Australian Government

Australian Pesticides and Veterinary Medicines Authority

# Proposed suspension of dimethoate products

Submissions received

September 2023

29 August 2023

Australian Pesticides and Veterinary Medicines Authority (APVMA)
By email: chemicalreview@apvma.gov.au

**PROPOSED SUSPENSION OF DIMETHOATE PRODUCTS**

Thank you for the opportunity to contribute comments to the APVMA's proposed

Coles appreciates the APVMA's concerns in relation to the continued use of dimethoate products. We understand it is the APVMA's intention to enact the proposed suspension in around mid-September 2023, providing 24 hours-notice to industry. We are concerned about industry's ability to achieve compliance within this timeframe. We respectfully request that should the APVMA proceed with its proposed suspension of dimethoate products, it considers at least an additional notice period of six weeks from the date of notification before the suspension takes effect.

This extension is necessary due to the anticipated timelines suppliers will encounter in sourcing permitted alternative treatments for fruit fly, particularly if as indicated, the confirmation of this change will take place with only 24 hours-notice.

For example, mangoes are supplied to Western Australia, from the Northern Territory until around January when the local season begins. Therefore, mangoes travelling from the Northern Territory to Western Australia would have to be transported to Victoria to be fumigated with methyl bromide and then freighted into Western Australia. Due to methyl bromide triggering the ripening process it is likely the fruit would be overripe on arrival and not able to be retailed, contributing to increased food waste, cost and impact on the environment.

As you can appreciate, as a national retailer with more than 840 supermarkets, there is a considerable amount of fresh produce en route to our distribution centres and stores at any one time. Therefore, we would like to seek an assurance that any produce already in the supply chain when the suspension takes effect is able to continue to its destination and be made available for sale.

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Coles acknowledges irradiation is an alternative treatment of fruit fly to methyl bromide, however we note there are currently only two facilities, one in Queensland and one in Victoria available to provide this service. An additional notice period would also provide industry with more time to investigate the capacity of these facilities, including if they are able to be used as an alternative.

Thank you again for the opportunity to make this submission and we would welcome the opportunity to discuss further our response. If you require any additional information in relation to the points above please do not hesitate to contact me via email at charlotte.gilbert@coles.com.au or mobile 0409 435 923.

Yours sincerely,

**Charlotte Gilbert**
General Manager Produce

[redacted]

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[redacted]

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The time frame with which we have to operate for the approaching Mango season does not give opportunity for alternatives to bring mangoes to market allowing consumers to have choice of fruit at a competitive rate. While the risk of MRL's exposing consumers to risk Of chemicals remains relatively low giving the with holding periods and diluted rate of use. And the fact that the skin of the fruit is not consumed but cut away to expose the flesh of the fruit for consumption. Why has it taking 6 years since the last product review to question the MRL levels. Why is it possible for other fruit to be given HGM Protocal including Bananas tomato and citrus to enter WA but a small number of mango growers from the NT are refused access to a market that has taken their fruit over the last 6 years or more.

[redacted]

[redacted]

NORTHERN TERRITORY GOVERNMENT
Department of
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DITT2023/04230~0002

28 August 2023

Ms Gaye Weller
Director Chemical Review
Australia Pesticides and Veterinary Medicines Authority
GPO Box 3562
SYDNEY NSW 2001

Email: chemicalreview@apvma.gov.au

Re: **Notice under section 35 of the Agricultural and Veterinary Chemicals Code: Proposed suspension of label approvals and registration of products containing dimethoate**

Dear Ms Weller

This submission is made for your reconsideration of the timing of suspension of label approvals and registration of products containing dimethoate listed in Table 1 under point 4 of your correspondence (Ref: A3062785).

