A green field with sheep in it

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This document may be cited as: Ministry for the Environment. 2025. *Proposed product stewardship regulations: Agrichemicals, their containers, and farm plastics. Discussion document*. Wellington: Ministry for the Environment.

Published in March 2025 by the  
Ministry for the Environment   
Manatū mō te Taiao  
PO Box 10362, Wellington 6143, New Zealand  
[environment.govt.nz](http://www.environment.govt.nz)

ISBN: 978-1-991140-72-2

Publication number: ME 1880

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# Message from the Minister for the Environment

**A person with blonde hair wearing a black jacket

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Plastic products play a critical role in supporting New Zealand’s world-leading agri-economy. However, rural communities also know that once they have been used, products such as agrichemical containers, bale wrap and other farm plastics can quickly pile up and become difficult to deal with in a way that does not cause harm.

Supporting New Zealand’s farmers and growers to better manage plastic waste is a priority, and industry has been working to improve services. Following an industry-led design process, this consultation seeks your views on proposed regulations to support a national product stewardship scheme for agrichemicals and their containers, and for other farm plastics including bale wrap. Product stewardship helps producers and manufacturers play a bigger role in the end-of-life management for the products they place on the market.

The new scheme, provisionally called Green-farms, would bring the existing Agrecovery and Plasback schemes into a single national take-back and recycling programme, simplifying and expanding services so they are accessible to everyone who uses the products that are proposed to be regulated. The national take-back service would include free-to-use drop-off sites at convenient locations, including rural-sector retailers. Free-to-use collection services would be available for remote locations.

As well as farmers and growers, consumers such as the forestry, manufacturing, hospitality, tourism and sport sectors, local authorities, contractors and households would be able to use the national take-back services.

A product stewardship approach recognises that everyone involved in a product’s lifecycle, from design and manufacturing to use and disposal, has a role to play in ensuring that products are handled and disposed of in a safe and environmentally responsible way. The Government is committed to continuing to support industry-led product stewardship schemes.

I welcome your feedback about how the new scheme and proposed regulations might affect you. I encourage you to share your views on these proposals.

**A blue pen drawing on a white background

AI-generated content may be incorrect.**

Hon Penny Simmonds  
**Minister for the Environment**

# Glossary

| Term | Definition |
| --- | --- |
| Accreditation | In this context, a decision by the Minister for the Environment confirming that a proposed product stewardship scheme meets the requirements set in [sections 14](https://www.legislation.govt.nz/act/public/2008/0089/latest/DLM1154579.html) and [15](https://www.legislation.govt.nz/act/public/2008/0089/latest/DLM1154580.html) of the Waste Minimisation Act 2008. |
| Agrichemicals | Chemicals (in liquid or solid form) used to control pests, weeds, and livestock diseases (eg, insecticides, herbicides, fungicides and veterinary medicines), to support plant growth or soil health (eg, fertilisers). |
| Agrichemicals, their containers, and farm plastics | In this context, all products covered by the [Declaration of Priority Products Notice 2020](https://gazette.govt.nz/notice/id/2020-go4533) for ‘agrichemicals and their containers’ and ‘farm plastics’, unless specified otherwise. |
| Bale wrap | Plastic film for ensiling feed for livestock, to protect it from moisture and spoilage. |
| End of life | When a product is no longer useful for its original purpose. |
| Free-rider | In this context, a person or company that benefits from a voluntary product stewardship scheme without paying their fair share into the scheme for the services the scheme provides to manage their products at end of life. |
| Guidelines | In this context, the [General Guidelines for Product Stewardship Schemes for Priority Products Notice 2020](https://gazette.govt.nz/notice/id/2020-go3342). |
| In-scope products | In this document, the four product groups that the Government proposes to regulate ([listed below](#productlist)). They are a subset of the products covered by the [Declaration of Priority Products Notice 2020](https://gazette.govt.nz/notice/id/2020-go4533). |
| Priority product | A product declared to be a priority under [section 9](https://www.legislation.govt.nz/act/public/2008/0089/latest/DLM1154572.html) of the Waste Minimisation Act 2008. |
| Producers | Includes manufacturers, brand owners and importers of a priority product. |
| Product stewardship | When people and businesses take responsibility for the environmental impacts of products through their life cycle, either voluntarily or in response to regulations. |
| Product stewardship organisation (PSO) | The organisation that implements an accredited product stewardship scheme. |
| Recycling | Reprocessing waste or diverted material to produce new materials. |
| Silage sheet | A plastic sheet used to cover silage feed pits, preventing air and moisture from entering. |
| Take-back services | Collection of end-of-life products for recycling. Take-back services may include collection sites where users can drop off their products (eg, rural supplies retailers, depots and other convenient sites), or they may involve collection from a user’s premises (eg, more remote farms). |
| WMA | Waste Minimisation Act 2008. |

# Executive summary

## Purpose of this consultation

We are seeking your views on proposed regulations to enable a national take-back and recycling scheme for agrichemicals, their containers, and farm plastics.

