

**TO:** WorkSafe

**DATE:** 25 April 2022

**SUBMISSION ON:** Restricted Entry Intervals

**FROM:** New Zealand Kiwifruit Growers Inc (NZKGI)  
Zespri

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## **1. Kiwifruit industry in New Zealand**

Kiwifruit have been grown commercially in New Zealand since the 1930s and are grown in eight regions, however much of New Zealand's kiwifruit (80%) is grown in the Bay of Plenty where the soils are generally deep and free draining. The kiwifruit industry is the biggest sector and largest exporter in New Zealand's horticultural industry making up 38% of total export value<sup>1</sup>

Māori growers make up around 10 percent of the industry with 87 percent being based in the Bay of Plenty. In 2021, Māori growers produced 15.7 million trays which is approximately \$165 million of income to Māori growers.

Kiwifruit has been a remarkable success story for New Zealand, delivering enduring and strong economic returns to the New Zealand economy. With exports worth \$3.6 billion in the financial year 2020/2021 and with sales expected to grow to \$4.5 billion by 2025, kiwifruit provides one of the highest per-hectare returns in New Zealand's primary sector – \$76,722 per hectare for Zespri Green (green) and \$177,846 per hectare for Zespri SunGold™ (gold) in 2020/21.

The kiwifruit industry is a major contributor to regional New Zealand returning \$2.25 billion directly to rural communities in 2020/21. This has wide ranging benefits not only in terms of regional employment, but domino effects into rural communities for related services (everything from tractor distributors to farm supplies, cafes and schools).

Not only does kiwifruit significantly contribute to regional and national GDP and provide returns to growers, but the industry also has a low environmental footprint and low carbon emissions (0.6 tonnes of CO<sub>2</sub>-e per ha per year<sup>2</sup>).

Across the industry, there are 2,813 growers, 14,000ha of orchards, 9,250 permanent employees and up to 25,000 seasonal jobs during the peak season.

Of the seasonal workforce, 60% are New Zealanders with 57% of these being Māori. The remainder of the seasonal workforce are supported by backpackers and workers from Pacific nations.

## **2. New Zealand Kiwifruit Growers Inc**

New Zealand Kiwifruit Growers Inc (NZKGI) is mandated under the Commodity Levies (Kiwifruit) Order to advocate on behalf of New Zealand kiwifruit growers and does this by representing the commercial and political interests of kiwifruit growers in industry and government decision making.

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<sup>1</sup> [Fresh Facts](#)

<sup>2</sup> Source: Zespri

### 3. Zespri

Zespri is 100 percent owned by current and former kiwifruit growers and has a global team of 700 based in Mount Maunganui and throughout Asia, Europe and the Americas. Zespri's purpose is to help people, communities and the environment thrive through the goodness of kiwifruit, and we work with 2,800 growers in New Zealand and 1,500 growers offshore to provide consumers with fresh, healthy and great-tasting Zespri Green, RubyRed™ and SunGold Kiwifruit. In 2020/21, Zespri supplied over 180 million trays of kiwifruit to consumers in more than 50 markets and recorded global operating revenue of NZ\$3.9 billion.

Zespri sets the standards our growers must adhere to, which includes which agrichemicals can be used on orchard, and when.

### 4. WorkSafe Proposals

NZKGI thanks WorkSafe for meeting with us to discuss the proposed Restricted Entry Intervals (REI) and for the opportunity to provide comment on the products that impact the industry. While NZKGI understands that reviewing REI is set out under regulation 13.23 of the Health and Safety at Work (Hazardous Substances) Regulations 2017, REI must be practical and manufacture REI specifications should be prioritised.

### 5. Recommendations on Selected Pesticides

| Approval number   | HSR100889   | Substance name | Kasumin      |                                       |
|-------------------|---|----------------|--------------|---------------------------------------|
| Active ingredient | Pesticide justification   | REI            | Proposed REI | Industry proposed PPE requirements    |
| Kasugamycin       | Kasumin is intended for use as a bactericide antibiotic to control <i>Pseudomonas syringae</i> pv. <i>actinidiae</i> (Psa) in kiwifruit | 7 days         | 13 days      | No gloves<br>Long sleeves (if needed) |

Kasumin is a bactericide registered for the control of Psa-V on kiwifruit vines in New Zealand. The active ingredient in Kasumin (kasugamycin) is used only on plant-based bacteria and fungi and has no applications in human or veterinary health. It is used in 20 countries on crops including tomatoes, paprika, eggplants, rice and potatoes against a range of bacterial diseases in horticulture. The Agricultural Compounds and Veterinary Medicines Group (ACVM) granted a full label claim and permission to use Kasumin only as a foliar spray with strict use conditions in approved regions – presently all North Island regions.

