

POTENTIAL TO MANIPULATE FLOWERING TIME

30 September 2008

In a very high-chill year – and with the coldest August in 57 years in southwest NSW – scientists have managed to stimulate apricot trees to flower earlier.

By applying the liquid sunscreen Parasol prior to budburst, research agronomist Shane Phillips brought forward flowering in treated apricot trees at Tandou Orchard, Menindee, NSW.

Shane Phillips: “The difference between treated and untreated trees was visually obvious, with treated trees flowering two days earlier than the untreated trees.

“It’s a significant finding. It appears that Parasol provides growers with the potential to manipulate flowering time – broadening both the flowering window, and the opportunities for cross pollination.

“We think that Parasol stops the absorption of solar heat by putting a reflective coating on the bud, so chill hours are up earlier.

“It means that we could potentially stagger the flowering of pollinating varieties. It could be a useful labour management tool for picking.

“While we did this initial work on apricots, it would be very interesting to see the response in cherries – or any other line that requires cross pollination.”

Breaking dormancy earlier also opens the door to potentially supplying earlier - more lucrative - stone fruit for the Australian market.

Shane Phillips: “So Parasol’s role as a sun damage protector for produce is only part of the story.

“Another potential use for Parasol is after the cherry harvest, to protect the buds from heat – this helps to stop twinning or double-bud formation.”

Australian pome and stone fruit trials with Parasol this season include measurements of sunburn, improvement in packout, and return on investment. The effectiveness against pitting and stem browning in cherries, plus post-harvest protection against doubling in cherries will also be investigated. Good results have been achieved both pre- and post-harvest in cherries in the USA, and growers have had no problem removing the product during post-harvest washing.

The manipulation of budburst in stone fruit, and compatibility testing with common products applied to pome and stone fruit is another goal of Australian researchers.

Crop Care Australia/New Zealand regional manager for agricultural sunscreen products (in conjunction with US manufacturer Purfresh) Shaun Heidrich: “Parasol has already been successfully used on apples in Victoria, where growers estimate sun damage can cause losses of up to 30% of their crop in certain varieties. Parasol has been shown to prevent a large proportion of that loss – while helping to lift fruit quality.

“Shielding the tree canopy from the sun’s heat also helps to reduce water loss and improve the efficiency of water use – a significant bonus when growers are facing dwindling water supplies and lower rainfall.”

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Applied by ground equipment or through aircraft, Parasol is available for use in Australia to protect a broad range of agricultural crops - including apples, pears and stone fruit.

Parasol forms a reflective barrier on susceptible crops when applied throughout the growing season.

It is recommended that the first spray of Parasol be applied before temperatures reach 30°C – or when fruit size is around 20mm diameter for pome and stone fruits (except cherries). Direct nozzles for a thorough coverage of the topside of the fruit. A second application should be made 7 to 14 days after the first, and then subsequent applications are required to maintain coverage throughout the season.

For cherries, an application is recommended 30 days prior to the expected harvest, with a follow up application 14 days later. An application 7 days after harvest - applied directly to the foliage - and another 14 days later, will protect buds and benefit the following crop.



QUALITY cherries protected from sun damage by the liquid sunscreen Parasol – which has also shown promise as a tool to manipulate the time of flowering, and to protect the next cherry crop against double bud formation.



PARASOL provides a reflective film to shield the leaf canopy from the sun's heat and radiation.



UP to 30% of some apple varieties can be lost through sun damage.

For more information:

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