

TO: European Commission

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SUBMISSION ON: Legislative Initiative: Hazardous chemicals – prohibiting production for export of chemicals banned in the European Union

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1 Executive Summary

- 1.1 New Zealand Kiwifruit Growers Incorporated (“NZKGI”) is a grower advocacy group representing New Zealand Kiwifruit growers.
- 1.2 NZKGI **opposes** the proposal to ban the production and export of cyanamide (CAS number 420-04-2), and Bifenthrin (CAS number 82657-04-3) from EU countries.
- 1.3 Cyanamide, as a component of Hi-Cane, is vitally important as a budbreaker for the production of kiwifruit in Aotearoa New Zealand. It has been used successfully since it became available in 1988, and its continued use is necessary until an alternative with the same efficacy or new cultivars are available.
- 1.4 Bifenthrin is an important chemical control for the management of some of the biggest biosecurity threats to our primary sector, including the Brown Marmorated Stink Bug (“BMSB”). The potential banning of the production and export of Bifenthrin overlooks the need for Aotearoa New Zealand to have this chemical in its toolbox to manage biosecurity risk.
- 1.5 Kiwifruit is the largest fresh fruit export in terms of value for Aotearoa New Zealand. Aotearoa New Zealand’s 2,800 kiwifruit growers and the communities in which they operate rely on the kiwifruit industry for employment as well as their economic and social wellbeing.

- 1.6 While NZKGI acknowledges that the EU has concerns regarding the health and environmental implications of the use of the listed chemicals globally, NZKGI submits that the focus of the EU's concern is too narrow in relation to cyanamide and Bifenthrin in Aotearoa New Zealand. In particular, these chemicals contribute to commercial and biosecurity benefits, and the health and environmental risks are effectively mitigated through regulatory controls.
- 1.7 The use of cyanamide once a year in kiwifruit orchards to promote bud break while the vines are dormant significantly contributes to the production of a healthy food product. Cyanamide breaks down very quickly and is not present in the fruit. This once-a-year application contributes to the viability and success of the industry for growers and their respective communities, by providing income, employment, and an associated sense of well-being. From an environmental perspective, it also contributes significantly to kiwifruit being New Zealand's lowest climate emissions farming system.
- 1.8 NZKGI's view is that the counterfactual (i.e. the effects if HC and/or Bifenthrin were unavailable) ought to be considered. In our view, the loss of income and employment, and the consequential stress and potential for impacts on mental well-being would significantly contribute to health effects, and considerably more so than allowing the use of these chemicals with appropriate controls.
- 1.9 A biosecurity incursion would significantly affect the primary sector which people depend upon for their livelihoods, health and well-being. From an environmental perspective, an incursion could significantly risk our endemic biodiversity, which in Aotearoa New Zealand is rich and unique, being an island nation.
- 1.10 NZKGI generally supports the use of substances of concern being minimised and regulated, and substituted as far as possible, with the phasing out of those substances that are most harmful where appropriate. However, there is no justification to ban the production and export of cyanamide to Aotearoa New Zealand given its safe record of use for over 35 years and the regulatory controls that govern its use.
- 1.11 Despite the industry's best endeavours, there are currently no alternatives with the efficacy of cyanamide, and new cultivars that do not require cyanamide could be many years away. In the interim, however, effective regulations control the use of the chemical and in turn protect people and the environment. Appropriate regulatory controls also exist for Bifenthrin.
- 1.12 If the production and export of cyanamide and Bifenthrin are banned from Europe, the chemicals will need to be imported from another country. While this remains an option, in relation to cyanamide, NZKGI values the quality of the German product as well as the scientific support and environmental research that has been freely provided by the manufacturing company Alzchem. Our view is that it is highly unlikely that we will find an alternative supplier who will provide support for the

substance in the way that Alzchem does, and we are struggling with the reasoning behind the prospect of needing to do so.

