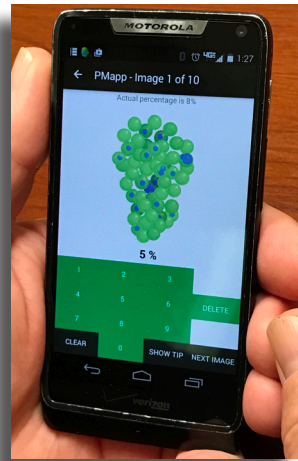
PMapp is an easy-to-use tool for identifying, assessing, and recording the incidence and severity of powdery mildew. The app is supported by a companion website with additional training and scouting resources.

PMapp home screen.

Area assessment training.

Disease assessment in the app.

Using the diagrammatic key.

Part of the online diagrammatic severity key.

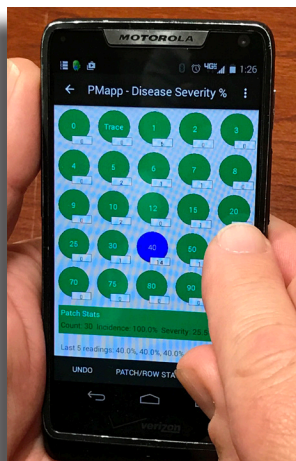*Screenshot of the online area assessment training module.*

The app was ready for use in Australia in 2015 and became very popular. In 2016, it was released for use outside of Australia. Development of the project was funded by the Australian Wine and Grape Authority and the University of Adelaide. The products were developed cooperatively by the University of Adelaide and several private companies.
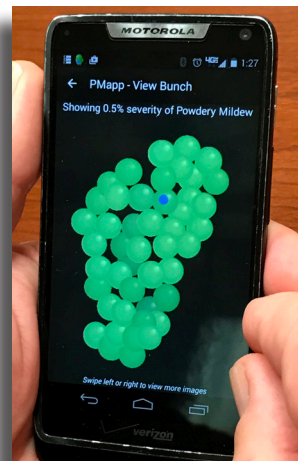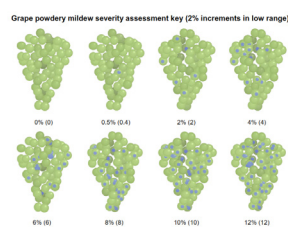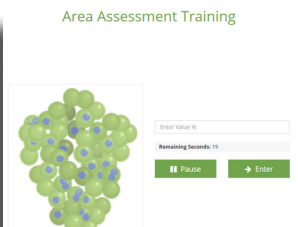
The goal was to design a tool to improve the assessment of powdery mildew through training - either online or on a mobile device.

The training modules include an area assessment training that employs illustrations of grape clusters with berries marked as infected. The trainee guesses the area affected in 2% increments. Feedback is given at the end of the exam.

Another module for disease recognition has photographs of clusters with areas of powdery mildew (or not) circled. The trainee can zoom in to look more closely at the damage and then has to pick which of the three photographs has powdery mildew most accurately identified.

The modules are very useful for training inexperienced field scouts, getting multiple scouts calibrated with each other, and for experienced scouts to improve the accuracy of their severity ratings.

The assessment tool on the app allows you to enter severity ratings of vines scouted in the field. Incidence and severity are calculated automatically. Data can be recorded from multiple rows separately to provide spatial information. Results can be emailed from the field.

The app also includes a self-calibration tool and a diagrammatic key for reference in the field.

There is also a Powdery Mildew Assessment Guide from the companion website with protocols for scouting and assessing damage.

PMapp is supported for both Apple and Android devices.