

He tono nā



Te Rūnanga o NGĀI TAHU



ki te

ENVIRONMENTAL PROTECTION AUTHORITY

e pā ana ki te

SUBMISSION ON APP204042

Importation for Release of Xivana

Date: 14/01/2022



Mihimihi

This mihimihi is taken from Te Whakatau Kaupapa

He tapa tu a ko i uta
He tapa tu a ko i tai
He tapa tu a Tane
He tapa tu a Tangaroa
He kaha ko i uta
He kaha ko i tai
He kaha a Tane
He kaha a Tangaroa
Hei tapa tu a Tane
Hei tapa tu a Tangaroa

The inland boundaries have been defined
The sea coast has been defined
Tane is responsible for the interior
Tangaroa is responsible for the sea
The inland areas are important
The coastal areas are important
Tane's influence is very strong
Tangaroa's influence is very strong
Tane stands for the land
Tangaroa stands for the sea

Ko o matou whakaaro ki te whenua
Nga roto, nga awa, te moana
Hei here i a tatou
O nga tuputupunga
o Te Aka O Tu Whenua
Hei whakatō whakatipu
I nga mahinga kai a te iwi

Our thoughts are to the land
To the lakes, the rivers and the sea
That bind us together
To preserve the well-being
Of the vines of Tu Whenua
That gave rise to
the people's food gathering places

Ko o mātou tūmanako
Te tatu o te mātauranga
O nga whakaaro
Hei here ai a Iwi, a mana
Ka whakapuakina
Ka marino ai te wa
O te whakaaro kotahi
Kia tau ki uta
Tenei waka tūmanako
Tenei waka aroha
Kia tau te Rangimarie

Our hopes are that
The doors of knowledge
And the doors of thought
That have held or people and our authority
captive, Will be opened
That the waters of the thoughts be calmed and
settled, as one thought
That this canoe of hope
That this canoe of love
May reach shore safely
And that peace may prevail

Ko Aoraki te maunga
Ko nga wai huka e rere ana
Ko nga waitapu
Ko Ngāi Tahu te Iwi
Tenei te tangi
O nga whakatupuranga
O Ngāi Tahu Whanui
Kia koutou, nga iwi
O nga marae maha
Kia ora tatou e tau nei

Aoraki is the mountain
The snow-fed rivers
Are the sacred streams
Ngai Tahu are the people
This is the call
Of the rising generations
Of the Ngai Tahu people
To you, the people
Of the many marae
Greetings to you all

Whakatauki (Proverb)

”Te Toto o te tangata, he kai; te oranga o te tangata e whenua”

While food provides the blood in our veins, our health is drawn from the land

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1 Tāhuhu Korero (Introduction)

Ngāi Tahu HSNO Kōmiti

The Te Rūnanga o Ngāi Tahu HSNO Committee is mandated by Te Rūnanga o Ngāi Tahu. The members of the committee are appointed by Te Rūnanga based on their knowledge and expertise in the areas of hazardous substances and new organisms.

Ngāi Tahu Values

All Te Runanga o Ngai Tahu activities are informed by the following values:

Whanaungatanga (family)

Respect, foster and maintain important relationships within the organisation, within the iwi and within the community.

Manaakitanga (looking after our people)

Respect each other, iwi members and all others in accordance with our tikanga (customs).

Tohungatanga (expertise)

Pursue knowledge and ideas that will strengthen and grow Ngāi Tahu and our community.

Kaitiakitanga (stewardship)

Work actively to protect the people, environment, knowledge, culture, language and resources important to Ngāi Tahu for future generations.

Tikanga (appropriate action)

Strive to ensure that Ngāi Tahu tikanga of is actioned and acknowledged in all of our outcomes.

Rangatiratanga (leadership)

Strive to maintain a high degree of personal integrity and ethical behaviour in all actions and decisions we undertake.

2 Statutory obligations to Ngāi Tahu

This response is made on behalf of Te Rūnanga o Ngāi Tahu (Te Rūnanga). Te Rūnanga is statutorily recognised as the representative tribal body of Ngāi Tahu Whānui and was established as a body corporate on 24th April 1996, under section 6 of Te Rūnanga o Ngāi Tahu Act 1996 (the Act). We note the following relevant provisions of our constitutional documents:

Section 3 of the Act: This Act binds the Crown and every person (including any body politic or corporate) whose rights are affected by any provisions of this Act.

Section 15(1) of the Act: Te Rūnanga o Ngāi Tahu shall be recognised for all purposes as the representative of Ngāi Tahu Whānui.