This is a form of product stewardship. Product stewardship is where people and organisations involved in the life cycle of a product (eg, producers, importers, retailers and consumers) share responsibility for minimising environmental harm and maximising the net benefit from the product at the end of its useful life.

|  |
| --- |
| In-scope product groups we propose to regulate  The regulations would cover four types of product considered to be among the most problematic:   * agrichemicals sold in plastic containers and drums of 1,000 litres or less (including household pest and weed control products) * plastic bale wrap and silage sheet * small plastic bags (40 kilograms or less when full) containing products such as seed, feed, fertiliser, soil and crop inputs, farm and animal supplements * bulk woven polypropylene bags (over 40 kilograms when full) containing products such as seed, feed, fertiliser, soil amendments, minerals and bulk nutrition. |

## What is the problem we are seeking to address?

Currently, not all farmers have access to take-back and recycling services for agrichemicals, their containers, and farm plastics. This contributes to ongoing but avoidable practices, such as on-farm burning, burial or indefinite storage in some rural areas. This in turn risks harming the environment and our health, and losing recyclable materials. Regional council rules to control on-farm waste disposal – including bans on burning plastics – vary greatly between regions and are difficult to enforce.

Since 2006, two voluntary product stewardship schemes – run by Agrecovery and Plasback – have offered take-back services for agrichemicals and their containers, and some farm plastics. Both schemes have made steady progress in reducing waste, but engagement by producers and farmers has plateaued, and some parts of the country remain poorly served.

## The Green-farms Product Stewardship Scheme

A new product stewardship scheme was developed by industry stakeholders, and accredited by the Minister for the Environment in October 2023. It is provisionally named Green-farms, according to its accreditation. This scheme is not operating yet, pending government decisions on the regulations.

According to its accreditation, the scheme would offer a free-to-use take-back service to consumers (mainly farmers and growers), initially covering the four product categories [listed in the box above](#productlist). For agrichemicals, the scheme would take back containers and residual agrichemicals only.

Over time, the scheme may include other farm plastics, such as netting and wool fadges. However, these are not among the materials currently proposed for the regulations to cover.

The scheme was designed to work alongside regulations under the Waste Minimisation Act 2008 (WMA). This approach was supported by industry stakeholders during the co-design process. The costs of running the scheme and managing the take-back and treatment will be covered by fees paid by producers and importers of in-scope products, who will likely pass on some or all of the fees to consumers.

## The proposal

We are consulting on two options:

* **Option 1: Introduce WMA regulations**. These will support the accredited scheme for the in-scope products.
* **Option 2: No action (maintain the voluntary approach)**. No regulations would be made. The current schemes may continue with voluntary stewardship of agrichemical containers and other farm plastics.

Your responses to this consultation will inform Cabinet consideration of the options.

Under Option 1, WMA regulations would prohibit the sale of agrichemicals in specified container types and certain farm plastics, except in accordance with the accredited scheme for these (ie, Green-farms). The obligation to sell only in accordance with the scheme would apply to the four product groups [listed in the box above](#productlist).

All producers and importers placing these products on the New Zealand market would be required to pay a stewardship fee designed to cover end-of-life management of the products.[[1]](#footnote-2) The proposed fees are in [section 3.2](#proposedfeerates).

The regulations aim to address the shortcomings of voluntary stewardship by:

* establishing a level playing field, in which all producers, importers and retailers of priority products share responsibility (and costs) for managing the in-scope products at end of their life, eliminating the free-riding costs on the existing voluntary Agrecovery scheme
* offering farmers and other consumers a free-to-use and convenient take-back service – reducing the incentive for inappropriate disposal (eg, burying or burning) and diverting waste away from landfill
* enabling the Government to enforce the requirements.

1. Introduction
   1. About this consultation

This consultation aims to:

* seek your views on proposed regulations to enable a national take-back and recycling scheme for agrichemicals, their containers, and farm plastics
* understand business and consumer perspectives on the possible impacts of these proposals.

### How to have your say

We welcome your comments on this consultation. The questions throughout the document are a guide only, and you do not have to answer them all.

### Closing date for submissions

Send in your comments by 11.59 pm on 1 June 2025. For details on how to make your submission, see [How to have your say](#HowToHaveYourSay).

View the consultation document, and more details on how to make a submission, at <https://consult.environment.govt.nz/waste/agrichemicals-their-containers-and-farm-plastics>. If you have questions or want more information about the policy proposals or the submission process, please email [rps@mfe.govt.nz](mailto:rps@mfe.govt.nz).

### What happens next?

After receiving submissions, we will analyse them to inform policy and government decisions on regulations for a product stewardship scheme for agrichemicals, their containers, and farm plastics.

* 1. Policy context

In 2020, agrichemicals, their containers, and farm plastics were among the six product groups declared as priority products under the Waste Minimisation Act 2008 (WMA).[[2]](#footnote-3) Once a product is declared a priority product, a stewardship scheme[[3]](#footnote-4) for the product must be developed and accredited as soon as practicable. Regulations can also be made under the WMA to support product stewardship.

