



Additional information for summerfruit growers

2021-22 season

The following notes¹ expand on the information provided in the 2021-22 wall charts of MRLs and the suggested export Pre-Harvest Intervals (PHIs) for summerfruit. They are supplied to provide the growers with additional information to support the MRLs and PHIs listed in the various summerfruit tables.

SUMMERFRUIT EXPORT MRLs

Australia – TTMRA

Several of the PHIs set for Australia are based on Australia's acceptance of the New Zealand MRL. This is done under an agreement (the Trans-Tasman Mutual Recognition Agreement or TTMRA) between the Australian and New Zealand governments. Some of the Australian supermarkets may be reluctant to accept that these MRLs are perfectly legitimate, so we suggest that where alternatives exist it may be prudent to use these other products.

In the PHI/MRL spreadsheets, where the MRL has '(NZ)' under it, this indicates the PHI is based on the NZ MRL.

For apricots these include: Carbaryl, Cyproconazole, Dicloran, Flusilazole, Pirimicarb, Streptomycin, Tebufenozide, Thiram and Ziram.

For cherries: Carbaryl, Cyproconazole, Dicloran, Flusilazole, Streptomycin, Tau-fluvalinate, Thiram.

Iprodione use for USA

There is still no clear information from USA on when their proposed changes to the MRLs for Iprodione (Rovral, Defence) are expected. MPI indicates that the decision date is unknown.

Japan & Korea MRLs – cherries

Note that for Korea and Japan, MRLs for stone fruit apply to the whole fruit after removal of the stones.

NZ MRLs for offshore markets

There are a number of instances where a PHI has been set for a pesticide for China, Indonesia and Vietnam based on acceptance of the NZ MRL.

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For some pesticides where this NZ MRL approach has been taken, or where the NZ MRL is the same as the one set for the overseas market, MPI have indicated a longer PHI than the withholding period stated on the NZ labels for these pesticides.

WHY? This is because either:

- the NZ MRLs and label withholding periods are rather old (and may not reflect current use), or
- they have been set for 'All fruit' (and have not been updated to match the label recommendations), or
- the supporting data for summerfruit is not sufficiently robust to suggest the NZ withholding period as an export PHI (MPI have therefore taken a more conservative approach).

Pesticides in this category include:

- Carbaryl
- Triforine

MPI Policy – MPI policy is not to suggest PHIs shorter than required under NZ Good Agricultural Practice (ie those consistent with NZ MRLs) even if higher overseas MRLs exist.

PESTICIDE REGISTRATION AND LABEL CLAIMS

Pesticide use in New Zealand is governed by the Agricultural Compounds and Veterinary Medicines Act and Regulations. Under this legislation, 'off label' use of pesticides is permitted, provided the MRLs listed in the NZ MRL Standard are not exceeded. For more information go to the NZGAP Guidelines for Off-label Use of Agrichemicals: https://www.nzgap.co.nz/NZGAP_Public/Growers/Guidelines.aspx

The lists of suggested export PHIs may include pesticides for which no summerfruit claims exist, and in such cases, this information is provided for reference purposes, or in anticipation of the appropriate label claims being accepted. From a product liability point-of-view, it may be preferable to include only those pesticides with 'authorised' label claims for use on summerfruits in any published spray programmes.

PESTICIDE WITHHOLDING PERIODS AND EXPORT PHIS

As part of the ACVM Group registration process, withholding periods for pesticides are established as part of the 'authorised' Good Agricultural Practice (GAP) for each pesticide. This GAP is based on the optimum use of the pesticide to give acceptable control of the pest/disease/weed while ensuring residues in the treated crops are minimised. MRLs are established to reflect this GAP and the presence of residues above the MRL is an indication that GAP has not been followed.

On the other hand, PHIs suggested for export crops are intended for guidance in the development of export spray programmes, to minimise the risk of treated produce not complying with the MRLs of our trading partners, and may not reflect GAP.

