

SUBMISSION ON

Helping nature and people thrive - Exploring a biodiversity credit system

03 November 2023

To: Ministry for the Environment and Department of Conservation

Name of Submitter: Horticulture New Zealand

Supported by: NZ Asparagus Council, NZ Kiwifruit Growers Inc., Potatoes NZ, Process Vegetables NZ, Vegetables NZ Inc.

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Our submission

Horticulture New Zealand (HortNZ) thanks the Ministry for the Environment and Department of Conservation for the opportunity to submit on "Helping nature and people thrive - Exploring a biodiversity credit system for Aotearoa New Zealand" and welcomes any opportunity to continue to work with the Ministry for the Environment and Department of Conservation and to discuss our submission.

The details of HortNZ's submission and decisions we are seeking are set out in our submission below.

HortNZ's Role

Background to HortNZ

HortNZ represents the interests of approximately 4,200 commercial fruit and vegetable growers in New Zealand who grow around 100 different fruit, and vegetables. The horticultural sector provides over 40,000 jobs.

There is approximately, 80,000 hectares of land in New Zealand producing fruit and vegetables for domestic consumers and supplying our global trading partners with high quality food.

It is not just the direct economic benefits associated with horticultural production that are important. Horticulture production provides a platform for long term prosperity for communities, supports the growth of knowledge-intensive agri-tech and suppliers along the supply chain; and plays a key role in helping to achieve New Zealand's climate change objectives.

The horticulture sector plays an important role in food security for New Zealanders. Over 80% of vegetables grown are for the domestic market and many varieties of fruits are grown to serve the domestic market.

HortNZ's purpose is to create an enduring environment where growers prosper. This is done through enabling, promoting and advocating for growers in New Zealand.



Executive Summary

What should count as biodiversity

Biodiversity eligible for credits should include:

- Creating an environment with native host plants and the associated ecosystem to support:
 - Arthropod biodiversity, particularly insects, mites and spiders; and
 - Other invertebrate biodiversity
- Soil health improvements
- Inter- and underplanting on horticultural paddocks and orchards
- Native border plantings and shelter belts
- Wetland restoration and riparian plantings
- Fish passage remediation

Which have benefits for:

- Water quality: reducing nutrient losses to water, reducing erosion
- Soil health: increasing soil organic carbon, managing soil moisture, reducing soil compaction, managing weeds, introducing nitrogen-fixing plants
- Social and economic wellbeing: improving the sustainability of businesses that grow healthy, low-emissions food, saving growers money by reducing fertiliser needs, cultural and educational co-benefits

HortNZ recommends that:

- Projects as small as half a hectare should be within scope for credits.
- Credits for projects across multiple land users could be sold as bundles.
- Credits will be certified against an internationally recognised standard in an assurance process aligned with the Joint Accreditation System of Australia and New Zealand (JASANZ).

Activity-based system design

If biodiversity credits are meant to finance the human labour and technology needed to make biodiversity improvements, funding should occur before the project but with strict monitoring and reporting to ensure follow-through. Funding should cover the effort, not the outcome. Pricing the outcome may create a perverse value system of pricing nature - which then allows cost-benefit analysis of nature based in rote economic values. Pricing the human cost (in terms of labour and technology) incentivises the work to make improvements instead. An activity-based system is also faster to set up, giving people the financing they need to get projects rolling sooner. This approach still allows for monitoring and reporting during the time period the credit covers, which could be prerequisites for accessing future credits.

Questions for system design consistency with national policy

- Can local authorities meet their requirement from the National Policy Statement for Indigenous Biodiversity to incentivise restoration in priority areas through the biodiversity credit system?
- How can the biodiversity credit system be designed such that it supports the objectives of the National Policy Statement for Highly Productive Land?

Submission

1. Biodiversity benefits for horticulture

The co-benefits for biodiversity on horticultural land are numerous – that’s why our industry is investing in nature through riparian plantings, restored wetlands, diverse inter- and under-plantings, green buffers and native shelterbelts. The “why” for us is simple. More biodiversity can help:

- Manage pollution and run-off in our waterways to improve water quality,
- Protect from erosion and flooding,
- Bolster soil health, and
- Control insect pests.¹

At the same time, these projects provide shelter and food for beneficial insects and provide landing places for migrating animals. Many existing best horticultural practices like growing hedges, also known as shelterbelts, to ease the impact of high winds and prevent spray drift double with biodiversity benefits when native plants are included.

Horticulture and conservation efforts have shared biosecurity concerns. The pests, weeds and diseases that threaten native plants often threaten horticulture as well. Growers are on board as partners in combatting these invasive species and pathogens to protect our taonga species, our domestic food supply and our valued export industries.