- 1.13 It is noted that this initiative aims to ensure more consistency between internal and external policies and thus improve the international standing of the EU, strengthening the credibility of their values and actions, and most importantly improving protection for human health and the environment globally.
- 1.14 In NZKGI's view, the proposed ban on the production and export of cyanamide and Bifenthrin will not achieve the aim of the initiative, because the full effects on human health and the environment globally (in this case Aotearoa New Zealand) arising from the proposed ban have not been appropriately considered. NZKGI's view is that Aotearoa New Zealand would be significantly worse off without these products, and would need to source them from elsewhere, and this needs to be recognised.
- 1.15 NZKGI submits that the proposal to ban the export of cyanamide and Bifenthrin is a very blunt instrument, and a more nuanced approach is required that properly considers the effects on kiwifruit growers and their communities in Aotearoa New Zealand.
- 1.16 In NZKGI's view, an enhanced focus by the EU on support for research to find less harmful chemical alternatives where their use is currently required, and on promoting safe practices and appropriate environmental protection in those countries that require guidance and assistance, would strengthen the credibility of the EU.

2 Structure of this submission

- 2.1 This submission is structured as follows:
- Section 3 is an introduction,
 - Section 4 describes the kiwifruit industry in Aotearoa New Zealand,
 - Section 5 describes the use of cyanamide in the kiwifruit industry,
 - Section 6 describes the importance of cyanamide to the kiwifruit industry,
 - Section 7 discusses the implications of a changing climate,
 - Section 8 describes the need for Bifenthrin for biosecurity purposes in the kiwifruit industry,
 - Section 9 discusses the regulatory controls for cyanamide in New Zealand to ensure its safe use and minimal impact on the environment,
 - Section 10 considers the objectives and likely impacts of the initiative, and,
 - Section 11 draws conclusions.

3 Introduction

- 3.1 The European Commission is seeking views from stakeholders and citizens regarding the commitment of the Chemicals Strategy for Sustainability (adopted on

14 October 2020) to prohibit the production for export of hazardous chemicals banned in the EU. The proposal is detailed in the Call for Evidence - Legislative Initiative: Hazardous chemicals – prohibiting production for export of chemicals banned in the European Union.

- 3.2 Section D of the initiative describes the target audience that the European Commission would like to hear from. NZKGI has an interest as a grower advocacy body representing New Zealand Kiwifruit Growers.
- 3.3 NZKGI is mandated under the Commodity Levies Act 1990 to advocate on behalf of New Zealand kiwifruit growers, and we do this by representing the commercial and political interests of kiwifruit growers in industry and government decision making.
- 3.4 This submission is supported by [Māori Kiwifruit Growers Incorporated \(MKGI\)](#). MKGI represents Māori Growers specifically and was formed to recognise specific Māori perspectives. Māori-owned kiwifruit orchards produce almost 14 million trays of kiwifruit annually or about 10% of New Zealand's total kiwifruit exports.

4 The Kiwifruit Industry in Aotearoa New Zealand

- 4.1 The kiwifruit industry is Aotearoa New Zealand's largest horticultural earner. Kiwifruit exports were worth \$3.92 billion in the financial year 2022/2023 and sales are expected to grow to \$4.5 billion by 2025. By 2030 Māori grower revenue is estimated to grow from \$271m to \$638m per year.
- 4.2 Kiwifruit provides the highest per-hectare return in New Zealand's primary sector – \$57,636 per hectare for Green and \$137,524 per hectare for SunGold in 2022/23. Just 5% of all producing orchards are greater than 10 ha, with the median orchard being approximately 3 ha in size.
- 4.3 The kiwifruit industry is a major contributor to regional New Zealand returning \$2.24 billion directly to rural communities in 2022/23. There are approximately 2,800 growers, 14,500 ha of orchards, 9,250 permanent employees and up to 24,000 jobs during the peak season.
- 4.4 Kiwifruit is grown in eight regions however much of New Zealand's kiwifruit (80%) is grown in the Bay of Plenty region where the soils are generally deep and free draining. The regional contribution and producing areas for New Zealand kiwifruit are summarised in Figure 1.

