

EastPack Update

15 November 2013

SOOTY MOULD – PASSION VINE HOPPER

SPRAY OPTIONS

Spray options outside the orchard into gully and waste areas **now** that host PVH are:

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- PVH & Sooty Mould Control
- Hayward Pollination
- Dry Weather Plan

- Actara – a systemic spray but it cannot be applied when there are any open flowers present in these waste or gully areas due to bee toxicity.
- Bifenthrin (Talstar or Venom) plus Engulf penetrant to kill PVH eggs embedded in woody tissues and structures. Apply at night outside bee activity. Hatching nymphs which cannot move far will also be killed on contact. Egg hatch will continue through November-December.
- Use handgun or volute
- Other sprays (eg Calypso) do not appear to have been very successful.
- Repeated sprays will be needed
- Ensure there is no possibility of spray drift on to kiwifruit
- Start spraying waste and gully areas now to help prevent nymphs and adults establishing in orchard blocks

Once nymphs or adults are within the orchard blocks after fruit set then pyrethrum sprays are the only option available although unlikely to be as effective as needed.

- GreenSeals Pyrethrum and Key Pyrethrum have a 100-day Pre-Harvest Interval
- PyGanic has a 14-day Pre-Harvest Interval
- KiwiGreen monitoring over the PVH threshold is required for those blocks to be sprayed – contact EastPack labs for a monitor
- Outside rows may need repeated sprays
- Orchard shelter should be sprayed

CULTURAL MANAGEMENT

Sooty Mould is a complex problem. It is a fungus that grows on the sugary residue deposited onto fruit by insects feeding on the sap of the kiwifruit plant. The most significant of these insects is the Passion Vine Hopper, PVH, (*Scolypopa australis*).

Control strategy - Prevention, the answer

Preventing the establishment of PVH in the orchard will be the most successful strategy.



Key steps are;

- Remove host plants from within the orchard and establish a clear “buffer zone” between the orchard and the areas of high pest pressure.
- Monitor for the presence of PVH nymphs.
- Prevention is much more successful than dealing PVH adults within the orchard.
- Prevention is much more successful than dealing with Sooty Mould within the orchard.



HAYWARD POLLINATION BEST PRACTICE SUMMARY

- Use a contract for your Bee keeper ([Click here for Kiwifruit Pollination Agreement](#))
- Use at least 8 hives per hectare or 1 hive per 1,000 trays
- Introduce hives in two or more drops
- Introduce first hives with at least 20 to 30% female flowers open
- Introduce more hives as bee activity in the orchard drops off or more than 50% of female flowers are open
- Place hives in several sites around the orchard
- Place hives in sites that get early morning sun
- Place hives where they will be warm and sheltered
- Provide water for the Bees
- Feed the Bees sugar syrup at least every second day
- Mow the orchard to reduce the number of other flowers the Bees might visit
- Use some supplementary pollen to add value and stimulate Bees

Good pollination adds value to the crop by;

- Maximising fruit size
- Increasing the number of trays
- Improving fruit shape
- Increasing the Dry Matter of the fruit



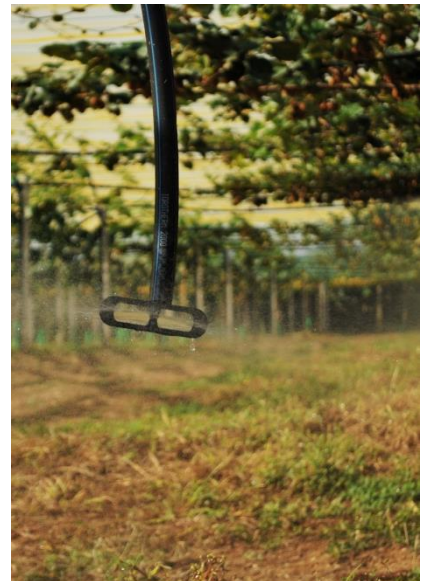
DRY SUMMER FORECAST

All of the weather forecasters are predicting a warm and dry summer for the North Island this summer.

It is already very dry with soil moisture levels at an all-time low in areas like Edgecumbe and Opotiki. Last year's drought, the lower than average rainfall over the winter and in spite of some recent rain, we have near record low levels of soil moisture reserves.

- Start your irrigation now if you haven't already.
- Aim to get at least 25 to 30mm on each week.
- Try to keep the soil moisture levels topped up rather than letting the soil get really dry.

Dry weather will be a help to defend our orchards against Psa, but may make it a challenge to optimise fruit size, especially in Hayward. A long dry summer will also favour the build-up of populations of PVH and may well lead to a difficult year for sooty mould.



EP Update Technical contributions from Tim Torr and Bruce Shepherd

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