

From: [REDACTED]
To: [Reassessments](#)
Subject: Hydrogen Cyanamide reassessment submission - Agrinova NZ Ltd
Date: Friday, 17 December 2021 9:43:40 am
Attachments: [Hydrogen Cyanamide Submission.pdf](#)
[Submission-form-for-HSNO-applications.docx](#)

To whom it may concern

Please find attached our submission on reassessment of Hydrogen Cyanamide

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Hydrogen Cyanamide Submission

Agrinova NZ Ltd

13 December, 2021

To whom it may concern

We oppose the EPA's proposal to revoke the approval of hydrogen cyanamide.

The economic impact on the Kiwifruit industry and the economy of regions such as the Bay of Plenty would be severe and unjustified.

Suitable alternatives are not available currently – nor does the proposal give sufficient time to allow the registration of any alternative if there was one.

Risks identified in the review can be overcome or greatly mitigated with controls.

Significant areas of concern identified lack data or research in the use context in New Zealand – insufficient time has been provided for the industry to address or research these questions raised and for a review of the conclusions reached in the EPA application to occur.

Economic Impact

The Sapere report for the EPA identifies an economic loss to the New Zealand economy over 10 years of \$1.9 to 2.5 Billion dollars over 10 years from revoking the registration. The benefits of hydrogen cyanamide are therefore clearly **high** rather than **medium-high** as the EPA have stated in their application.

To put this in context we are talking about the equivalent of the entire export earnings of all other fresh fruit industries from New Zealand, excluding Apple and Kiwifruit.

Alternative products have not demonstrated anywhere near equivalent efficacy and the higher value cost to the economy is therefore more likely.

Insufficient time to evaluate and register alternative chemistry is available in the proposal to revoke the registration.

Organic production methods do not give equivalent results and only suit sites with significant winter chilling, higher altitude orchards in the Bay of Plenty, not typically coastal sites or Northland.

Negative economic impact will be weighted most heavily against rural communities in eastern Bay of Plenty and Northland. These are areas of the country that are some of the most economically vulnerable.

Lack of access to Hydrogen Cyanamide will also place the Kiwifruit industry at a significant disadvantage to our southern hemisphere competitors in Chile.

Registration of alternatives

Although a worldwide search for alternatives has been conducted by suppliers, such as ourselves and the industry for many years. No suitable alternative that could be considered close to equivalent has been identified.

Hydrogen cyanamide being an older generic chemistry is not a high value product to any of the suppliers and an alternative would be attractive if available.

Kiwifruit, though of high economic value to the New Zealand economy, is a tiny crop globally with planted area of 216,000 ha total. This compares to 4.7 million ha of Apples (FAO, 2019).

It is not an attractive target for product development on a global scale, with a new agrichemical costing an estimated minimum of \$358 million dollars (Croplife 2016) and being a high risk business undertaking. The minimum cost of developing an alternative, when divided by the plant area of kiwifruit in New Zealand industry cost \$25k per hectare.

Due to the high risk and cost, few new agrichemicals are globally developed specifically for crops outside of the main commodities crops. As it was with Hydrogen Cyanamide, uses are found in minor crops only as an additional bonus to the developer's primary targets.

Even if a suitable alternative was available now, with certainty of efficacy, the phase out period proposed fails to provide sufficient time under New Zealand legislation to obtain agrichemical registration.

In the best-case scenario, with a suitable product with final formulation development complete and full toxicology packages in place it will take an absolute minimum of 5 years to obtain registration in New Zealand. Given that there are no known alternatives ready for trialing and registration, the proposed 5 year phaseout is not enough time.

Registration Timelines in NZ

Registration steps	Min time required – best case scenario
Trial permits – ACVM and EPA	6 Months
Field efficacy, Crop Safety, and residue studies	24 Months – two seasons, dormancy to harvest
Residue analysis, data assessment	6 Months
ACVM registrations	12 Months
EPA Approval	18-24 Months
Total time	5 years min

Notes: EPA submission can not be made until ACVM application is reviewed and accepted by MPI, otherwise data protection is lost. Timeline assumes no issues with field trials requiring repetition or delays in permitting or product import post permit approval, that results in season/ timing being missed. ACVM and EPA timelines are only estimates based on current experience and can often take longer depending on staffing and work load at time of submission.

Mitigation of Operator Risk

The implication of alternative loading and handling systems should not be discounted as has been done by the EPA as suitable mitigation of risk to applicators.

The majority of the application of Hydrogen cyanamide currently are made by professional agricultural contractors who cover large areas of Kiwifruit.

Alternative non-contact closed chemical loading systems are widely available internationally, commonly used in other agricultural industries and with suitable timeframe could be implemented in partnership between suppliers, industry and licensed applicators.

Use of spray cabs on tractors is already occurring and could be mandated for the chemistry, again with a phase in period. There is also no reason why additional appropriate PPE could not be worn in spray cabs to mitigate any risk of air leakage.

Controls could be placed on the chemistry to license applicators, mandate these measures, mitigating the risk and allowing continued safe use. Industry bodies, importers, distributors can work with Work Safe and EPA to achieve the desired outcomes.