2. Existing or planned projects in horticulture

Horticultural businesses across New Zealand and abroad are harnessing the power of nature to increase their positive impact on the environment, bolster crop yields and improve fruit and vegetable quality. Whether these projects fall under the umbrella of regenerative horticulture, organic practice, or just good agricultural practice, biodiversity is blooming in the sector. The following case studies highlight the types of projects that could be eligible for biodiversity credits to incentivise positive outcomes for nature alongside the production of healthy, low-emissions food.

2.1. Integrated Pest Management

Integrated pest management (IPM) is an effective, economical, and ecologically compatible approach to controlling pests.² IPM involves the employment of a combination of control methods targeted at key life stages of insects and diseases.

¹ Wallacea Trust working group. “Methodology for Awarding Biodiversity Credits”. May 2023. Accessed online [Methodology for awarding biodiversity credits \(wallaceatrust.org\)](https://www.wallaceatrust.org/methodology-for-awarding-biodiversity-credits)

² Robert K D Peterson, Leon G Higley, Larry P Pedigo, Whatever Happened to IPM?, American Entomologist, Volume 64, Issue 3, Fall 2018, Pages 146-150, <https://doi.org/10.1093/ae/tmy049>

Chemical control is the use of soft, targeted chemistry to disrupt the lifecycle of key orchard pests and diseases.

Biological control is the practice of encouraging beneficial predatory insects to manage pest populations. Inputs utilised on-orchard are targeted to key pest and disease limiting disruption to beneficial populations. In some cases, habitat plantings like floral strips, multi-species swards or refuges are used to bolster beneficial populations.

Cultural control involves growth management practices such as pruning to reduce the amount of host available for pests at key times of the season. For example, orchards use shoot management to reduce apple leaf curling midge (ALCM) populations.

IPM offers a comprehensive and balanced approach to pest management aiming to reduce the negative effects of pests on crops while promoting sustainability of the wider environment.

Case Study: Pukekohe Demonstration Farm

In one project at the Pukekohe Demonstration Farm, rows of white, blue or yellow flowers span the width of the vegetable paddock, adding colour between rows of pumpkins and barley. In another, small hedges of native plants burst into bloom next to waterways, beyond the paddocks. These mixed plantings provide shelter, nectar, alternative food and pollen for beneficial insects. Those insects, in turn, pollinate the crops and control harmful invasive pests like caterpillars and aphids.

These trials are part of “Biodiverse planting on vegetable farms”, a five-year Vegetables NZ project funded through A Lighter Touch, a partnership between the Ministry for Primary Industry and the horticulture, wine and arable sectors to explore ecological solutions for crop protection.

These are prime examples of projects that bring benefits both for biodiversity and primary production. While the first one is made up of annual exotic flowers, meaning they will have to be replanted each year, growers would incorporate native species if they could attract the same beneficial insects. The second project is already made up of perennial natives, which means those plants will live for many years, providing a habitat for insects, a stopping place for migratory birds, and a home to all of the other species that follow along. Hedges on the side of properties, especially next to waterways, are likely to have longevity because they won't ever be in the way of planting crops. Most of the beneficial insects these projects attract are native or self-established in New Zealand, including parasitic wasps, lacewings, hoverflies and spiders.

Monitoring and evaluating success:

The success of these plantings from a biodiversity perspective can be measured both in quantity of native species and reduced environmental harm from insecticide applications. Scientists can observe which insects are present on these plantings and track plant growth with green leaf area and biomass. Growers can also provide evidence of reduced insecticide use through their year-on-year Good Agricultural Practice (GAP) reporting.

While these projects are in their early stages, the inter-planting trial avoided four to five insecticide applications after crop-monitoring showed the crops were doing fine with the support of the beneficial insects. This is promising for the success of these trials.

Learn more: [A Lighter Touch, "Biodiverse planting on vegetable farms"](https://a-lighter-touch.co.nz/a-blooming-approach-to-pest-management/)



Image source: <https://a-lighter-touch.co.nz/a-blooming-approach-to-pest-management/>

Summerfruit (stone fruit like cherries, nectarines, and plums), pipfruit (apples and pears) and citrus growers are all looking toward understory planting in orchards to attract beneficial insects and improve biological control for key pests. Currently, orchards often manage the understory with a permanent grass sward, which provides a surface for tractor passes, and a bare strip under the trees which is kept clear from weeds. This approach is aligned with IPM because of its minimal impact on the environment. It is also cost-effective and prevents weeds from competing with fruit trees for water and nutrients.³

Growers are looking into diverse understory plantings as an alternative practice which reduces the need for herbicides and insecticides over the long term. Groundcovers outcompete invasive weeds and attract beneficial insects to manage pests. These plantings attract biodiversity, including native bees, bumblebees and butterflies. Understory planting also reduces the carbon footprint of an orchard because the growers need fewer tractor passes to manage weeds and soil health if the understory plantings are doing the work instead.⁴ Using perennial or self-seeding plants further reduces the need for human maintenance because they'll keep growing year on year or regenerate on their own.

