

PREPARING FOR THREATS SPECIFIC TO KIWIFRUIT

In Brazil, kiwifruit orchards infected with Brazilian Wilt (*Ceratocystis fimbriata*) have suffered up to 50% vine loss over the last five years. There is currently no effective treatment available.

In Chile, Verticillium Wilt (caused by a strain of *Verticillium albo-atrum*) is impacting gold varieties, with up to 80% vine mortality on some infected orchards. Infected plants of susceptible kiwifruit cultivars will almost always die and this typically happens very quickly.

The two examples above are considered kiwifruit specific threats, as we would likely be the only affected industry if these particular strains were to arrive in New Zealand. It is up to us to drive readiness programmes to ensure we are well prepared to manage their impacts, as opposed to multi-sector threats such as Brown Marmorated Stink Bug which are the focus of joint readiness programmes.

HOW ARE WE PREPARING?

Over the past 12 months, KVH has made significant progress in preparation for these sector specific threats.

Operational Agreements provide a platform for the development of Readiness Plans, which are completed in partnership with the Ministry for Primary Industries (MPI) for each specific organism.

The plans detail current knowledge gaps and research needs, and outline how we would respond should the organism be detected in New Zealand. The first of these was completed in May 2017 for Brazilian Wilt.

The Brazilian Wilt Readiness Plan is the culmination of efforts since we first heard of kiwifruit vines collapsing in Brazil - including visits to the region, a review by an international expert on the potential impacts to our industry and, a simulation at our December 2016 KiwiNet workshop to test the practicalities of the plan and further refine our approach.

The readiness plan is a living document as KVH and Zespri are funding research efforts to resolve knowledge gaps, and the plan will evolve in parallel. Meanwhile we are also funding research to develop the next readiness plan on Verticillium Wilt.

WHAT CAN GROWERS DO TO REDUCE RISK?

The KiwiNet simulation illustrated that Brazilian Wilt is completely different to Psa. Long distance spread will not occur naturally, only through human-assisted movements of infected plant material or soil on tools, dirty equipment, machinery and footwear. Eradication prospects are also completely different to Psa. With Brazilian Wilt, there is a very real chance of eradication should the pathogen be detected early in a confined area, an important concept for us all to understand. If it were to arrive it could establish and result in 10-30% vine losses per year on infected orchards, or we may be able to eradicate it forever.

The financial difference between these potential outcomes could not be more different for the New Zealand kiwifruit grower.

To achieve the latter and have a good shot at eradication, the pathogen must be contained. But, as we don't know how long it takes for symptoms to develop from the time of infection (months or years), containment of a pathogen that we cannot see is only feasible if the industry follows biosecurity best practice all the time. Source clean plant material, check and clean all inputs entering your orchard boundary, and report anything unusual.

This takes effort. However, biosecurity practices are your best form of insurance against a significant risk to your investment. ■



Verticillium Wilt – Bob Fullerton, Plant & Food Research



Brazilian Wilt (*Ceratocystis fimbriata*)