Environmental Protection Authority
Te Mana Rauhī Taiao

New Zealand Government

Hydrogen cyanamide reassessment

OCTOBER 2020

Kia hiwa rā	*Be alert*
Kia hiwa rā	*Be watchful*
Korihi te manu	*The morning chorus sings*
Tākiri mai te ata	*as a new day dawns*
Tēnā koutou e ngā rangatira	*Greetings to you the respected ones,*
e ngā iwi me ngā karangaranga maha	*the many people far and wide*
Tēnei te mihi ki a koutou katoa	*We acknowledge you one and all*
Tihei mauri ora	*Behold the sneeze of life*

Information pack for Māori consultation

Ānei ngā pārongo e pā ana ki te aromatawai mō te pūmatū mōrearea ko hydrogen cyanamide, e kīia nei hoki ko Hi-Cane. Ko te take o ēnei kōrero hei whakamārama i te hātepe o te aromatawai, kia uru ai koutou ki tēnei kaupapa.

This is an information pack regarding the reassessment of the hazardous substance hydrogen cyanamide, also known as Hi-Cane. The purpose of this document is to explain the reassessment process so you can participate in this initiative.

Introduction

We're preparing an application for reassessment of hydrogen cyanamide (HC). An important aspect of the application we will put forward is the perspective of Māori. We have prepared this document in order to

- Provide some background to the HC reassessment
- Provide context for the process going forward
- Indicate to you that we would like to engage further by having hui once we have a more developed understanding of the risks presented by HC use in New Zealand

Feel free to provide us with any initial thoughts you may have in response to this, but please be aware that we intend to have a more meaningful engagement once we have progressed our risk analysis. We would suggest that you wait until we have made our position on the risks available before providing any substantial contribution, though you may wish to take the opportunity to gather your relevant information.

Accordingly, please view this initial contact as a primer, or heads-up for further discussion. Our intention is to arrange hui or virtual hui (as the COVID-19 situation allows) at a later date once we have progressed further in our risk analysis of HC use in New Zealand. When we arrange these hui, we'll provide our position on the risks, and present the regulatory tools that are available for protection of human health, the environment, and mauri.

We encourage you to circulate this document through your own networks.

Background

HC is a plant growth regulator used in the production of kiwifruit. The purpose of using HC in such kiwifruit production is to ensure that growth of shoots, or 'bud-break', occurs in a controlled fashion. It is also applied to some apple, cherry, apricot, and kiwiberry crops for the same bud-breaking purpose, but to a much lesser extent than kiwifruit.

Bud-break happens naturally when a vine experiences sufficient frost, but can also be stimulated chemically using the likes of HC. Chemical stimulation of bud-break offers a number of practical advantages, which translate to profitability for growers. Crops treated with HC result in the more desired "king flowers" (which produce higher quality fruit), and will flower in a condensed period (e.g. over one week, rather than four) which reduces harvest costs, and increases overall yield. Warmer regions where kiwifruit are grown are both particularly and increasingly dependent on HC in order to sustain the viability of the crop, due to the mild frosts becoming milder with climate change.

Approval history

HC was first registered by the Pesticides Board in 1988. There are six commercial products registered under the Agricultural Compounds and Veterinary Medicines Act (ACVM Act), including the well-

known product name, Hi-Cane.[1] HC was reassessed in 2006 by the Environmental Risk Management Agency (ERMA[2]).

2006 Reassessment

In 2006 the Environmental Risk Management Agency (ERMA) reassessed HC.[3] The reasons for the 2006 reassessment were the increase in use of HC, and a steady flow of reports of adverse effects to human health and the environment. The 2006 reassessment involved a variety of stakeholders including Zespri, New Zealand Kiwifruit Growers Incorporated (NZKGI), a number of Iwi, and Māori kiwifruit growers.

Based on the information presented before it, the Decision-making Committee decided that the kiwifruit industry was best placed to regulate itself, through measures required by NZKGI and Zespri. Accordingly, the only additional control imposed under the HSNO Act as a result of the reassessment was the requirement for a label statement warning against consuming alcohol before and after using HC (to prevent cyanamide flush). The Decision-making Committee considered that the standard controls prescribed in the Hazardous Substances Regulations, spray management provisions in regional plans, and Good Agricultural Practice (GAP), were adequate to manage the risks. The provisions in the regional plans and GAP included applicator qualification and bystander notification requirements.

The current reassessment

Reassessments are a two stage process. The first stage is to determine whether there are grounds for reassessment, and if so, then the second stage is the actual reassessment.

Grounds for reassessment[4]

Grounds for reassessment were established based on the availability of new information on the effects of HC. The new information included regulatory action by the European Food Safety Authority (EFSA) and the associated human health and environmental risk assessments. The EFSA review, other assessments published by regulatory authorities in the United States (US) and Europe, and risk assessments provided by stakeholders will be used to inform our assessment of risks posed by HC use in New Zealand. Grounds for reassessment were established in September 2019.[5]

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[1] See the appendix for details of other hydrogen cyanamide products.

[2] The predecessor organisation to the EPA.