Cost is a major barrier to entry since current management practices are cheaper and easier to implement. A biodiversity credit system that incentivises understory plantings would accelerate adoption. While growers would be more than happy to use native species if they can attract the right insects, funding – helped by a biodiversity credit system – would support this research. Funding would see a surge in the number of trials on orchards to kickstart a widespread shift in management practice that may take 10-20 years.

³ Apples and Pears NZ

⁴ Summerfruit NZ. "Planting an understory in stone fruit orchards: What have we done so far". 2023. Presentation.

Case Study: Orchard Understory Planting

Understory planting is the practice of growing diverse plants beside or beneath orchard trees to attract beneficial insects. One citrus grower who implemented understory plantings told RNZ, "We're planting different varieties of plants down the rows and under the trees. In fact, in the seedless lemon block yesterday I was just putting in our new grass mix which also includes about six different species of grasses, lucerne, clover, marigolds, some chicory and some plantain, so far more diverse to attract a lot more beneficial insects. It's better for the soil as well, because it's tap-rooting down reducing compaction and also fixing some nitrogen with those legumes as well."⁵

The industry is conducting research to support these types of projects. A Lighter Touch funded biodiversity planting trials in two citrus orchards between May 2021 - June 2023 to understand the benefits for perennial crops. The project developed a "toolkit" of resources for growers looking to apply understory planting, including checklists to get started and scientific backing for the new management practice.

Learn more: [Biodiverse planting in perennial crops - A Lighter Touch \(a-lighter-touch.co.nz\)](https://a-lighter-touch.co.nz)



Image source: <https://a-lighter-touch.co.nz/wp-content/uploads/2022/06/ALT-Part-1-Establishment-WEB-SP.pdf> (p. 4)

⁵ [Prickly pears: finger limes pop with zesty flavour | RNZ](#) Accessed online 19/09/23.

Table 1 summarises the benefits of intercropping and understory planting.

Table 1: Positive impacts of inter-cropping and understory planting ^{6,7}	
Insect biodiversity	Provide shelter and food, including nectar and pollen, to beneficial insects
Water quality	Reduces nutrient losses to water Reduces erosion
Soil health	Increases soil organic carbon Manages soil moisture Reduces soil compaction Manages weeds
Reduces costs	Reduces nutrient losses allowing growers to save fertiliser Biological nitrogen fixation reduces fertiliser needs
Profitability	Increase crop yields Improve crop quality Reduce pest and disease pressure

2.2. Shelter Belts and Gullies

Shelter belts are used on the boundaries of horticultural properties to protect crops and trees from wind and rain. Some shelter belts are made up of mixed plantings, including natives. These plantings should be eligible for credits. Corners or gullies on horticultural properties are also ideal candidates for diverse plantings. The image below shows a mixed, indigenous shelter belt in Ōpōtiki.



Image courtesy of New Zealand Kiwifruit Growers, Inc. (NZKGI)

⁶ Merfield, Charles N. "An introduction to the principles of service (cover) crops and intercropping". July 2023. The BHU Future Farming Centre. Permanent Agriculture and Horticultural Science and Extension. Accessed online [The BHU Future Farming Centre - Information - Bulletin - 2023 V3 - An introduction to the principles of service \(cover\) crops and intercropping](#). (p. 4)

⁷ A Lighter Touch. "Agroecological approaches to insect pest control in perennial crop systems: Establishing floral resources for improved biological control". June 15, 2022. Accessed online [Establishing floral resources for improved biological control. - A Lighter Touch \(a-lighter-touch.co.nz\)](#) (p. 3)

For example, kiwifruit orchards in Kerikeri were built on retired dairy farms. Some of the land had steep gullies too steep for planting, so growers let them regenerate into native bush. These areas have potential as key linkages in the translocation of threatened species, but many land users haven't had the resources to see which species live there.

Case Study: Bruntwood Farms Waterway and Indigenous Planting

Over the last eight years, Bruntwood Farms have removed approximately 6 ha of gorse, woolly nightshade and blackberry from their kiwifruit orcharding land and planted natives in the Plummers Point Road area, near the Tauranga harbour.