The submission is based on the following points:

a. The Northern Territory (NT) produces approximately 50% of the Australian national production of fresh mangoes. In 2021-22 crop cycle, the NT produced over 33,000 tonnes (4.5 million trays) of mango valued over $105 million (Hort Innovation, 2022). Exports of NT mangoes represent about 1.1% of production with the remainder going to the domestic market (ABS, 2021-22).

b. The mango harvest in the NT spans between July and December; September to November being the months of peak season.

c. Currently, dimethoate is used in the NT by commercial mango growers as a cost effective and efficient postharvest treatment against fruit fly for domestic export of the fruit.

d. The export of mangoes from the NT to Tasmania, South Australia and Western Australia is regulated through pre-approved interstate/territory Certification Assurance Arrangements and Interstate Certification Assurance (ICA) procedures. If the proposed suspension of label approvals and registration of products containing dimethoate listed in Table 1 under point 4 of your correspondence (Ref: A3062785) is imposed, the number of approved arrangements will be significantly reduced.

    - Condition and Treatment of Mangoes, CTM-01, accepted by South Australia and Tasmania includes pre-harvest treatments (cover and bait sprays) to manage fruit flies as alternatives to post-harvest dimethoate dip application or flood spray. **This procedure requires a six week pre-harvest treatment regime.**
    - Currently, **CTM-01 is not recognised by Western Australia** and therefore pre-harvest treatments to control fruit flies are not accepted.
    - Alternative ICA procedures approved by South Australia, Tasmania and Western Australia to meet the fruit fly import requirement are:

- Irradiation (ICA-55) - **the NT does not have an Irradiation facility**.
- Fumigation with Methyl bromide (ICA-04) - **the NT possesses only a very limited capacity of fumigation.**
- Vapour Heat Treatment (VHT) – **the NT has limited capacity of this treatment and it is not accepted by South Australia.**
- Hot Water Treatment (HWT) - **is not an acceptable treatment for South Australia or Tasmania and the accepted method for Western Australia is unsuitable for mangoes.**
- Cold Storage – **is not a suitable treatment for mangoes.**

e. Timing of the proposed suspension of label approvals and registration of products containing dimethoate listed in Table 1 under point 4 of your correspondence (Ref: A3062785) has exposed the NT mango industry to an extreme risk of economic loss because:

- The NT mango industry is already harvesting and exporting mangoes interstate/territory. The proposed suspension of label approvals and registration of products containing dimethoate listed in Table 1 under point 4 of your correspondence (Ref: A3062785) does not allow the industry time to adopt and practice CTM-01 (pre-harvest cover and bait sprays) for exporting fruit to South Australia and Tasmania.
- Since CTM-01 is not recognised by Western Australia, and the NT mango industry has yet to evaluate the economic impact of adopting very limited alternative ICAs, the industry is at the risk of complete loss of the major Western Australian market.
- Some mango growers have already entered into contracts for this season to supply mangoes, including supply to Coles and Woolworths Supermarkets, both of whom have main distribution centres based in South Australia. Businesses face increased logistical cost and risk being unable to fulfil their contracts.

f. Additionally, the report of exceedances of Maximum Residue Levels (MRLs) may reveal a confluence of pre- and postharvest treatment of products containing dimethoate. A stand-alone postharvest treatment of dimethoate might not exceed the MRL threshold – this is subject to further review.

We note in your briefing notes which were circulated to Chemical Coordinators on 8 August 2023 that timeliness of the proposed suspension was taken into consideration. This is evidenced by point 21 which states that the APVMA considered mangoes to be currently out of season. As outlined above you can see that this is incorrect, and as such this submission is made for your reconsideration of the timing of proposed suspension of label approvals and registration of products containing dimethoate listed in Table 1 under point 4 of your correspondence (Ref: A3062785) until after the current NT mango season.

Should you have any questions regarding the NT submission, please contact Ms Sally Heaton, Acting Chief Plant Health Officer on email chemicals.DITT@nt.gov.au or telephone 08 8999 2134.

Yours sincerely

Jed Matz
Deputy CEO Agriculture, Fisheries and Biosecurity

**References**

Hort Innovation, 2022. Australian Horticulture Statistics Handbook 2021/22. Australian-horticulture-statistics-handbook (Accessed: 16 August 2023).
Australian Bureau of Statistics, 2021/22. Year in review: 2021-22 | Australian Bureau of Statistics (abs.gov.au) (Accessed: 24 August 2023).