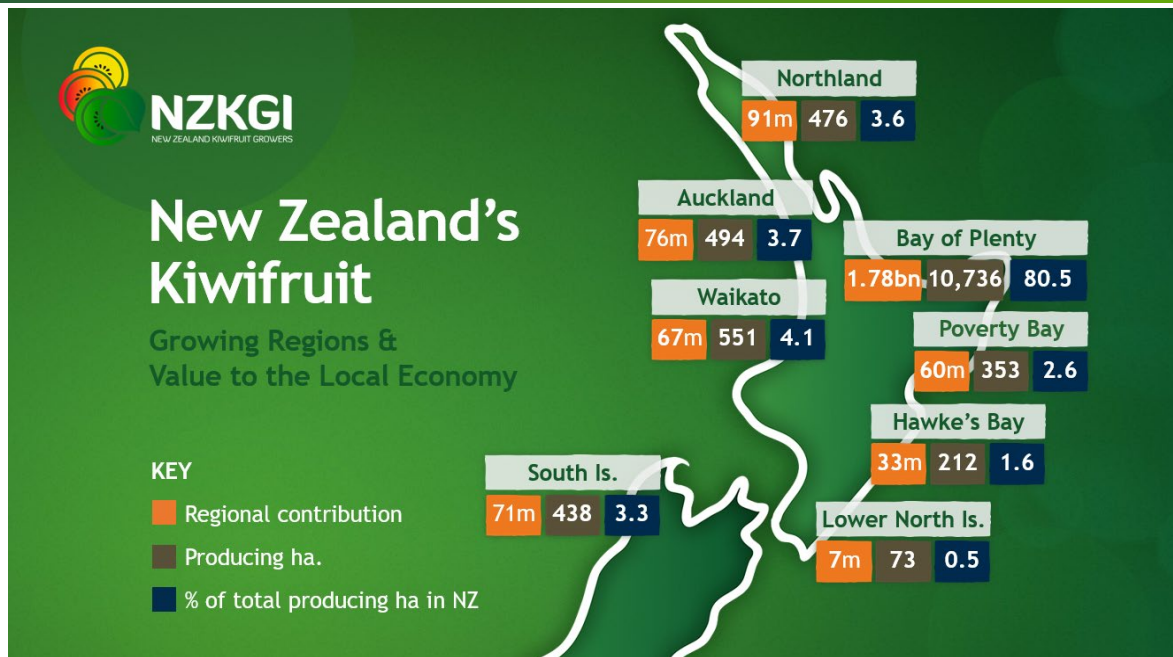


Figure 1: Regional Contribution and Producing Area¹

5 Hydrogen Cyanamide Use

- 5.1 Hydrogen cyanamide² (referred to hereafter as HC) has been used in the kiwifruit industry in Aotearoa New Zealand since it became commercially available in 1988. The kiwifruit industry primarily uses Hi-Cane, which contains 520 g/L of HC.
- 5.2 HC is applied once a year on dormant green, gold and Zespri Ruby Red™ kiwifruit and is not used on organic kiwifruit. HC breaks down rapidly and is not present within the fruit. The application of HC generally occurs from July through September. During the 2021 season, around 90% of producing hectares were sprayed with HC.
- 5.3 HC is a plant growth regulator which promotes uniform budbreak and flowering of kiwifruit and is used to compensate for inadequate winter chill. Without the use of HC, the impact on yield would be so significant that growing the crop would likely become uneconomic for many growers.

6 Importance of Hydrogen Cyanamide

- 6.1 The use of HC is of critical importance to kiwifruit growers, particularly in areas where warmer temperatures occur in the Bay of Plenty and further north, where the degree of winter chilling is inadequate to achieve uniform budbreak and flowering.

¹ NZKGI (2021) The Voice of New Zealand's Kiwifruit Growers. New Zealand Kiwifruit Growers Incorporated.

² "Cyanamide" is more commonly known as "hydrogen cyanamide" in New Zealand. Both have the same CAS number.