Zespri's Crop Protection Standard allows for one application of Kasumin however a second Kasumin application possibly could be approved under Zespri's Justified Approval process. Kasumin is used within Psa-V management programmes through the intense Spring period where Psa risk is high and pruning (canopy management) and thinning operations are being carried out.

Zespri maintains a zero-residue policy for bactericide residues on fruit. Every supplying orchard receives an antibiotic residue test and fruit that does not meet this requirement will not be accepted into Zespri inventory. To reduce residue risk and allay beekeeper concerns, Kasumin cannot be used 21 days before the first male or female kiwifruit flowers open in or near to producing blocks. Every orchard using Kasumin is entered into an audit pool to ensure compliance to product use requirements.

The period of time when Kasumin works best is before flowering. In the period prior to flowering, workers have a very short period of time to thin buds (a critical orchard practice) and increasing re-

entry intervals of Kasumin from 7 to 13 days for kiwifruit would make it almost impossible to complete thinning across the industry. There would be reliance on a significant labour pool for a limited time and there are severe labour shortages across the industry for the last three years.

Unintended consequences of this change may include a decision not to include Kasumin in the Psa protection programme, with substitution of copper (only possible when weather conditions are suitable to avoid phytotoxicity risk) or perhaps Keystrepto, a least preferred emergency product option against Psa outbreaks.

These decisions for high-risk sites would lessen resilience of Psa resistance management strategies and would result in further copper applications which run counter to industry strategies of reducing copper usage. The possibility of reducing the effectiveness of the orchard disease control program could also be in question.

It is safe to re-enter sprayed areas within 48 hours as stated by the Kasumin product label *persons re-entering treated areas within 48 hours must wear full PPE as described above and for the following 5 days, if handling the crop, wear gloves to prevent skin contact.*

[https://nz.uplonline.com/download\\_links/xJ8xQhT5m3DYs97b5dEMyCCZ6M9AKnjjP4PGoil.pdf](https://nz.uplonline.com/download_links/xJ8xQhT5m3DYs97b5dEMyCCZ6M9AKnjjP4PGoil.pdf)

To date, use of this product has been well managed and audited, with good oversight from industry bodies. It is recognised as a valuable tool for growers as identified by the industry use levels.

**Recommendation: No change to existing REI**

| Approval number   | HSR101029  | Substance name | Blossom Protect Component |                                    |  |
|---|--|----------------|---------------------------|------------------------------------|--|
| Active ingredient   | Pesticide justification  | REI            | Proposed REI              | Industry proposed PPE requirements |  |
| Two strains of Aureobasidium pullulans Trade names: Aureo Gold Botector | Intended for use in the protection of pome fruit trees against Erwinia amylovora (fire blight) and in protection of kiwifruit vines from Pseudomonas syringae pv. actinidiae (Psa) | 4 hours        | 24 hours                  | No gloves<br>Long sleeves          |  |

Aureo®Gold is a natural yeast strain that reduces growth and spread of Psa bacteria. It is applied during flowering and post fruit set, a time in the calendar when use of other controls for Psa is limited (anytime from budbreak to six weeks post flowering with no phytotoxic effects on foliage or developing fruit.). Aureo®Gold is a yeast found naturally on many different species of plants and fruits in New Zealand and is safe for bees.

Aureo®Gold has been approved for use by the Ministry for Primary Industries under ACVM (agricultural compounds and veterinary medicine) regulations and has BioGro Organic Certification. The Toxicology Consulting Limited report states that the REI should be increased from 4 to 24 hours because the product must be completely dry on the affected surfaces before re-entry. It's important to note that the safety data sheet<sup>3</sup> for Blossom Protect notes a REI of four hours and therefore it remains unclear why a REI of 24 hours has been proposed.