They mulched with a digger, let the weeds regrow, sprayed them out, covered the mulched area with wood chips for weed suppression and then planted the natives in the months of August and September.

There is a stream on the property that runs into large ponds that discharge to the Tauranga Harbour. Bruntwood Farms intend to initiate water quality monitoring next year. They have invested approximately \$300,000 so far in the projects.



Case study and image courtesy of New Zealand Kiwifruit Growers, Inc. (NZKGI)

2.3. Water Quality and Fish Passage

Case Study: LeaderBrand Regenerative Horticulture Project

LeaderBrand, one of New Zealand's largest vegetable growers, are participating in regenerative horticulture trials on their Gisborne farms. In addition to research on the effects of composts and cover crops on soil health and crop performance, they are planning to restore 5 ha of historic wetlands. The wetlands will filter runoff from the vegetable paddocks before it reaches the river. LeaderBrand Sustainability Manager Stuart Davis says that planting decisions will be based on research that has identified

the known interactions of native wetland plants with crop pests and their natural enemies. These beneficial insects will find plenty of habitat with about ten thousand native plants planned per hectare. The wetlands will both improve water quality and provide some flood attenuation.

The project will be co-designed with local iwi and many of the plantings will be supplied by an iwi-owned native plant nursery in the area. LeaderBrand are taking special care with the cultural heritage of the area, restoring a nearby archaeological site and collaborating with iwi on naming the sites and designing signage. Students in the area will also be welcomed to explore the new wetlands on classroom field trips once walkways and informational materials are in place. This project combines ecosystem restoration and biodiversity cultivation with cultural and community well-being benefits.

Dr. Davis estimates that maintaining the wetlands will cost over \$1000 NZD per year. Biodiversity credits could help justify the upkeep.

LeaderBrand have also worked with their local council and Māori farming interests to develop fish passage remediation structures, which allow native migrating fish to pass over culverts and other obstacles. Further structures are planned as part of the upcoming wetland project. These projects could also be eligible for credits.

Learn more: [Launch of regenerative project investigates impacts of growing - LeaderBrand](#)

2.4. The industry is open to biodiversity credits

The early adopters are already putting biodiversity projects into action. Their success will inspire the fast followers, but an added incentive of biodiversity credits will help justify the financial cost.

3. What counts for a credit?

HortNZ strongly supports the development of a biodiversity credit system. We want to ensure that the types of projects described in this submission are eligible for credits given their myriad benefits for soil health, insect and native plant biodiversity, water quality, and healthy food supply. As such, we recommend that the following types of projects and biodiversity are included within the criteria for credits:

- Creating an environment with native host plants and the associated ecosystem to support
 - Arthropod biodiversity, particularly insects, mites and spiders (e.g. wētā, pūriri moth, native bees and koura); and
 - Other invertebrate biodiversity (e.g. kauri snail, peripatus and powelliphanta)
- Soil health improvements through adding soil carbon and reducing compaction

- Inter- and underplanting on horticultural paddocks and orchards
- Native border plantings and shelter belts
- Wetland restoration
- Fish passage structures

Our industry has especially strong potential to support native beneficial insect populations. According to Plant and Food Research ecologist Dr. David Pattemore, “Insects play a variety of critical roles in healthy ecosystems – they can act as pollinators of crops to produce seeds and fruit, they can help to control pest insects, and help in the decomposition and recycling of nutrients”.⁸ For these reasons, insects and other invertebrate biodiversity should be eligible for credits.

Projects on horticultural operations will often be at a small scale. LeaderBrand’s 5 ha wetlands or Bruntwood’s 6 ha of plantings are about the largest size of what is feasible for our sector. Early adopters and innovators should be rewarded for the biodiversity work, even on a small scale, to inspire the followers. The collective efforts of biodiversity projects in urban areas and other smaller rural landowners will add up to great progress, but those projects can only be rewarded if the scale of credits is right. Collective action could be rewarded under bundled activities – for example, all of the native bush on kiwifruit orchards could be measured and rewarded by Zespri.

HortNZ recommends that:

- Projects as small as half a hectare should be within scope for credits.
- Credits for projects across multiple land users could be sold as bundles.

4. Interactions with national policy direction

4.1. National Policy Statement for Indigenous Biodiversity

Horticulture New Zealand believes a voluntary biodiversity credit system to incentivise restoration and conservation projects is an important counterbalance to the National Policy Statement for Indigenous Biodiversity (NPS-IB).