Uniform budbreak promotes consistent flowering and pollination, which means that kiwifruit is ready to harvest all at the same time on an orchard. This maximises labour efficiencies and volume flows to packhouses and coolstores and distribution to export markets. This is particularly important given that labour shortages in the horticulture sector can be significant.

6.2 HC is critical for kiwifruit production as it:

- promotes uniform and increased bud break,
- increases the number of flowers in a compact timeframe,
- increases the number of king flowers and reduces the number of unwanted lateral flowers,
- develops a uniform leaf canopy and better bee efficiency, reducing the need for more expensive artificial pollination, and,
- ensures early leaf growth giving a longer growing season and bigger fruit.

6.3 Figure 2 shows an example of the effect that HC has on bud break.



Figure 2: Effects of HC spraying on budbreak (left unsprayed, right sprayed).

7 Climate Change Implications

Low Emissions Industry

- 7.1 Aotearoa New Zealand is a country reliant on primary production and tourism for much of its economic wealth and is vulnerable to the economic and environmental impacts of climate change.
- 7.2 Horticulture has been identified as a key mitigation for climate change in Aotearoa New Zealand because it has lower emissions than pastoral farming. Kiwifruit growing is Aotearoa New Zealand's largest low-emissions farming system. HC plays a huge role in contributing to the success of our low-emissions industry. Without HC, many kiwifruit orchards would not be viable and land use conversion would likely result in higher emissions.

The Impact of Climate Change on Winter Chill

- 7.3 Growers are experiencing warmer autumn and winter conditions. Between 2017 and 2022, ten out of eleven sites across the Bay of Plenty and Gisborne regions showed a reduction in chilling hours between May and June. For example, Te Teko had 410 winter chill hours in 2017, but this has steadily reduced over time with 230 hours recorded in 2022. This trend is looking likely to continue for autumn and winter 2023.
- 7.4 Cool temperatures in these months help to stimulate budbreak and flower production. In areas with warmer winters, HC can be applied after harvest, mimicking the effect of cooler temperatures, encouraging flower production and leading to a greater yield of quality kiwifruit. As New Zealand's winters gradually warm, HC (or any future alternatives) will be an important tool for growers to adapt to climate change.
- 7.5 In areas like Northland and Bay of Plenty, temperature increases will further reduce winter chill which means that without HC, the industry's production will be increasingly severely impacted. The impact of climate change may mean that the need for HC will increase as growers further south could require its use.
- 7.6 The ability to access and use HC will be extremely important as the climate warms until a suitable alternative, or new cultivars are available.

8 Bifenthrin Required for Biosecurity

- 8.1 The management of biosecurity risk is a crucial component of Aotearoa New Zealand's biosecurity toolbox. An effective biosecurity system requires the ability to quickly and effectively manage biosecurity risks to mitigate and prevent the spread of pests and diseases that can be harmful to our primary production, environment and social values.

- 8.2 This is achieved in several ways, but an important component of this is ensuring the right tools remain available within our toolbox. Chemical controls, including pyrethroids such as Bifenthrin, are important tools to manage some of the biggest threats to Aotearoa New Zealand’s primary sector – including Brown Marmorated Stink Bug.
- 8.3 A report on the likely economic impact of the Brown Marmorated Stink Bug on the New Zealand economy (NZIER 2017) if it were to arrive, found that the Brown Marmorated Stink Bug would significantly reduce horticultural yields and impose surveillance and treatment costs on orchard owners. The Brown Marmorated Stink Bug establishment would not only result in additional pesticide costs, but also reduced labour productivity, lower export prices, new machinery requirements, and additional netting requirements. The study estimated horticulture export values would fall by between NZ\$1.4 billion and NZ\$3.0 billion in 2028 and between NZ\$2.0 billion and NZ\$4.2 billion in 2038 because of the presence and impact of Brown Marmorated Stink Bug.
- 8.4 Aotearoa New Zealand’s horticultural industries, in partnership with Government, have worked hard to ensure that chemicals such as Bifenthrin are available for use in a Brown Marmorated Stink Bug response as without the option of effective chemical control, the chances of a successful eradication are significantly reduced. As such, losing access to important agrichemical export markets could have significant implications on our readiness and response efforts.