28/8/23

Ms Gaye Weller,
Director Chemical Review
Australian Pesticides and Veterinary Medicines Authority,
GPO Box 3562,
SYDNEY NSW 2001

Email: chemicalreview@apvma.gov.au

Dear Ms Weller,

**Re: Notice under section of the Agricultural and Veterinary Chemicals Code: Proposed suspension of label approvals and registration of products Containing dimethoate.**

I write on behalf of the NT Farmers Association to make a submission in relation to the proposal to suspend the use of dimethoate.
The mango season in the Northern Territory commenced some weeks ago continuing until November 2023 and the timing of the proposed suspension of the use of dimethoate will have a considerable negative operational and financial impact on NT growers.

The reason for the decision to move to a ban on the use of dimethoate is acknowledged but the unintended impact the commencement date of 5 September 2023 will have on growers, is unfair and unreasonable given the chemical has been used for many years.
The notification of the proposed suspension was received during the picking season with little or no time for growers to adjust to an alternative treatment.

On behalf of the Northern Territory Farmers Association, I respectfully ask that further consideration be given to the proposed commencement date and that the date be delayed for 6 weeks to allow the current harvest to be completed.

Yours faithfully,

Allan McGill
Interim CEO

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K. Melksham's Comments on Dimethoate in Mangoes and Avocadoes

I am a Senior Chemist with Queensland Health Forensic and Scientific Services. Among other things, I am currently involved in analysing for Dimethoate in fruit dips for use on mangoes, avocadoes and other fruit that are to be exported from Queensland and the Northern Territory. However, I would like to make the point that I am making these comments in a private capacity and they do not necessarily represent the opinions of Queensland Health.

I have previously been a Principal Residue Evaluator with the National Registration Authority (NRA, now the APVMA) and was Acting Manager of the Chemicals and Residue Evaluation Section of the NRA. Prior to that I was Assistant Director/Principal Residue Evaluator for the Residue Evaluation Section of the Chemicals Safety Unit of the Commonwealth Department of Health, Housing and Community Services. When registration of pesticides transferred from individual States to the Commonwealth I was seconded to that position from Qld DPI where I was a Senior Chemist.

In that Queensland position I was responsible for the analytical work leading to the granting of a minor use permit for the post-harvest dipping of mangoes against Qld fruit fly (Swaine, G., Melksham, K. J, and Corcoran, R. J., Aust. J. Exp. Agric. Anim. Husb., (1984), **24**, pp620 -623). While at the NRA I also authored and presented "Setting Maximum Residue Limits (MRLs)" at the 16th Conference of Residue Chemists.

When the use of Dimethoate on mangoes was developed in 1982 (see the above paper), the MRL for Dimethoate in mangoes was 2 mg/kg. Dimethoate (ADI 0.001 mg/kg bw/day) metabolises to omethoate (ADI 0.0004 mg/kg bw/day) and other compounds but, as has been shown since, a relatively low percentage is converted to Omethoate. There was an MRL of 2 mg/kg for Omethoate in fruit so no data was generated for Omethoate. This figure also applied to citrus.

There have been numerous changes in registered products since 1982. A question which should be asked is whether current formulations of Dimethoate contain Omethoate at less than the allowed level of 2 g/kg for the Active Constituent (i.e. 0.8 g/L in formulations)? Can the problem be overcome by changing the requirements for the Active Constituent of Dimethoate?

For fruit (inedible peel) the concentration in the whole fruit is calculated as the concentration in the skin x wt of skin plus concentration in flesh x wt of flesh and this is all divided by the total weight (including the seed). The original work was done on Kensington Pride mangoes. Varieties with smaller seeds have since been developed for both mangoes and avocadoes so the seeds do not have as much effect on reducing the calculated level.