Under the NPS-IB, local authorities must consider incentives for restoration in priority areas to recognise the opportunity cost of maintaining biodiversity (Clause 3.21.3). In the case of horticultural land, this is the opportunity cost of not growing more fruits or vegetables on that land. A question to consider is whether this requirement on local authorities can be met through the biodiversity credit system.

4.2. National Policy Statement for Highly Productive Land

The National Policy Statement for Highly Productive Land protects LUC I-III soils – those most suited to food production – from inappropriate subdivision, use and development.

⁸ Plant & Food Research. “Healthy land for healthy food”. 4 July 2023. Accessed online [Healthy land for healthy food · Plant & Food Research \(plantandfood.com\)](https://www.plantandfood.com/healthy-land-for-healthy-food)

While the NPS-HPL does not preclude landowners from using highly productive land for conservation efforts, an outcome where elite soils were used in large quantities for biodiversity plantings at the expense of domestic food supply would be a perverse outcome.

The credit system, in part, is meant to prevent outcomes like the proliferation of monoculture plantation forestry that resulted from unbalanced incentives in the Emissions Trading Scheme. We caution system designers to consider the protection of highly productive land from the outset of their work.

4.3. Questions for system design consistency with national policy

- Can local authorities meet their NPS-IB requirement to incentivise restoration in priority areas through the biodiversity credit system?
- How can the biodiversity credit system be designed such that it supports the objectives of the NPS-HPL?

5. Learning from existing systems

Privately-run biodiversity credit systems already exist within New Zealand, and the government should turn to these examples for lessons learned. The Toha Network has already mobilized over \$1.5 million NZD in credits for regenerative and organic agriculture practices, over \$68 thousand for East Coast climate action, and over \$15 thousand for climate innovation. They claim to have mobilised \$15 million in climate contributions to date from 63 donors. This funding was not all for biodiversity, however. For instance, out of its \$68 thousand overall, East Coast Exchange mobilised \$19,720 for native reforestation and biodiversity.⁹

Toha's public-facing numbers suggest that there is a market for non-carbon climate credits, but a full market research report is needed from the government if they continue to pursue a publicly administered system.

5.1. Engaging with New Zealand primary production

The Toha credit network is already incentivising primary producers to engage in climate action through biodiversity projects and beyond. Their credit systems provide excellent case studies designed to a New Zealand-context with farmers and growers as key participants.

Calm the Farm, one of their member organisations, provides grant funding or low-interest impact loans for regenerative farming practices¹⁰. Calm the Farm has a data co-op where farmers who leave money invested in their projects in the system have voting rights. The addresses data privacy concerns while giving participants more agency over system design and outcomes.

⁹ [East Coast Exchange \(toha.nz\)](https://toha.nz)

¹⁰ [HOW IT WORKS \(calmthefarm.nz\)](https://calmthefarm.nz)

Discussion Questions

Our responses to the specific consultation questions can be found below.

- Q. 1** Do you support the need for a biodiversity credit system (BCS) for New Zealand?
Please give your reasons.

AGREE

HortNZ sees biodiversity credits as an opportunity to reward and incentivise nature-positive activities on privately-owned land.

- Q. 2** Below are two options for using biodiversity credits. Which do you agree with?
- (a) Credits should only be used to recognise positive actions to support biodiversity.
 - (b) Credits should be used to recognise positive action to support biodiversity, and actions that avoid decreases in biodiversity.
- Please answer (a) or (b) and give your reasons.

(B)

HortNZ sees value in rewarding both positive action and action that avoids decreases in biodiversity. For instance, growers moving to use fewer insecticides and herbicides because they've started using biological control agents (beneficial insects and groundcovers) are avoiding decreases in biodiversity alongside paddocks. We think that these activities would also be eligible for credits recognising positive actions to support biodiversity, however.

- Q. 3** Which scope do you prefer for a biodiversity credit system?
- (a) Focus on terrestrial (land) environments.
 - (b) Extend from (a) to freshwater and estuaries (eg, wetland, estuarine restoration).
 - (c) Extend from (a) and (b) to coastal marine environments (eg, seagrass restoration).
- Please answer (a) or (b) or (c) and give your reasons

NO PREFERENCE

HortNZ does not have a strong opinion on where freshwater and marine environments should be included, but biodiversity in terrestrial environments should include soil biodiversity and invertebrates, as well as shelter belts, interplanting and riparian planting.

- Q. 4** Which scope do you prefer for land-based biodiversity credits?
- (a) Cover all land types, including both public and private land including whenua Māori.

(b) Be limited to certain categories of land, for example, private land (including whenua Māori).

Please answer (a) or (b) and give your reasons.

