

A perennial problem: powdery mildew

Claire McCrory, Berry Industry Development Officer



Anna Mackintosh, an agriculture honours student at the University of Tasmania, is currently evaluating strategies for powdery mildew suppression in tunnel grown strawberries.

The 21-year-old from Hobart is in her final year of a Bachelor of Agricultural Science degree. Keen to invest in a project that would directly benefit industry, Anna approached farms asking where their production challenges occur.

Anna's research is based at the Costa strawberry farm in East Devonport. The aim of her research project is to investigate the epidemics of powdery mildew and quantify the effect of different commercial spray programs involving protective fungicides on powdery mildew development.

"One of the most significant things industry talked about was the impact of powdery mildew disease on strawberries. It infects all aerial tissue and leads to a loss of quality and quantity of up to 70%."

Powdery mildew is a fungal disease favouring dry leaf surfaces and cool to warm air temperatures with high relative humidity; conditions which are typical in a tunnel environment. Furthermore, the reduced UV light and dripper irrigation used in substrate production hinder effective disease management.



For our project we are lucky enough to work with a major berry grower. We wanted to ensure the project was applicable and relevant, so we went to them and asked for industry questions that needed to be addressed.

Anna's strawberry trial will focus on the Amesti strawberry variety in a design which will test the efficacy of three alternative spray regimes against Costa's commercial standard. There will also be one tunnel left completely un-sprayed to allow for the study of powdery mildew occurrence, development and spread.

Following the harvest period, Anna is planning to undertake pot trials during the year to test strategies to combat powdery mildew, including spray misting and silicon fertigation.

Good luck, Anna! We look forward to hearing the outcomes of your project at the end of the year.