The Charter of Te Rūnanga o Ngāi Tahu (1993, as amended) constitutes Te Rūnanga as the kaitiaki of the tribal interest.

Te Rūnanga respectfully requests that this response is accorded the status and weight due to the tribal collective, Ngāi Tahu Whānui, currently comprising over 70,000 members registered in accordance with section 8 of the Act.

Under the HSNO Act, the environmental and cultural health and well-being of Māori, and Treaty of Waitangi outcomes and values, must be taken into account when making decisions about introducing and using hazardous substances or new organisms into New Zealand.

Section 5(b) of the Act provides (amongst other things) for the:

“Maintenance and enhancement of the capacity of people and communities to provide for their own economic, social and cultural well-being”.

Section 6(d) of the Act requires that the Environmental Protection Authority of New Zealand (EPA), when exercising functions under the Act, take into account: “The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, valued flora and fauna, and other taonga”.

Section 8 of the Act requires that all persons exercising functions under the Act take into account: “...the Principles of the Treaty of Waitangi” including the recognition of the special relationship between the Crown and tangata whenua.

3 Description of Application APP204042

This application is for the approval to import the fungicide Xivana into Aotearoa, New Zealand for use on tomato, potato, and onion crops.

Xivana contains the active ingredient Fluoxapiprolin, at a 20g/L concentration and a 1:1 racemic mixture of both its (R)- and (S)-enantiomers. It is from the piperidinyl-thiazole-isoxazolines chemical group which is an oxysterol binding protein homologue inhibitor and is active against Oomycete fungi and is closely related to the compound oxathiapiprolin.

At this stage, Fluoxapiprolin is not internationally approved, and its regulatory status is still pending. There are concerns that due to its medium soil mobility¹, persistence in the environment, bio accumulative potential and its non-biodegradability², taonga species could be affected. The active ingredient at higher concentrations triggers a classification for chronic aquatic ecotoxicity (Category 1).

Xivana has been found to have chronic aquatic ecotoxicity (Category 3) and is also found to have contact sensitisation (Category 1B) which is likely caused by other undisclosed ingredients. Fluoxapiprolin on its own is has acute inhalation toxicity as well as chronic aquatic ecotoxicity.

Studies have shown that in test subjects the active ingredient has produced stable Fluoxapiprolin-resistant mutants obtained by fungicide adaptations³. This is of significant concern to Ngāi Tahu given the increase of fungicide resistance worldwide and the interaction this has with antibiotic resistance⁴.

4 Position of Te Rūnanga o Ngāi Tahu on Application APP204042

Te Rūnanga o Ngāi Tahu holds concerns over an already widespread and extensive use of toxic agrichemicals in the horticultural and agricultural sectors. The burden that they and their breakdown products place on the terrestrial and aquatic environments is unacceptable. The benefits supporting the introduction of any new agrichemicals must therefore be clearly and explicitly spelt out. At the same time, the risks must be fully documented, and measures taken to mitigate their impact. We advocate for research into bioactive compounds and holistic management regimes which would reduce the need for environmentally toxic agrichemicals.

For these reasons, we oppose the importation for release of application number APP204042 Xivana. We wish to be heard in support of our application.

¹ McCall P.J., Laskowski D.A. *et al.* 1981

² Soo-Kloppel, 2020. Biodegradation of fluoxapiprolin

³ Jianqiang Miao, Chengcheng Li, Xiaofei Liu, et al, Apr 1, 2021, Activity and Resistance-Related Point Mutations in Target Protein PcORP1 of Fluoxapiprolin in *Phytophthora capsica*, Copyright © 2021, American Chemical Society

⁴ Zhang H, Chen S, Zhang Q, Long Z, Yu Y, Fang H. Fungicides enhanced the abundance of antibiotic resistance genes in greenhouse soil. *Environ Pollut.* 2020

5 Reasons for position on application APP204042

We approach this application under a Kaupapa Māori lens, that includes assessment of the effects of biocontrol method in six key areas. These include Te Ao Tūroa, Ōhanga, Hauora, He Tāngata, Kaitiakitanga, Te Tiriti o Waitangi.

Te Ao Tūroa (Environment)

Te Ao Tūroa refers to the natural world, encompassing taonga species, te mana o te wai (all water bodies; ie: sea, freshwater, wetlands, estuaries), ngahere (native forest), ecosystems and biodiversity.

