

FACING CLIMATE CHANGE – AUSTRALIAN HORTICULTURE

26 September 2008

Ignoring climate change is not an option for Australian fruit and vegetable growers.

The yield and quality of produce is at risk with weather extremes, including high temperatures and persistent drought.

The reality is that Australia's climate is changing.

The recent 4th report from the Intergovernmental Panel on Climate Change showed that the 1990s were the warmest decade ever recorded. The last 100 years have been the warmest of the millennium – trends that are predicted to continue into the future.

The most recent prediction is for an average global temperature rise of 1.1 to 6.4°C by the end of this century. A 1° C rise would make Melbourne weather similar to Wagga (currently) and a 6° rise would make it similar to Roma in southeast Queensland.

Predictions suggest that there will also be a marked increase in the frequency of hot days, warm nights and reduced frequency of frosts. Solar radiation is predicted to increase by 10% across the southeast and southwest corners of Australia by 2070.

A change in the amount, distribution and intensity of rainfall – combined with increased evapotranspiration – means there is likely to be up to 40% more droughts in Eastern Australia and up to 80% more in the Southwest by 2070.

CSIRO's recent *Overview of climate change adaptation in Australian primary industries* highlights the vulnerability of Australia's agriculture sector to a changing climate, and its potentially negative impacts on the yield, quality and reliability of production.

As well as relocating, adjusting growing seasons and changing to new varieties, growers are looking to new technologies to improve water use and conservation.

What technologies are out there to support growers in their effort to maintain and increase crop returns?

One successful answer has been Parasol. This liquid formulation of calcium carbonate forms a thin, reflective film on produce and the leaf canopy – to reduce the impact and damage from sun exposure.

Shaun Heidrich is Australia/New Zealand regional manager for agricultural sunscreen products for Crop Care – in conjunction with US manufacturer Purfresh.

Shaun Heidrich: "The potential for using liquid sunscreen Parasol in horticulture crops across Australia is substantial with many growers are already keenly interested.

"Most crops suffer some form of solar stress, and many growers are also facing limited or reduced water allocations. Parasol liquid sunscreen provides the opportunity to grow crops more efficiently and to grow higher quality produce."

Parasol has already been successfully used on apples in Victoria, as well as capsicum, mangoes and transplanted seedlings in Queensland.

Crop Care Australasia Pty Ltd

ABN: 53 061 362 347

Portal North – Unit 15/16 Metroplex Avenue Murarrie QLD 4172

PO Box 84 Morningside QLD 4170

Phone: 07 3909 2000 Fax: 07 3909 2010 www.cropcare.com.au



“Recent trials in pineapples have provided growers with a new answer to sun damage. They have been looking for a solution, but there were problems with removing the products that they had previously tested from the fruit. Parasol, however, was shown to be easily removed from the pineapple surface at wash-off.”

Apple growers in Victoria estimate that sun damage can cause them to lose up to 30% of their crop on certain varieties. The use of Parasol has been shown to prevent a large proportion of that loss – while helping to lift fruit quality.

Shielding plants 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.

Crop Care is monitoring the use of Parasol and water use efficiency in a program studying rates of sap flow in grapevines in South Australia.

Applied by ground equipment or through aircraft, Parasol is now available for use in Australia to protect a range of agricultural crops including apples, pears, stone fruit, citrus, tree nuts, olives, grapes, avocados, bananas, mangoes, lychees, guavas, pawpaws, pineapples, vegetables – including capsicums, tomatoes, potatoes, onions, cucurbits, and lettuce, seedlings, ornamental and nursery plants, cotton and peanuts.



HELICOPTER applying Parasol liquid sunscreen to a Mooroopna orchard.



EFFECTIVE coverage of apple leaves Obtained from a helicopter application of Parasol liquid sunscreen to reduce sunburn and the effects of heat stress.

For more information:
Shaun Heidrich
Australian Region Manager – sunscreen products
Crop Care Australasia
0488 424 698

Kerrie Mackay
National Business Manager – Horticulture and SuSCon
Crop Care Australasia
0413 458 069