(A)

Including all land types in the scope for land-based biodiversity credits will provide opportunities for like-minded neighbours to work together on larger, and more ecologically valuable projects than might otherwise occur. Nature is indifferent to property boundaries, and neighbours can work together to create biodiversity corridors that allow migration of taonga species.

Q. 5 Which approach do you prefer for a biodiversity credit system?

(a) Based primarily on outcome.

(b) Based primarily on activities.

(c) Based primarily on projects.

Please answer approach (a) or (b) or (c) and give your reasons.

(B) ACTIVITIES

If biodiversity credits are meant to finance the human labour and technology needed to make biodiversity improvements¹¹, funding should occur before the project but with strict monitoring and follow-through. Funding should also cover the effort, not the outcome. Pricing the outcome may create a perverse value system of pricing nature – which then allows cost-benefit analysis of nature based in rote economic values. Pricing the human cost (in terms of labour and technology) instead incentivises the work to make improvements instead. An activity-based system is also faster to set up, giving people the financing they need to get projects rolling sooner. This approach still allows for monitoring and reporting during the time period the credit covers, which could be prerequisites for accessing future credits.

Q. 6 Should there also be a requirement for the project or activity to apply for a specified period to generate credits?

Please answer Yes/No and give your reasons.

YES

HortNZ favours a system which pays land users credits to maintain their biodiversity project for a year. This is similar to the Ekos “Sustainable Development Units Programme”, launched 2022, which covers short term biodiversity activities like a year of pest management, since longer-scale outcomes would be less credible and harder to measure.¹² This will allow for continuous payment to keep the project running and provide natural checkpoints to monitor progress.

¹¹ Biodiversity Credit Alliance. [Home | Biodiversity Credit Alliance](#)

¹² World Economic Forum. “Biodiversity Credits: Unlocking Financial Markets for Nature-Positive Outcomes”. September 2022. Accessed online [WEF Biodiversity Credit Market 2022.pdf \(weforum.org\) \(p. 6\)](#)

Q. 7 Should biodiversity credits be awarded for increasing legal protection of areas of indigenous biodiversity (eg, QEII National Trust Act 1977 covenants, Conservation Act 1987 covenants or Ngā Whenua Rāhui kawenata)?
Please answer Yes/No and give your reasons.

YES

We see no reason why this shouldn't be an option, but covenants should not a requirement to obtain credits. That approach would be overly restrictive.

Q. 8 Should biodiversity credits be able to be used to offset development impacts as part of resource management processes, provided they meet the requirements of both the BCS system and regulatory requirements?

NO

Offsets within the resource management processes are meant to prevent degradation or loss of biodiversity rather than incentivise new biodiversity-positive actions. We would not want to create a perverse incentive for developers to design their projects such that they are both required to obtain an offset and eligible for financial reward for doing so.

Q. 9 Do you think a biodiversity credit system will attract investment to support indigenous biodiversity in New Zealand? Please give your reasons.

UNSURE

Market research is required to understand the demand for biodiversity credits. We do believe there is at least some demand given international biodiversity targets, the rise of corporate responsibility requirements, and the fundraising of existing biodiversity credit systems like the Toha Network in New Zealand.¹³

Q. 10 What do you consider the most important outcomes a New Zealand biodiversity credit system should aim for?

ATTRACTING INVESTMENT

We support a transparent, credible system that is set up based on market research. Understanding consumer preferences needs to come before system design, or else the credits will not attract investment at-scale. Biodiversity credits should be able to help businesses measure and meet their environmental, social and governance metrics.

ENSURING ACCESSIBLE PARTICIPATION

We support a wide range and scale of biodiversity solutions and seek recognition that biodiversity can coexist alongside primary production. The continuous stream of regulation from central government has left many growers feeling that their deep care

¹³ [The Toha Network](#)

for their land and water is not just ignored, but penalised. A biodiversity credit system is a rare opportunity to bridge some of that social division by rewarding great ideas and exemplary environmental stewardship.

To ensure wide-reaching access to this biodiversity credit programme, the technical work to sign up and be involved should be reasonable. Most horticultural businesses are too small to have dedicated compliance staff, and growers are time poor. If the paperwork to apply for credits is too complex, the system will exclude folks who are dedicated to conservation on their land but need financial support to realise biodiversity projects.