Application rate

Focus of research in New Zealand has aimed to find suitable alternatives to Hydrogen cyanamide not on reducing use per hectare.

Identified by the EPA in this review was the potential to reduce risk by rate reduction. Significant rate research on Kiwifruit has not occurred in New Zealand since the products introduction in the late 1980s.

Advances in application technology, surfactants, growing systems and variety changes have the potential to allow for efficacy to be maintained at lower chemical rates per hectare.

Time is required to do this research to address the issue now raised by the EPA – the proposal to revoke the approvals, does not provide any time to address this option.

As with other jurisdictions internationally – a review period with targets for the industry to address these areas of concern with research to allow the on going use of the chemistry would be a more suitable approach.

Non-target Plants and Birds

Kiwifruit orchards at the time of application do not provide an attractive habitat for birds. Mitigation strategies such as mowing orchards to remove habitat and food, and bird scaring could be conducted if required. As noted by the EPA the potential effect of the chemistry is very short lived, so mitigation would not need to be significant if required at all.

Research is required to validate this risk and the need for mitigation. The proposal does not provide time or a review period to do conduct this.

Hydrogen cyanamide was initially developed as a fertilizer product for field crops. Phytotoxic impacts on plants are related to the contact dose and plant species. The use of shelter belts, natural or artificial, air induction nozzles and spray drift retardants are already standard practice in the Kiwifruit industry making likely impacts on none target plants outside of the orchard very low risk. The EPA's modelling does not appear to have accounted for the effects of these controls.

Again no time has been provided for the industry to study the potential issue nor other suitable controls to mitigate any risk.

Proposed controls for phase out period

The restriction on timing of application does not allow for the use on the Kiwifruit Red19 – application on this variety occurs, depending on seasonal chilling, is commonly in the first week of July.

Buffer zones proposed for Apples are too large to be practically workable and effectively will result in an immediate ban on the product's use with no phase out period. The modelling does not appear to take into account actual New Zealand orchard situations or the use of drift mitigation strategies, or shelter belts.

Conclusion comments

- No suitable alternatives are currently available.
- Economic costs of revoking the approval is very high and will weigh heavily on poorer rural communities.
- Mitigation strategies are available and can be implemented to address risks raised by EPA via controls.
- Research is required on potential non-target impacts in the New Zealand Kiwifruit orchard context as significant assumptions are made in the EPA assessment without any local data relevant to Kiwifruit orchards.
- As is done in other jurisdictions a review period to allow industry to address concerns raised is more appropriate than the proposed revocation of the approval.
- EPA and WorkSafe need to work with industry to determine actual risk, not as assumed risk, in the New Zealand context and develop suitable mitigation strategies over a review period not a phase out.

The significant economic impacts of the EPA's proposal, without suitable alternatives are too large to ignore. Particularly the negative impacts on communities in Northland and the eastern Bay of Plenty.

Submission form: For Hazardous Substances and New Organisms applications

Submission details

What application are you submitting on?: Hydrogen cyanamide

Organisation or submitter name: Agrinova NZ Ltd

Contact person (for organisations only): [REDACTED]

Postal address (optional): PO Box 50 080, Porirua

City/Region (optional): Porirua

Telephone number: 042370905

Email: [REDACTED]@grochem.com

Privacy statement

The EPA is collecting your personal information for the purpose of administering this application under the Hazardous Substances and New Organisms Act and will use the information you provide in this form to contact you in relation to the application. We will store your personal information securely. Your submission and name will be made publicly available on our website, but your personal contact details will not be disclosed. You have the right to access the personal information we hold about you and to ask for it to be corrected if it is wrong. If you would like to access your personal information, or have it corrected, please contact us at info@epa.govt.nz.

Confidential details

The Official Information Act 1982 (OIA) applies to all information held by the EPA (subject to section 55 of the Hazardous Substances and New Organisms Act 1996), and information may be released under the OIA unless there are grounds to withhold it. If you consider any part of your submission is confidential, please clearly label it as such and include the reasons why you think the information is confidential (eg, you may consider some information to be commercially sensitive). Further information on the OIA is at www.ombudsman.parliament.nz

Your submission

What is your view on what is proposed in the application form?

- I support the application
- I oppose the application
- I neither support or oppose the application

The reasons for making my submission are¹: *(further information can be supplied with your submission, see footnote).*

In support of the Kiwifruit industries need to retain access to the chemistry.

I wish for the EPA to make the following decision:

Retain the approval of the substance with increased controls

All submissions are taken into account by the decision makers. In addition, please indicate whether or not you also wish to speak at a hearing if one is held.

- I wish to be heard in support of my submission (this means that you can present your submission to the DMC at the hearing but does not allow you to introduce new information at the hearing)
- I do not wish to be heard in support of my submission (this means that you cannot speak at the hearing)

If neither box is ticked, it will be assumed you do not want to appear at a hearing.

¹ Further information can be supplied with your submission. If you are sending this submission electronically, please attach one or more files in any standard file format.

Send your completed form

You can send us the completed form by either post or email.

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