In cases where overseas MRLs are higher than those set in New Zealand, it is technically possible for pesticides to be used at higher rates or closer to harvest than is considered to be good agricultural practice. However, as a matter of

policy, export PHIs shorter than the NZ withholding periods are not suggested because this would not reflect normal GAP and could result in non-compliance with NZ MRLs if the treated produce were to be sold on the domestic market.

SUMMARY OF CHANGES TO MRLs and PHIs 2021-22

With overseas markets reviewing their MRLs, some changes have also been made to the PHIs for the 2021-22 season. Thailand for example, now has a MRL as low as 0.005 mg/kg for Chlorpyrifos indicating an advanced level of testing capability.

The following tables list those changes made to PHIs as a result of changes made to MRLs for each of the five summerfruit crops.

Any changes to PHIs or MRLs are highlighted on each of the specific crop wall charts.

New country PHIs

Great Britain (England, Scotland, Wales) has been added following BREXIT.

New products

No new products have been added.

Deleted country PHIs

No country PHIs have been deleted.

Key

'Insufficient data' means that there is insufficient information to suggest a suitable PHI. In some cases, use may be possible before any edible plant parts are formed (eg before fruit formation).

'None set' means that no MRLs exist for the pesticide and that detectable residues should not be present, unless Codex MRLs are acceptable or NZ MRLs are recognised.

MRLs and suggested PHIs for EU also apply to Finland and Norway unless listed separately.

EU MRLs adopted up to 31 December 2020 also apply in Great Britain (England, Scotland, Wales). All EU MRLs continue to apply in Northern Ireland.

Apricots

Pesticide	Country	Comment
Clofentezine	Australia	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 0.10 mg/kg to 1.00 mg/kg
Chlorothalonil	European Union	<ul style="list-style-type: none"> – PHI changed from 'Shuck Fall' to 'Petal Fall'. – MRL changed from 1.00 mg/kg to 0.01 mg/kg.
Captan	Switzerland	<ul style="list-style-type: none"> – PHI remains at '21 days' – MRL changed from 4.00 mg/kg to 6.00 mg/kg
Trifloxystrobin	Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 1.00 mg/kg to 3.00 mg/kg
Tebuconazole	Switzerland	<ul style="list-style-type: none"> – PHI changed from 'Insufficient Data' to '3 days'. – MRL changed from 0.30 mg/kg to 0.60 mg/kg.
Piperonyl butoxide	Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Insufficient Data' – MRL changed from 0.50 mg/kg to 0.01 mg/kg

Streptomycin		Saudi Arabia	<ul style="list-style-type: none"> – PHI remains at 'Shuck Fall' – MRL changed from 'None Set' to 0.01 mg/kg
Luna Sensation	Fluopyram	Switzerland	<ul style="list-style-type: none"> – PHI remains at '1 day' – MRL changed from 0.70 mg/kg to 1.50 mg/kg
	Trifloxystrobin	Switzerland	<ul style="list-style-type: none"> – PHI remains at '1 day' – MRL changed from 1.00 mg/kg to 3.00 mg/kg
Chlorpyrifos		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 0.05 mg/kg to 0.01 mg/kg
		Thailand	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 'None Set' to 0.005 mg/kg
Tau-fluvalinate		Saudi Arabia	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 'None Set' to 0.01 mg/kg
		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Shuck Fall' – MRL changed from 0.10 mg/kg to 0.30 mg/kg
Fluxapyroxad		European Union	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 1.00 mg/kg to 1.50 mg/kg
Milbemectin		Saudi Arabia	<ul style="list-style-type: none"> – PHI remains at '14 days' – MRL changed from 'None Set' to 0.01 mg/kg
Prochloraz		Saudi Arabia	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 'None Set' to 0.01 mg/kg
		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 0.20 mg/kg to 0.05 mg/kg
Propargite		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Insufficient Data' – MRL changed from 1.50 mg/kg to 0.01 mg/kg
Pacllobutrazole		Saudi Arabia	<ul style="list-style-type: none"> – PHI remains at 'Dormant' – MRL changed from 'None Set' to 0.01 mg/kg
		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Dormant' – MRL changed from 0.50 mg/kg to 0.15 mg/kg
Primicarb		Switzerland	<ul style="list-style-type: none"> – PHI remains at '3 days' – MRL changed from 2.00 mg/kg to 3.00 mg/kg
Pristine	Boscalid	Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 3.00 mg/kg to 5.00 mg/kg
	Pyraclostrobin	Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 0.80 mg/kg to 1.00 mg/kg
Methoxyfenozide		Switzerland	<ul style="list-style-type: none"> – PHI changed from '21 days' to '14 days' – MRL changed from 0.30 mg/kg to 2.00 mg/kg
Iprodione		Switzerland	<ul style="list-style-type: none"> – PHI changed from '7 days' to 'Insufficient Data' – MRL changed from 3.00 mg/kg to 0.01 mg/kg.
Difenconazole		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Shuck Fall' – MRL changed from 0.50 mg/kg to 0.70 mg/kg
Spinosad		Switzerland	<ul style="list-style-type: none"> – PHI changed from '1 day' to '7 days' – MRL changed from 1.50 mg/kg to 0.06 mg/kg

