



Cutting Edge / Snykant

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Warning: Increased usage of pyriproxyfen

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With the increasing availability of generic equivalents to Nemesis at a fraction of the cost, citrus growers will be tempted to use this scabicide more frequently and over wider areas than they have in the last 5 years. Experience in South Africa, California and Israel has shown that this product can result in increased numbers of Australian bug (*Icerya purchasi*) and various mealybug species due to detrimental effects on their beetle predators. Pyriproxyfen is also known to have devastating effects on the scale predator *Chilocorus nigritus* that plays an important role in IPM in the subtropical regions. Residues of pyriproxyfen are detrimental to some predatory beetles for many months and the recovery of populations of these natural enemies may take two or three seasons due to local extinction effects.

Over the last few years, Nemesis has primarily been used in emergency red scale situations where the more IPM-compatible treatment of a chloronicotinyl to the soil or stem (e.g., Confidor, Mospilan), or an oil spray, would have been insufficient or not possible for some reason. Those who can recall the widespread usage of Nemesis in the early 1990s may think that the inclusion of an organophosphate (OP) in the spray programme as used in those days will once again resolve problems with repercussion pests, but several things have changed since then.

- Fewer OPs are now available for use after petal fall to correct increasing populations of mealybug and Australian bug, due to increasing restrictions on residues.
- The phytosanitary importance of mealybug on our fruit is increasing due to existing markets becoming more protective and new markets wanting phytosanitary assurances.
- The species distribution of mealybugs is changing and in some areas the indigenous oleander mealybug (*Paracoccus burnerae*), an important phytosanitary pest, has become the dominant species.

Nemesis is now known to be compatible with several other insecticides and fungicides in tank

mixes, but this may not necessarily be the case for all pyriproxyfen generics because the emulsifiers used in the formulations could differ. Care should therefore be taken with spraying mixtures unless the label states that the products are compatible.

In conclusion, don't base your red scale control decisions solely on application cost per hectare but consider the risks associated with repercussion pests and the long-term effects on predatory beetles.