Q. 11 What are the main activities or outcomes that a biodiversity credit system for New Zealand should support?

BIODIVERSITY ON HORTICULTURAL LAND

A biodiversity credit system for New Zealand should include the following types of projects that both possible and beneficial for our fruit and vegetable growers:

- Creating an environment with native host plants and the associated ecosystem to support
 - Arthropod biodiversity, particularly insects, mites and spiders (e.g. wētā, pūriri moth, native bees and koura); and
 - Other invertebrate biodiversity (e.g. kauri snail, peripatus and powelliphanta)
- Soil health improvements
- Inter- and underplanting on horticultural paddocks and orchards
- Native border plantings and shelter belts
- Wetland restoration and riparian plantings
- Fish passage remediation

Biodiversity should extend to beneficial exotic species, like bumblebees which were introduced to New Zealand but play a crucial role as pollinators.

SOCIAL AND CULTURAL BENEFITS

Social and cultural well-being co-benefits to human health and wellbeing, partnership with iwi/hapū, and educational and recreational access should be rewarded. This could include making the natural landscape accessible as an outdoor classroom or for public walking access.

Q. 12 Of the following principles, which do you consider should be the top four to underpin a New Zealand biodiversity credit system?

Principle 1 – Permanent or long-term (eg, 25-year) impact

Principle 2 – Transparent and verifiable claims

Principle 3 – Robust, with measures to prevent abuse of the system

Principle 4 – Reward nature-positive additional activities (additional to business as usual)

Principle 5 – Complement domestic and international action

Principle 6 – No double-counting, and clear rules about the claims that investors can make

Principle 7 – Maximise positive impact on biodiversity

PRINCIPLE 4

The very purpose of a biodiversity credit system should be to incentivise nature-positive activities. Rewarding environmentally-friendly actions in line with regenerative and organic agriculture or lighter-touch crop protection would incentivise upkeep of those practices.

PRINCIPLES 2 AND 3

The system should be credible and evidence-based to meet the demands of consumers and ensure a high enough price that participation is worth it for land users.

PRINCIPLE 6

Preventing double-counting and restricting investor claims will mitigate corporate greenwashing.

WHY WE DISAGREE WITH REQUIRING PERMANENT IMPACT

A credit system that only rewarded “permanent” protection would fail to reward innovation, trials and smaller-scale projects that add up to a meaningful suite of work. On private land, there is always a chance that the land will change ownership or tenancy, and future users may not upkeep the biodiversity work. Guaranteeing otherwise would require legally binding commitments that would deter many potential market participants. Paying for activities over a limited timeframe mitigates these risks.

Q. 13 Have we missed any other important principles? Please list and provide your reasons.

NOT AT THIS TIME

Q. 14 What assurance would you need to participate in a market, either as a landholder looking after biodiversity or as a potential purchaser of a biodiversity credit?

ALIGNMENT WITH INTERNATIONAL STANDARDS

Deriving market value for biodiversity credits will be contingent on internationally recognised assurance systems that certify the biodiversity against an agreed

standard. In our view, it is essential that the assurance process is aligned with the Joint Accreditation System of Australia and New Zealand (JASANZ) process.

There are some existing international standards that could form the basis of a credible system. The most advanced that we are aware of is the work underway by ISEAL.¹⁴

The administrative requirements of registering for a credit cannot be so burdensome that they outweigh the value of the credit for the landholder. For instance, many growers already report on biodiversity through their Good Agricultural Practice (GAP) scheme, whether that is through Global GAP or the NZ GAP Global GAP equivalent standard. Reporting biodiversity for the credit system could be in a complementary format to existing assurance schemes, so that growers don't have to gather the same information twice in two different formats. NZ GAP could deliver an add-on standard aligned with an international standard like ISEAL to provide a vehicle for delivering credible assurance of biodiversity to the market.

We have been disappointed by the ad hoc approach that government initiatives have taken to assurance, with duplication and misalignment creating additional administration but less credibility. The government should learn from the misalignment in the process used for Freshwater Farm plans, which developed a unique approach to assurance that was not aligned to international best practice.

Q. 15 What do you see as the benefits and risks for a biodiversity credit market not being regulated at all?

EFFICIENCY AND FLEXIBILITY WITH A RISK TO CREDIBILITY

A privately-run system could be more flexible to the demands of a particular market. For instance, Toha's East Coast Exchange allows community members to support micro or macro-scale projects in Tairāwhiti Gisborne with simple verification requirements that suit that scale of action.¹⁵ Participants log a selfie of themselves at work and the names of participants of their project to verify their eligibility for credits. A much more robust scheme might be necessary for new forests or conservation estates, but this approach is tailored to get community-led projects moving quickly. The risk is that a private system may not meet the expectations of transparency or rigor from international or corporate investors.

Q. 16 A biodiversity credit system has six necessary components (see figure 5). These are: project provision, quantification of activities or outcomes, monitoring measurement and reporting, verification of claims, operation of the market and registry, investing in credits. To have the most impact in attracting people to the market, which component(s) should the Government be involved in? Please give your reasons.