* 1. Scope of this consultation

We are only consulting on regulations covering a subset of the declared priority products, namely:

* agrichemicals[[4]](#footnote-5) sold in plastic containers and drums of 1,000 litres or less (including household pest and weed control products)
* plastic bale wrap and silage sheet
* small plastic bags (40 kilograms or less when full) containing products such as seed, feed, fertiliser, soil and crop inputs, farm and animal supplements
* bulk woven polypropylene bags (over 40 kilograms when full) containing products such as seed, feed, fertiliser, soil amendments, minerals and bulk nutrition.

At this stage we are not proposing to regulate the other agricultural and horticultural plastics covered by the Declaration of Priority Products Notice 2020.[[5]](#footnote-6) We may consider these in future, once we have more information on logistics and costs from voluntary take-back and recycling trials.

Under these proposals, the regulated parties would be the scheme manager, as well as entities that sell and distribute in-scope agrichemicals and farm plastics. Farmers, growers and other consumers of in-scope products would not be regulated. They would have wider opportunities to reduce waste and risk of harm from these products.

The proposals here aim to improve end-of-life management of agrichemical containers, their residual agrichemicals, and certain farm plastics. They do not affect the Environmental Protection Authority rules for the approval, labelling, packaging and disposal of hazardous substances.

1. Context
   1. What is the problem?

### Agrichemical containers and their residual agrichemicals

Many New Zealand farmers regularly use chemicals to control pests, weeds and diseases. These are also used in other sectors (eg, forestry, industry, utilities, infrastructure, recreation), by local and central government, and in households.

Agrichemicals can become surplus when land management or land ownership changes, chemicals expire, or chemicals are deregistered. Agrichemicals are by intent toxic. They pose a risk to human health and the environment if inappropriately used, stored or disposed of.[[6]](#footnote-7) Over time, stored waste agrichemicals can enter the surrounding environment from perished containers,[[7]](#footnote-8) or during natural disasters.[[8]](#footnote-9) The release of toxic chemicals to air, soil and water can harm crops, livestock, humans and ecosystems.

Some agrichemicals, particularly older ones, can contain persistent organic pollutants (POPs). POPs do not degrade in plants, animals or the physical environment. Rather, they accumulate up the food chain, posing a long-term health risk to humans and ecosystems. Many agrichemicals declared as POPs have been deregistered for use in New Zealand, but they still arise from agrichemical collections, particularly when farming systems or farm ownership change.[[9]](#footnote-10)

Unused or unwanted agrichemicals cannot be recycled. If they cannot be used legally for their intended purpose, they must be safely neutralised or destroyed, to reduce the risk to the environment.[[10]](#footnote-11)

The packaging used to supply and mix agrichemicals is also potentially toxic unless adequately cleaned. Some packaging can be recovered and recycled, if triple-rinsed to remove chemical residue (exceptions are oil-based products and POPs, or unknowns).

### Farm plastics

Opinion surveys consistently show majority support for better management of waste, including plastics.[[11]](#footnote-12)

It is estimated that over 13,000 tonnes of farm plastics were sold in New Zealand in 2019, in the categories of agrichemical containers and drums; bale wrap and silage sheet; and seed, feed and fertiliser bags.[[12]](#footnote-13) For other categories, the quantities are unknown. Sales of farm plastics are projected to increase ([appendix 1](#_Appendix_1:_Annual)).

Farm surveys indicate that many farm plastics are burnt, buried or stored indefinitely on-farm.[[13]](#footnote-14) This may breach the legislation for hazardous substances and their disposal.[[14]](#footnote-15) The open burning of plastics releases air pollutants and toxic substances, such as dioxins, which can contribute to significant health problems.[[15]](#footnote-16)

Some farmers pay to send their waste to consented landfills. This poses a lower environmental risk than on-farm burning, burial or storage, since consented Class 1 landfills are engineered to minimise disposal impacts.

Farm plastics are also recognised internationally as a significant source of microplastics in the environment.[[16]](#footnote-17)

In addition, burning, burying or landfilling farm plastics removes the opportunity to recover resources for recycling.

Possible underlying causes of current disposal practices include:

* limited availability of convenient and low- or no-cost alternatives for farmers and other consumers
* limited knowledge of available alternatives
* lack of awareness of the potential impacts of burning and burying waste.

### Regional rules for on-farm waste disposal

Regional councils have used their powers under the Resource Management Act 1991 (RMA) to control on-farm waste disposal, which is typically a permitted activity. All regional councils have rules for disposal sites (also known as farm dumps, waste pits, etc). The rules vary across councils, but generally aim to avoid the negative effects.

Some councils prohibit outdoor burning of all plastics, while others prohibit it for certain types (eg, chlorinated, polyvinyl chloride, or halogenated plastics). Enforcing these rules can be a challenge.

### Voluntary initiatives have plateaued

Since 2006, two voluntary product stewardship schemes have offered take-back services to the rural community for agrichemical containers and residual agrichemicals, and for some farm plastics. Each scheme has made steady progress within a voluntary framework [(appendix 2](#_Appendix_2:_Amount)), but engagement by producers and farmers has plateaued. