Greenside Produce adopt integrated pest management

A Hort360 case study

What are BMPs?
Best Management Practice (BMP) programs are an effective mechanism to help drive the productivity and profitability of farm businesses. They assist primary producers to identify on-farm practice management changes that can lead to environmental benefits and production gains. BMPs aim to demonstrate environmental benefits and natural resource stewardship helping them to be embraced by primary producers.

Agriculture farmers, industry groups and government agencies in the Great Barrier Reef catchment area are working collaboratively to develop a BMP for many industries to accelerate uptake and adoption of on-farm practice changes that can contribute to improvements in Reef water quality.

What is Hort360?
Hort360 is the horticulture BMP program, designed to give horticulture businesses a 360-degree view of their farm operations.

Through Hort360, growers can identify potential risks and off-farm impacts of their practices, capitalise on business opportunities and highlight unnecessary farm expenses. It is a whole of farm business approach, and it’s being embraced by growers and horticulture stakeholders throughout Queensland.

Meet the growers
Watermelon and pumpkin growers in North Queensland, Greenside Produce owners Chris and Sue Coyne are no stranger to pest pressure. But with the January-February 2019 monsoon, Fusarium, Silver-Leaf White Fly and invasive weeds have been more profound and an ongoing struggle for their business.

Greenside Produce has for some time adopted several Integrated Pest Management (IPM) approaches, and the results are very positive.

Chris and Sue Coyne
Outside Ayr, North QLD
Monitoring pests and practice changes

Greenside Produce is committed to regularly scouring their crops for pest incidence and keeping analytical records to identify pest trends and design appropriate strategies.

Fusarium outbreak is one of the key trends being monitored following the extreme weather event in early 2019. Fusarium is a root fungus, in the same family as Panama disease in bananas, and is very difficult to treat.

One of the most common approaches to eradication is paddock rotation, where susceptible crops are not grown in a field for over three years until the disease has died out. Unfortunately for a produce business, this is simply not practical.

Instead, Greenside Produce has moved towards a management and suppression approach. Through the addition of beneficial microbes (Trichodesma spp.), they found the prevalence and spread of Fusarium slowed considerably. Although not a permanent solution, it has allowed for continued production in areas that would have otherwise been impossible to crop.

IPM strategies have also been implemented to control the Silver-Leaf White Fly. One such technique has been the use of trap crops. It turns out these insects preferentially target grey pumpkins, over butternut pumpkins and watermelons. Capitalising on this, Greenside Produce intersperses their production rows with grey pumpkins. In doing so, White Fly damage these trap crops and not the production varieties. This strategy allows targeted pest control of the White Fly with far less chemicals by spraying the grey pumpkins only when White Fly populations increase.

Greenside Produce has also experimented with the introduction of Haiti Wasps in combination with a biological control growth agent (growth hormone). These techniques have an excellent synergy, e.g. the application of growth hormones reduces the breeding rate of White Fly giving the wasps enough time to reach sufficient population size to provide control. With beneficial insects, control is most effective once their populations have grown sufficiently.

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Chris Coyne, 
Greenside Produce