**Recommendation: No change to existing REI**

| Approval number   | HSR100588               | Substance name | Actigard     |                                    |  |
|-------------------|-------------------------|----------------|--------------|------------------------------------|--|
| Active ingredient | Pesticide justification | REI            | Proposed REI | Industry proposed PPE requirements |  |

<sup>3</sup> [https://westbridge.com/products-pdf-documents/BlossomProtect\\_Label\\_2018.pdf](https://westbridge.com/products-pdf-documents/BlossomProtect_Label_2018.pdf)

|                     |   |          |          |                           |
|---------------------|---|----------|----------|---------------------------|
| Acibenzolar-Smethyl | Actigard stimulates systemic acquired resistance reducing the symptoms of Psa-V (the virulent form of pseudomonas syringae pv. actinidiae) on kiwifruit | 12 hours | 48 hours | No gloves<br>Long sleeves |
|---------------------|---|----------|----------|---------------------------|

ACTIGARD is a plant activator that stimulates systemic acquired resistance, reducing the symptoms of Psa (Pseudomonas syringae pv. actinidiae) in Kiwifruit. It can be applied up to four times per year but is generally sprayed in spring when the leaves are approx 25mm and then again 1-7 days pre bud break. Another application straight after harvest further protects against infection

The Toxicology Consulting Limited report states that the REI should be increased from 12 to 48 hours because the product must be completely dry on the affected surfaces before re-entry. It's important to note that the safety data sheet<sup>4</sup> for Actigard notes a REI of 12 hours and therefore it remains unclear why a REI of 24 hours has been proposed.

#### Recommendation: No change to existing REI

| Approval number    | HSR100932   | Substance name | Warlock Insecticide |                                    |
|--------------------|---|----------------|---------------------|------------------------------------|
| Active ingredient  | Pesticide justification   | REI            | Proposed REI        | Industry proposed PPE requirements |
| Emamectin benzoate | Insecticide for the control of pests in apples, pears, gapes, avocados and kiwifruit. | 24 hours       | No change           | No gloves<br>Long sleeves          |

#### Recommendation: Support the proposed REI

| Approval number   | HSR100830   | Substance name | Rainbow Glufosinate Ammonium 200 |                                    |
|---|---|----------------|----------------------------------|------------------------------------|
| Active ingredient   | Pesticide justification   | REI            | Proposed REI                     | Industry proposed PPE requirements |
| glufosinateammonium<br>Trade names:<br>Bastnate Herbicide | Non-selective herbicide for the control of a wide range of broadleaf and grass weeds in orchard, vineyards, forestry and non-cropland areas | 24 hours       | Nil                              | No gloves<br>Long sleeves          |

#### Recommendation: Support the proposed REI

| Approval number   | HSR101088                                    | Substance name | Advance Gold                      |                                    |
|-------------------|--|----------------|-----------------------------------|------------------------------------|
| Active ingredient | Pesticide justification                      | REI            | Proposed REI                      | Industry proposed PPE requirements |
| Salicylic acid    | Intended for use as a plant growth regulator | Until dried    | No REI proposed as this substance |                                    |

<sup>4</sup> <https://syngenta.my.salesforce.com/sfc/p/#24000000Yk1o/a/1o00000059ck/SaOMGhgNzN5iETXlmRsfZzFQjRgKCRsAle3X87NrQJw>

|  |   |  |   |  |
|--|---|--|---|--|
|  | for the enhancement of bud break in horticultural crops<br>Does not meet criteria |  | does not meet the definition of a pesticide as it is a plant growth regulator |  |
|--|---|--|---|--|

|                   |  |                |              |                                    |
|-------------------|--|----------------|--------------|------------------------------------|
| Approval number   | HSR101142  | Substance name | Timorex Gold |                                    |
| Active ingredient | Pesticide justification  | REI            | Proposed REI | Industry proposed PPE requirements |
| Tea tree oil      | Intended for use as a plant growth regulator for the enhancement of bud break in horticultural crops<br>Does not meet criteria | Until dried    | 24 hours     | No gloves<br>Long sleeves          |

Timorex Gold is a plant-based biofungicide for the control of sclerotinia in kiwifruit. It is a natural product containing no chemical residues and is harmless to insects and bees. The active ingredient of Timorex Gold is a natural product that is classified as a low-risk substance for which [Maximum Residue Limits](#) (MRL) are not required in Europe. It is applied through the flowering period until fruit set.

**Recommendation: No change to existing REI or for clarification purposes require four hour entry (as this is optimal drying time)**

## 6. Conclusion

NZKGI and Zespri welcome any further discussion on the proposed REI and if WorkSafe are planning to hold hearings, welcome the opportunity to attend.

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