Ngāi Tahu views water as a taonga and the continual degradation of our waterways through agricultural practise and pesticide contamination is of significant concern. Many of our taonga species are unique to Aotearoa and are under increasing pressure due to climate change, habitat loss and fragmentation. We are particularly concerned with the high ecotoxicity of Xivana and the impacts that will have on our taonga species. Furthermore, its persistence in the environment and non-biodegradability are also cause for concern.

A “take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area” approach has been proposed by the applicant, however, there is uncertainty if this includes the requirements of a 10-meter buffer zone of riparian planting to help minimise effects of spray drift to non-target plants and aquatic life.

This fungicide has been proven to produce mutations in the target Oomycete species creating resistance to the active ingredient. If this occurs in Aotearoa New Zealand, the potential for a “fungicide resistance strain” of Oomycete fungi could negatively impact the plant species it is set out to protect.

Ōhanga (Economy)

The Ngāi Tahu economy allows for self-determination of Papatipu Rūnanga in the realisation of their aspirations. Specifically, we refer to the Apicultural and tourism industry and recreational pursuits where Ngai Tahu and Papatipu Rūnanga have major share-holding investments and interests.

Potato, tomato & onion crops are financially viable crops for both domestic and export markets and are present in takiwā growing regions, however, due to the environmental effects (refer to Te Ao Tūroa section above) and the potential to cause fungicide resistance, Xivana may negatively impact these plants species resulting in a diminished economic outcome for the targeted crops.

Hauora (Public Health)

The health and wellbeing of Ngāi Tahu whanau is interconnected with the health of the environment, in that mahinga kai (traditional food), and rongoa (traditional medicine) sources need to be free of toxins. Taonga – tuku – iho are prized resources passed down through the generations which Ngā Papatipu Runanga in particular, continue to access and utilise for mahinga kai, medicinal purposes, for producing woven products and other uses.

Eczema is a major health issue ki roto ite te Ao Māori, Xivana is a contact sensitiser that may cause a dermatitis like reaction when exposed to. This health affect can be attributed to one of Xivana’s non active ingredient components and should be removed or substituted as per the Health and Safety at Work Acts Hierarchy of Controls. Its active ingredient also has acute toxicity associated with it via the inhalation route of exposure and due to its proposed mode of application will likely have negative impacts on human health and could cause harm to operators, even with appropriate PPE. This will also have the potential to effect bystanders from spray drift.

He Tāngata (People and Communities)

The broader social influences on a community must also be considered which might include; recreational spaces, employment, housing, land usage, and other areas. The ability for Ngai Tahu whanau to access these areas must also be considered.

Kaitiakitanga (Guardianship)

Kāitiakitanga is about our responsibility as Te Rūnanga o Ngāi Tahu, both tribally and in our communities, to assess the cultural acceptability of a proposed activity. We are a part of the landscape and therefore have a responsibility to ensure its sustenance for this generation and for those to come.

The relationship between kaitiaki and taonga can be layered and complex. Different kaitiaki have different degrees of responsibility for taonga such as the kaitiaki of plants and mātauranga associated with them. The kaitiaki relationship can relate to the sustainability of the taonga itself, or it its components within the taonga that make it up, or to species, biota and environment surrounding the taonga. One of the key principles of kaitiakitanga is “mō tātou, ā, mō kā uri ā muri ake nei” – for us and our children after us.

Te Tiriti o Waitangi (Treaty Principles)

The Crown has an obligation to honour the Waitangi Treaty principles of Partnership, Participation and Protection.

The Ngai Tahu Settlement Act explicitly lists flora and fauna that are considered taonga to the iwi. This is not an intended to be an exhaustive list, as any organism sourced within Ngai Tahu takiwā may be considered taonga, and at a minimum require some level of consultation.

Consultation with Treaty partner TRONT/ Ngā Papatipu rūnanga in relation to their taonga and the proposed application requires contact in the earliest stages of the application process through to its submission and, if approved, mutual agreement on conditions and ongoing monitoring mechanisms to ensure beneficial outcomes are achieved.

6 Conclusions

Xivana has the potential for significant negative impacts on human and environmental health. Recent studies have also shown the ability for targeted fungi to mutate and become resistant to the product. Therefore, we propose the approval for importation for release of Xivana be declined.

7 Recommendation

We recommend that the approval for Xivana be declined.

To reference the Hierarchy of Controls, again we need to see what the most effective way of minimising risk to hazards are. In this case it will be to eliminate the substance by not importing.

Substitution is the next effective way of minimising risk. Its non-active ingredient components could be substituted for something non-hazardous removing the contact sensitisation health hazard.