[3] The 2006 reassessment documents can be found at the link below.

https://www.epa.govt.nz/database-search/hsno-application-register/view/HRC05001

[4] Grounds for reassessment must be established before a reassessment can proceed. See the link below for further information on the reassessment process.

https://www.epa.govt.nz/industry-areas/hazardous-substances/chemical-reassessment-programme/the-reassessment-process/

[5] The application and decision on the grounds for reassessment application can be found at the link below.

https://www.epa.govt.nz/database-search/hsno-application-register/view/APP203865

Available information

We made a call for information earlier this year (30 January 2020 – 29 May 2020), asking the public and other interested parties to provide us with any information that they had on HC. We received 12 responses to the call for information from a variety of stakeholders including industry groups, iwi, and individuals. Risk analyses, economic assessments, information on alternative bud-break agents, and general concerns were provided to us and will be used to inform our application for reassessment.

Other significant information that will inform our assessment includes:

- the EFSA review;
- information published by the US EPA; and
- risk assessments provided by stakeholders

Our review of these assessments will be in the context of HC use in New Zealand. This means we will form our position on risks to human health and the environment by undertaking an assessment that is appropriate and relevant to New Zealand's use of HC, relying on our own expertise supplemented by the information from stakeholders and overseas regulators.

The EFSA review found that risks to the health of operators and by-standers were of concern and exceed the acceptable exposure level in a number of scenarios, and is consequently not approved in Europe.

HC is currently undergoing re-registration review in the US.[6] In 2016, the US EPA issued an interim decision which applied additional restrictions to the use of HC which came into effect before the completion of the re-registration process. The risk mitigation measures that were applied included closed cab application, closed mixing and loading systems, restricted entry intervals, droplet size specification, and removal of hand-gun and aerial application methods.

Reassessment questions

The key questions for a reassessment are:

- What are the risks that are posed by the substance to human health and the environment?
- Are the risks able to be mitigated to an acceptable level?
- What measures need to be in place to mitigate risk to an acceptable level?
- Are any outstanding risks outweighed by the benefits offered by using the substance?

The above questions can be used to guide the reassessment through key issues.[7] These will be addressed in our application for reassessment.

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[6] Human health and environmental risk assessments were published by the US EPA in 2014.

[7] Please note that the decision-making criteria for reassessments are set out in the HSNO Act, and the Hazardous Substances and New Organisms (Methodology) Order 1998. The questions are provided to help understanding of the reassessment. A video on this is available at our website below.

https://www.epa.govt.nz/about-us/what-we-do/#Making_HSNO_decisions

Going forward

Once our risk assessment is complete, we'll arrange hui or virtual hui to discuss the risks from the perspective of Maori stakeholders. We value the insights and perspectives that you will be able to offer and encourage you to participate in hui if you are able. We'll use your input to develop a cultural impact assessment, and to inform our proposals for the outcome of the reassessment – these topics will be included in our application for reassessment.

Our application for reassessment will be made publicly available and open for submission. This is another opportunity for you to share your views on the reassessment of HC. You will also have the opportunity to talk to your submission in a hearing, where you can make a presentation to the Decision-making Committee.

All information submitted in the reassessment will provided to the Decision-making Committee in full. The Decision-making Committee will make their decision based on all the information put in front of it, and weigh up the risks and benefits presented by the substance.[8]

You can keep up-to-date with the HC reassessment with the link below. Additionally, we can keep you in the loop via email.

https://www.epa.govt.nz/public-consultations/in-progress/call-for-information-on-hydrogen-cyanamide-products/

If you have any questions, please email reassessments@epa.govt.nz, or contact Julian Jackson, Kaitohutohu Matua / Senior Advisor on 027 225 6151.

Toitū te marae a Tāne, toitū te marae a Tangaroa, toitū te tangata.

When the realms of Tāne and Tangaroa are sustained, the people will thrive.

Ngā mihi nui,

noho ora mai.

Nā,

Te Mana Rauhī Taiao
Environmental Protection Authority

[8] Some further information on the reassessments programme can be found below.

https://www.epa.govt.nz/industry-areas/hazardous-substances/chemical-reassessment-programme/the-reassessment-process/

https://www.epa.govt.nz/industry-areas/hazardous-substances/chemical-reassessment-programme/faqs/

Appendix: approval information

Summary	
Approval for active ingredient[9]	HSR002949
CAS number	420-04-2
Approval for formulation[10]	HRC000001
Products registered under the Agricultural Compounds and Veterinary Medicines Act 1997	**P007333** TREESTART 12-07-2005 Agrinova NZ Limited (trading as Grochem) **P007018** Hortcare Hi-break 29-07-2002 Grosafe Chemicals Ltd **P003566** HI-CANE 01-06-1988 Nufarm Limited **P007840** Synergy HC 05-05-2008 Agsin PTE Ltd **P005858** Gro-Chem HC50 29-11-2001 Agrinova New Zealand Ltd **P007190** CYAN 15-09-2004 Agrinova New Zealand Ltd
2006 reassessment application[11]	HSR05001
2019 grounds for reassessment application[12]	APP203865
2020 reassessment application[13]	APP203974

[9] https://www.epa.govt.nz/database-search/approved-hazardous-substances-with-controls/view/2415

[10] https://www.epa.govt.nz/database-search/approved-hazardous-substances-with-controls/view/6903

[11] https://www.epa.govt.nz/database-search/hsno-application-register/view/HRC05001

[12] https://www.epa.govt.nz/database-search/hsno-application-register/view/APP203865

[13] https://www.epa.govt.nz/public-consultations/in-progress/call-for-information-on-hydrogen-cyanamide-products/