Cherries

Pesticide	Country	Comment
Dicloran	Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Insufficient Data' – MRL changed from 0.10 mg/kg to 0.01 mg/kg

Chlorothalonil		Korea	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 3.00 mg/kg to 0.50 mg/kg
Cyprodinil		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Insufficient Data' – MRL changed to 2.00 mg/kg
Gibberellic Acid (GA3)		Switzerland	<ul style="list-style-type: none"> – PHI remains at '21 days' – MRL changed from 5.00 mg/kg to 'Not Listed'
Tebuconazole		Japan	<ul style="list-style-type: none"> – PHI remains at '1 day' – MRL changed from 5.00 mg/kg to 7.00 mg/kg
		Switzerland	<ul style="list-style-type: none"> – PHI changed from '10 days' to '1 day' – MRL changed from 0.50 mg/kg to 7.00 mg/kg
Piperonyl butoxide		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Insufficient Data' – MRL changed from 0.50 mg/kg to 0.01 mg/kg
Sulphur		Switzerland	<ul style="list-style-type: none"> – PHI remains at '0 days' – MRL changed from 50 mg/kg to 'Exempt'
Chlorpyrifos		China	<ul style="list-style-type: none"> – PHI remains at '28 days' – MRL remains at 1.00 mg/kg
		Thailand	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 'None Set' to 0.005 mg/kg
		European Union	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 0.05 mg/kg to 0.01 mg/kg
		Switzerland	<ul style="list-style-type: none"> – PHI remains at '42 days' – MRL changed from 0.20 mg/kg to 0.05 mg/kg
Luna Sensation	Fluopyram	Taiwan	<ul style="list-style-type: none"> – PHI remains at '1 day' – MRL changed from 0.70 mg/kg to 1.50 mg/kg
		Switzerland	<ul style="list-style-type: none"> – PHI remains at '1 day' – MRL changed from 1.50 mg/kg to 2.00 mg/kg
	Trifloxystrobin	Taiwan	<ul style="list-style-type: none"> – PHI remains at '1 day' – MRL remains at 3.00 mg/kg
		Switzerland	<ul style="list-style-type: none"> – PHI remains at '1 day' – MRL changed from 1.00 mg/kg to 3.00 mg/kg
Maldison		Korea	<ul style="list-style-type: none"> – PHI changed from '14 days' to '7 days' – MRL changed from 0.50 mg/kg to 3.00 mg/kg
Tau-fluvalinate		European Union	<ul style="list-style-type: none"> – PHI remains at 'Shuck Fall' – MRL changed from 0.50 mg/kg to 0.40 mg/kg
Merivon	Fluxapyroxad	Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 1.00 mg/kg to 3.00 mg/kg
	Pyraclostrobin		<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 1.50 mg/kg to 3.00 mg/kg
Milbemectin		Korea	<ul style="list-style-type: none"> – PHI remains at '14 days' – MRL changed from 'None Set' to 0.10 mg/kg
Ziram		Korea	<ul style="list-style-type: none"> – PHI remains at 'Insufficient Data' – MRL changed from 'None Set' to 0.70 mg/kg
Prochloraz		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Petal Fall' – MRL changed from 0.20 mg/kg to 0.05 mg/kg
Propargite		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Insufficient Data' – MRL changed from 1.50 mg/kg to 0.01 mg/kg
Captan		Korea	<ul style="list-style-type: none"> – PHI remains at '21 days' – MRL changed from 5.00 mg/kg to 3.00 mg/kg

