



Submission to the APVMA on the interim suspension of some uses of Dimethoate

Summerfruit Australia Limited

Summerfruit Australia Limited, (SAL) is the peak industry body representing growers of peach, nectarine, plum and apricot for the fresh markets. Most of our members also have crops such as cherries, apples, pears, grapes, vegetables and melons that are also affected by the APVMA review of Dimethoate. As an industry body we have been active in the regulatory reviews of Dimethoate and Fenthion and the dissemination of information back to our growers through meetings, newsletters and website.

Dimethoate Use

Dimethoate was introduced into the horticultural industry in the early 1960's and has been used on fruit for around 50 years. In that time Dimethoate has been used for many sucking and biting insect pests. Currently the major uses of Dimethoate are in control for Mediterranean Fruit fly and Queensland Fruit fly:

- Outbreaks in pest free areas;
- Post harvest dip for allowing shipment to pest free areas; and a
- Pre-harvest cover spray where Fenthion may cause damage to fruit or tree.

SAL does not see that the findings in the draft report on Dimethoate justify the interim suspension of any of the label or permit uses as provided in the list from the APVMA. The growers of summerfruit are deeply concerned about the viability of their industry should APVMA suspend or delete some label uses

Suspension of Use

The basis of the proposed suspension is to maintain the margin of safety in the diet of 2 to 6 year olds (19 kg weight). After the application of Dimethoate at the label rate on multiple trial sites the highest observed residue of Dimethoate and its' breakdown product Omethoate are used in the calculation of dietary intake. The levels used for assessment are a multiple of the figures held by industry and lead to breaching the Acute reference Dose of 2 to 6 year olds when used as inputs to diet calculations



Industry Data

As a part of quality assurance requirements growers have their fruit tested for a multiplicity of residues by accredited third party laboratories. These tests mostly show Dimethoate and Omethoate residues at or below the level of detection. SAL has been granted access to the data from Agrifood Technology, one of the largest providers of this service. The results from the whole of Australia show:

1. 655 samples Nectarine with no detections of Omethoate and 41 (6.23%) with a residue of Dimethoate
2. 493 samples of Peach with one detection of Omethoate and 17 (3.4%) with a residue of Dimethoate
3. 486 samples of plum with 2 (0.4%) detections of Dimethoate

The samples were below the allowable intake for 2 to 6 year old children, apart from a batch of results from a single post harvest dip at one packing shed, giving 5 peach samples below the Maximum Residue Limit but with anomalously high Dimethoate levels. SAL is investigating the conditions that led to these results.

In the APVMA review, the results of a few thousand individual tests from other independent pesticide monitoring programs are considered, with the concession that there were “limited detections of Dimethoate and Omethoate, with only one case exceeding current MRLs, ”.

Data from HAL

SAL believes that the results of the HAL funded project MT06022 “Generation of Dimethoate and Fenthion residue samples to maintain market access” are not reflective of the residues of Dimethoate in the food basket of the consumer and should not be used as inputs for the consumer dietary intake calculations. SAL understands such residue trials may be appropriate for a new chemistry where there is no experience of use patterns or residue; but where there are decades of real world data from real use patterns then these are the figures that should guide continued use patterns.

APVMA assessment of HAL data

SAL finds that the APVMA have selected the incorrect data for their assessment of nectarines treated pre harvest and have used a 3 day withholding from the trial **07-HAL-005(a)GLP-65**, not the 7 day **07-HAL-005(a)GLP-438**, this gives a dietary intake level 50% of that used by the APVMA to justify the suspension of use.

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APVMA multiplier for Omethoate

The Omethoate breakdown product of Dimethoate is a critical factor in the proposed suspension of Dimethoate label uses, but there is little or no information supplied by the APVMA on Omethoate as an individual agent. In section 8.1 of the APVMA draft report it is stated that since Omethoate is “considerably more toxic” a multiplier of 7 be applied to the Omethoate residue and added to the Dimethoate residue for acute dietary intake study. The European Food Safety Authority¹ considered a multiplier of 6 suitable in their study that allowed the new uses of Dimethoate some crops in 2011.

In the APVMA report, animal studies of Dimethoate toxicity are used to establish the No Observable Adverse Effect Level. It is hypothesised that it is the breakdown products of Dimethoate that are causing the observed toxicity, mainly the Omethoate. If this is the case then the Dimethoate toxicity trials are actually measuring the effect of the two components, Dimethoate and Omethoate, as a sum of their actions. It is not evident why a multiplier should be applied where the toxic effects of Omethoate are intrinsically measured by the ingestion of Dimethoate alone.

Consequence of Suspension of Dimethoate

Fruit fly outbreaks have been increasing in number over the last season in recognised areas of pest freedom. Dimethoate sprays and dips have been a critical element in destroying the fly life cycle and achieving eradication, while maintaining access to markets. In the absence of Dimethoate it is unlikely that pest eradication can be achieved and Fruit fly outbreaks are likely to become endemic and future outbreaks uncontrollable.

Growers, State Agriculture Departments and chemical companies have no confidence that any of the proposed alternatives to Dimethoate and Fenthion will be sufficient to maintain pest free areas, or even to allow the commercial harvest of fruit in many regions of Australia. The evidence is that fly control in the absence of Dimethoate will require more sprays with higher chemical load per area in total if there is to be any hope of a marketable product.

Pending the finalisation of the Dimethoate review SAL submits that there is no risk of harm to human health in allowing all currently registered uses to be maintained, and considerable benefit to growers and consumers of stonefruit

¹ EFSA Journal 2011;9(4):2146