A question to be asked is have the levels in the mangoes and avocadoes been calculated correctly (i.e. have the skin and fruit been analysed separately and has the weight of the seed been taken into account when calculating the overall level)? Was the sampling done representatively as required by CODEX? Also, does the problem only arise in varieties with small seeds? As well, Omethoate residues can be difficult to measure, so has the uncertainty of the measured result been considered when deciding that the result statistically exceeds the MRL with the appropriate level of confidence? If none of these issues apply then questions must be asked about the quality of the data used for setting the current MRLs.

There was a Dimethoate review in 2017 which reduced the dimethoate MRL for mango to 1 mg/kg but this MRL could apparently still be met by this use pattern as it has taken 6 years for a problem to emerge. The MRL for Dimethoate in avocado was set at 3 mg/kg. In October last year the Australian MRL for Omethoate in mangoes and avocadoes was reduced to 0.1 mg/kg. The MRL for Omethoate in citrus became 0.5 mg/kg.

The result is that by using Dimethoate post-harvest, the MRL for Omethoate can be exceeded in mangoes and avocadoes but presumably not in citrus. Presumably, Omethoate continues to form from residual Dimethoate after the 0 WHP dip treatment so the data used to come up with an Omethoate MRL may not have been obtained the time when highest Omethoate levels could occur. There has to be a logical reason why MRLs are now being exceeded when they weren't previously.

Regardless, the problem has clearly been mainly caused by lowering the MRLs for Omethoate. There is a ready solution to this problem which will at least allow interstate trade in mangoes and avocadoes to continue until a workable alternative treatment for Qld fruit fly is developed (because irradiation is clearly not workable at this time) or new Omethoate data can be generated for setting more appropriate MRLs. That is for the APVMA to temporarily (or permanently) set the Australian Omethoate MRL for mangoes and avocadoes at a higher level (eg 1 mg/kg for mango and 3 mg/kg for avocadoes). This will automatically be adopted into the Food Standards Code.

If the Dimethoate MRL (1 mg/kg) for mangoes is not exceeded by the current use pattern, then the Omethoate level clearly cannot exceed 1 mg/kg because the residue definition for Dimethoate includes Omethoate. A similar argument applies to Avocadoes. There are already examples of temporary Omethoate MRLs for Blackberries (T3), Egg plant (aubergine) (T0.07), Olives for oil production (T2), Raspberries, Red, Black (T3) and Vaccinium berries, including Bearberry (T2). It doesn't make sense that you can have these sorts of values for these commodities and only 0.1 for mangoes and avocadoes.

Approaches should then be made through the Australian representatives on JMPR to have the CODEX MRLs for Omethoate revised to include the Australian use patterns for mangoes and avocadoes. This would get around any issues with international trade and is how the process is supposed to work. CODEX MRLs allow for the highest residue levels from registered use patterns throughout the world.

From annual consumption figures available on the web (i.e. mangoes 2.4 kg per person, avocadoes 4.6 kg per person and citrus 64.9 kg per person) the contribution of mangoes and avocadoes to the theoretical maximum daily Intake of Omethoate is relatively minor, particularly given that the concentrations in the edible parts of these two commodities are roughly 30 times lower than what is in the skin. If there is a consumption problem, then perhaps some of the existing temporary MRLs should go to allow important existing uses that have been in place for over 40 years to continue, particularly given that there are no registered uses or permits for omethoate in some the commodities with temporary MRLs. If Dimethoate is of concern, why would you allow its uses to be extended?

K. Melksham

28/8/23

[redacted]

Hi there,

[redacted] we consign produce to WA with our ICA-01 accreditation. I'm just wondering how this proposed ban will affect us. Sending our fruit to WA is a very important aspect of our business and not having this option will be extremely detrimental to our business, both financially and for the outlook of our long term business growth. I know cavendish bananas are able to be exported without the use of dimethoate. I was hoping that we could also send our produce under the same conditions as normal cavendish bananas. We have never had an issue of fruit flys and our produce always arrives hard green. If someone could get into contact with me urgently that would be great.

Regards,

[redacted]