		Switzerland	<ul style="list-style-type: none"> – PHI remains at '21 days' – MRL changed from 5.00 mg/kg to 6.00 mg/kg
Paclobutrazole		Switzerland	<ul style="list-style-type: none"> – PHI remains at 'Dormant' – MRL changed from 0.50 mg/kg to 0.01 mg/kg
Pristine	Pyraclostrobin	Switzerland	<ul style="list-style-type: none"> – PHI remains at '0 days' – MRL changed from 1.50 mg/kg to 3.00 mg/kg
Methoxyfenozide		Switzerland	<ul style="list-style-type: none"> – PHI changed from 'Insufficient data' to '14 days' – MRL changed from 0.02 mg/kg to 2.00 mg/kg
Iprodione		Switzerland	<ul style="list-style-type: none"> – PHI changed from '1 day' to 'Insufficient Data' – MRL changed from 3.00 mg/kg to 0.01 mg/kg
Carbaryl		Japan	<ul style="list-style-type: none"> – PHI remains at '3 days' – MRL changed from 10.00 mg/kg to 7.00 mg/kg
Thiram		Korea	<ul style="list-style-type: none"> – PHI remains at 'Insufficient Data' – MRL changed from 'None Set' 0.70 mg/kg

Nectarines

Pesticide	Country	Comment
Clofentezine	Australia	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 0.10 mg/kg to 1.00 mg/kg
Chlorothalonil	European Union	<ul style="list-style-type: none"> – PHI changed from 'Shuck Fall' to 'Petal Fall' – MRL changed from 1.00 mg/kg to 0.01 mg/kg
Pymetrozine	European Union	<ul style="list-style-type: none"> – PHI remains at '28 days' – MRL changed from 0.03 mg/kg to 0.02 mg/kg
Chlorpyrifos	European Union	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 0.08 mg/kg to 0.01 mg/kg
Ziram	Singapore	<ul style="list-style-type: none"> – PHI remains at '35 days' – MRL changed from 3.00 mg/kg to 7.00 mg/kg

Peaches

Pesticide	Country	Comment
Clofentezine	Australia	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 0.10 mg/kg to 1.00 mg/kg
Chlorothalonil	European Union	<ul style="list-style-type: none"> – PHI changed from 'Shuck Fall' to 'Petal Fall'. – MRL changed from 1.00 mg/kg to 0.01 mg/kg
Pymetrozine	European Union	<ul style="list-style-type: none"> – PHI remains at '28 days' – MRL changed from 0.03 mg/kg to 0.02 mg/kg
Chlorpyrifos	Thailand	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 'None Set' to 0.005 mg/kg.
	European Union	<ul style="list-style-type: none"> – PHI remains at 'Pre-flower' – MRL changed from 0.08 mg/kg to 0.01 mg/kg

Plums

Pesticide	Country	Comment	
Chlorpyrifos	European Union	<ul style="list-style-type: none"> – PHI changed from 'Shuck Fall' to 'Pre-flower'. – MRL changed from 0.30 mg/kg to 0.01 mg/kg 	
Luna	Fluopyram	European Union	<ul style="list-style-type: none"> – PHI remains at '1 day' – MRL changed from 0.50 mg/kg to 0.60 mg/kg

Tau-fluvalinate	European Union	<ul style="list-style-type: none"> - PHI changed from 'Shuck Fall' to 'Petal Fall'. - MRL changed from 0.30 mg/kg to 0.01 mg/kg
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PESTICIDES WITH WITHDRAWN/REVOKED/PENDING MRLS/PHIS

The EU, along with one or two other countries, have either withdrawn authorisations for use in their own country, or are reviewing registrations, of a number of pesticides currently in use in the New Zealand summerfruit export spray programmes. These withdrawals/reviews have resulted from either MRLs being revoked, MRLs being placed under review, or the pesticides themselves being placed under re-assessment as being suitable for continued use.