9 Regulatory Controls in Aotearoa New Zealand

- 9.1 There are a number of different agencies controlling agrichemicals in Aotearoa New Zealand.
- 9.2 The Environmental Protection Authority Te Mana Rauhi Taiao (“EPA”) is a Crown Agent established under the Environmental Protection Authority Act 2011. The EPA regulates chemicals under the Hazardous Substances and New Organisms Act 1996 to safeguard people and the environment. The EPA makes decisions as to whether to approve new hazardous substances and imposes controls to manage their risks and to safeguard people and the environment.
- 9.3 The EPA’s approvals for hazardous substances are recorded in an HSNO register. A substance can only be approved if the positive effects (the benefits) outweigh the adverse effects (the risks and costs).
- 9.4 As well as evaluating and approving substances, the EPA can reassess substances and make new decisions about whether the controls need to be updated, or whether the substance should be banned. HC is currently going through a reassessment process.

- 9.5 WorkSafe New Zealand is responsible for establishing workplace controls for hazardous substances under the Health and Safety at Work Act (2015) and is the principal enforcement and guidance agency in workplaces.
- 9.6 Regional Councils have a function to control the discharges of contaminants into or onto land, air or water. The discharge of agrichemicals into the air may result in spray drift which has the potential to cause adverse effects. Regional plans contain provisions to avoid, remedy or mitigate the adverse effects of spray drift and these rules are enforced by Regional Councils.
- 9.7 The Land Transport Act (1998) regulates the transport of hazardous substances, including agrichemicals.
- 9.8 Agrichemicals are managed according to whether they are being used for biosecurity purposes, or by application method. Different application methods have differing risks of spray drift, with hand/held, motorised application methods less likely to result in spray drift than aerial application.
- 9.9 Bifenthrin has gone through an assessment under the Hazardous Substances and New Organisms Act 1996 to use specifically in the event of a Brown Marmorated Stink Bug response. There are also agricultural compounds and veterinary medicines (ACVM) regulations for the use of the chemical. The Biosecurity Act also has emergency provisions for use in a biosecurity response if required, and pre-emptive approvals are not in place.
- 9.10 The rigorous multi-agency approach to managing chemicals in Aotearoa New Zealand ensures that they are appropriately regulated to protect people's health and the environment.

10 Objectives and Likely Impacts of the Initiative

- 10.1 Part B of the call for evidence (Objectives and policy options) states:

“The objectives of the initiative are to increase protection for human health and the environment globally and to apply uniform measures in all EU countries.”

- 10.2 NZKGI is of the view that if the primary objective of the initiative is to increase protection for human health and the environment globally, then the focus is too narrow. In Aotearoa New Zealand, cyanamide and Befenthrin are absolutely necessary at this time. It is difficult to understand how banning the production and export of these substances from EU countries will result in an overall benefit to human health and the environment in Aotearoa New Zealand.

- 10.3 Part C of the call for evidence (Likely Impacts) states:

“The initiative will strengthen the credibility of the EU at international level.

Hazardous chemicals that are banned in the EU due to their hazardous properties and/or unacceptable risks to human health or the environment are still produced in the EU and then exported to countries outside the EU. However, these chemicals can potentially cause the same human health and environment concerns regardless of where they are used.

The EU, in line with its environmental policy objectives, does not wish products produced within the EU to contribute to such harm.

The initiative also has the potential to improve protection for human health and the environment in the EU, by preventing the use of chemicals in non-EU countries that have persistent and mobile properties with the capacity of having transboundary effects.

It is expected that there will be direct economic impacts on EU companies, including small and medium firms, who are currently exporting hazardous chemicals banned at EU-level, as those companies will no longer be able to produce/export their products. This will result in a loss of sales and market share and a possible relocation of production outside the EU.

However, in the long term, this change is expected to reinforce the reliability of EU products as regards safety and quality and thus their image on the global market.