¹⁴ Mallet, Patrick. "Collaboration is key to deliver on nature and biodiversity goals". 27 March 2023. Accessed online <https://www.isealalliance.org/sustainability-news/collaboration-key-deliver-nature-and-biodiversity-goals>.

¹⁵ [East Coast Exchange \(toha.nz\)](https://www.toha.co.nz/)

MARKET ENABLEMENT

Government support would be most useful in funding guidance and clarifying the legal rights of participants. Government operation of the credit registry would also lend credibility and prevent double-counting through a single system.

Q. 17 In which areas of a biodiversity credit system would government involvement be most likely to stifle a market?

MONITORING AND REPORTING

Existing assurance schemes are well-positioned to verify claims and monitor measurement and reporting. All commercial growers are already certified for food safety through an independent Good Agricultural Practice (GAP) scheme due to domestic and export market requirements. Global GAP already asks biodiversity questions, NZ GAP has a Global GAP equivalent add-on covering the same material, and kiwifruit growers under Zespri GAP receive biodiversity guidance. Facilitating monitoring and reporting through these bodies will reduce duplication of paperwork, thus making it easier for growers to participate. Similar private assurance schemes exist for other types of businesses.

Q. 18 Should the Government play a role in focusing market investment towards particular activities and outcomes and if so why? For example, highlighting geographic areas, ecosystems, species most at threat and in need of protection, significant natural areas, certain categories of land.

NO

The market cannot exist without investors. A heavy-handed approach to market management will make it more difficult to pair investors to the activities they want to support.

Q. 19 On a scale of 1, not relevant, to 5, being critical, should a New Zealand biodiversity credit system seek to align with international systems and frameworks? Please give your reasons

4

Aligning with international standards will give the system international credibility and attract overseas investment. There are existing standards with a positive reputation. New Zealand can draw on this excellent work rather than inventing something new and having to build its credibility from scratch. Our country's unique biodiversity does not mean that we need an entirely bespoke system. Please see our response to Q. 14 on necessary assurance, which discusses the importance of aligning with the JASANZ process.

Q. 20 Should the Government work with private sector providers to pilot biodiversity credit system(s) in different regions, to test the concept? If you support this work, which regions and providers do you suggest?

YES

Testing the concept before widespread implementation will encourage confidence in the system and work out problems in advance. We suggest working with Toha or other existing New Zealand credit systems and involving primary sector industry bodies to ensure their members' biodiversity projects can be recognised.

- Q. 21** What is your preference for how a biodiversity credit system should work alongside the New Zealand Emissions Trading Scheme or voluntary carbon markets?
- (a) Little/no interaction: biodiversity credit system focuses purely on biodiversity, and carbon storage benefits are a bonus.
- (b) Some interaction: biodiversity credits should be recognised alongside carbon benefits on the same land, via both systems, where appropriate.
- (c) High interaction: rigid biodiversity 'standards' are set for nature-generated carbon credits and built into carbon markets, so that investors can have confidence in 'biodiversity positive' carbon credits.
- Please answer (a) or (b) or (c) and give your reasons

(A)

HortNZ strongly believes that the government needs to stop adjusting the settings of the Emissions Trading Scheme and leave the market alone to achieve its decarbonisation goals. The more complex the system becomes, the less confidence participants will have in its success and the more likely the price of carbon crashes. The price of carbon has to rise to truly incentivise decarbonisation.

Setting biodiversity standards for carbon credits will hurt small businesses like those in the greenhouse sector who are doing their best to decarbonise but whose properties are too small to incorporate biodiversity.

It may be appropriate for some activities to receive both biodiversity credits and carbon credits, but those should be administered through two different systems.

- Q. 22** Should a biodiversity credit system complement the resource management system? (Yes/No)
- For example, it could prioritise:
- Significant Natural Areas and their connectivity identified through resource management processes
 - endangered and at-risk taonga species identified through resource management processes.

NO

The biodiversity credit system should exist solely to incentivise and fund biodiversity projects. Adding planning requirements and considerations will only make the system more complex and bureaucratic at the expense of getting projects started efficiently.

Q. 23

Should a biodiversity credit system support land-use reform? (Yes/No)

(For example, supporting the return of erosion-prone land to permanent native forest, or nature-based solutions for resilient land use.)

YES

HortNZ believes that a biodiversity credit system should support activities that reduce erosion, like planting native forest on hillsides or wetlands alongside primary production paddocks. Planning frameworks are more likely to drive land-use reform, but biodiversity credits can support funding to ease the transition.