In the EU especially, pesticides that are no longer authorised for use or may not retain authorisation, may have their MRLs revoked if no import MRLs are requested/supported. Those pesticides with their use authorisations withdrawn tend to have very low MRLs which makes it very difficult for PHIs to be set.

The following table lists the pesticides, countries and an indication of whether or not authorisations have been withdrawn or when the phase out of a chemical is likely to occur.

Pesticide	Fruit types	Country & timing (see below)							
		1	2	3	4	5	6	7	8
Chlorpyrifos	Plums; Nectarines; Cherries; Peaches				EU				
Iprodione	Plums; Apricots; Nectarines; Cherries				Canada; USA				
Tau-fluvalinate	Plums; Cherries	EU							
Ziram	Plums; Apricots; Cherries; Nectarines; Peaches	EU							EU
Ziram	Cherries				Canada				
Carbaryl	Cherries				Japan				
Chlorothalonil	Cherries				Japan				
Chlorpyrifos	Cherries				Japan				
Fluxapyroxad	Cherries				China				
Tebuconazole	Cherries				Japan				
Clofentezine	Cherries; Peaches				Australia				
Captan	Cherries				India				
Pyrethrins	Apricots								UAE

Glyphosate	Plums; Apricots; Cherries; Nectarines; Peaches	EU							
Spinetoram	Plums				EU				
Spinetoram	Plums; Apricots; Cherries; Nectarines; Peaches	EU							
Thiram	Plums; Apricots; Cherries; Nectarines; Peaches								EU

1	Under re-assessment	5	All authorisations withdrawn (except some paraffin oils)
2	All authorisations withdrawn	6	All registrations withdrawn
3	MRL revoked	7	Registration, label claims under review
4	MRL to be reviewed	8	MRL proposed for revocation

Streptomycin

While all uses of streptomycin have been withdrawn in EU (under their registration directive), the suggested PHIs of use up to Shuck Fall are designed to meet EU MRL regulations, with no measurable residues remaining on fruit being exported to the EU (effectively 0.01 mg/kg). Previous notes about the withdrawal of the authorised use was to give some warning that EU importers (eg supermarkets) may insist that streptomycin is not to be used on their shipments.

Bacillus thuringiensis

The following is a response from MPI as a result of a query regarding the use of Bacillus thuringiensis for leafroller control in summerfruit.

‘Bacillus Thuringiensis is generally exempt from having to comply with MRLs in most major markets, and in others, is not listed in their legislation. On this basis, we have assumed that the presence of residues (of the Bt toxin) is not of concern to most regulatory agencies.

While there is no label claim for use on summerfruit, this is an acceptable ‘off label’ use under the ACVM Act, and could therefore be used for all markets, right up to harvest if necessary.’

Also, please note, Bt very quickly breaks down under UV rays, 2-3 days.

Chlorpyrifos use on cherries

Caution – The use of chlorpyrifos on cherries may cause leaf damage to some varieties of cherries. This can affect the ability of the fruit to size and ripen. Before using chlorpyrifos please seek local advice.

Difenoconazole

Difenoconazole has no label claim for use on any summer fruit in New Zealand. This is probably why the MRL listed for Difenoconazole is 0.10 mg/kg which is the same level as the NZ Default MRL. All of the markets potentially to which NZ summerfruit could be exported (except in the case of Apricots) do have MRLs set and in most cases, these are at a higher level than the set NZ MRL.

Potentially, because of these higher export market MRLs, PHIs higher than those listed on the PHI/MRL charts could have been set. However, to ensure that the NZ MRL is not exceeded for product that might make it on to the NZ domestic market, PHIs for all markets have been set to those which must meet the NZ requirements.