The initiative is in line with Articles 31, 35 and 37 of the EU Charter of Fundamental Rights which require EU policies to ensure healthy and safe working conditions, a high level of human health and environmental protection and an improved quality of the environment.

This initiative is closely linked to Sustainable Development Goals (SDG), in particular SDG 3 (“Good Health and Well-Being”), SDG 6 (“Clean Water and Sanitation”) and SDG12 (“Responsible Consumption and Production”).”

- 10.4 NZKGI is of the view that rather than strengthening the credibility of the EU, the banning of the production and export of HC and Bifenthrin from EU countries will seriously impact the credibility of the EU with kiwifruit growers in New Zealand, and the communities that rely on the industry for employment and their economic and social wellbeing. In NZKGI’s view, the European Commission needs to ensure adequate consideration of the full implications of the ban. There are issues of fairness around banning chemicals that are both necessary and appropriately regulated to ensure the protection of human health and the environment, where no substitutes are currently available.

- 10.5 Our understanding is that in the EU, HC is not currently approved as an agricultural pesticide/plant growth regulator under Regulation 1107/2009 although emergency use exemptions may be available in some member states. Presumably then, there is still a requirement for it in some EU countries, albeit for emergency use. Until alternatives or new cultivars are available, the use of HC will be important as kiwifruit growers in Aotearoa New Zealand face their own climate emergency.
- 10.6 NZKGI also notes that Aotearoa New Zealand is an island nation and that transboundary effects with EU countries are not relevant, and that HC is not persistent in the environment.

11 Conclusions

- 11.1 NZKGI **opposes** the proposal to ban the production and export of cyanamide (CAS number 420-04-2), and Bifenthrin (CAS number 82657-04-3) from EU countries.
- 11.2 Cyanamide, as a component of Hi-Cane, is vitally important as a budbreaker for the production of kiwifruit in Aotearoa New Zealand. It has been used successfully since it became available in 1988 and its continued use with appropriate controls is necessary until an alternative with the same efficacy or new cultivars are available.
- 11.3 Kiwifruit is the largest fresh fruit export in terms of value for Aotearoa New Zealand. Aotearoa New Zealand's 2,800 kiwifruit growers and the communities in which they operate rely on the kiwifruit industry for employment as well as their economic and social well-being.
- 11.4 Bifenthrin is an important chemical control for the management of some of the biggest biosecurity threats to our primary sector, including the Brown Marmorated Stink Bug ("BMSB"). The potential banning of production and export of Bifenthrin overlooks the need for Aotearoa New Zealand to have this chemical in its toolbox to manage biosecurity risk.
- 11.5 If the proposed ban goes ahead, the kiwifruit industry in New Zealand will have no choice but to import HC and Bifenthrin from another country, until such time as alternatives are available, or in the case of HC, new cultivars are developed that are more tolerant to warm autumns and winters. In relation to HC, growers value the quality of the German product and the scientific support that Alzchem provides.
- 11.6 NZKGI is of the view that the wider implications of banning the production and export of HC and Bifenthrin from EU countries need to be considered. Kiwifruit growers are proud to be able to produce healthy food from Aotearoa New Zealand's largest low-emissions farming system, and they are also proud that the industry makes a significant contribution in terms of employment and economic and social well-being.

- 11.7 The industry is attempting to find an HC alternative or new cultivar that will tolerate warm autumns and springs, but none is so far available. In addition, it is extremely important that Aotearoa New Zealand has what it needs in its toolbox so that it is able to protect its people and unique environment from the very serious impacts that could arise from a biosecurity incursion.
- 11.8 NZKGI generally supports the use of substances of concern being minimised and appropriately regulated where they are required and no other options are available, and phasing out those that are the most harmful when the risks outweigh the benefits. The importance is in knowing the difference.
- 11.9 In NZKGI's view, an enhanced focus by the EU on support for research to find less harmful chemical alternatives where their use is currently required, and on safe practices to protect people and the environment in those countries that are not appropriately regulated and who require guidance and assistance, would strengthen the credibility of the EU.
- 11.10 Thank you for considering our submission.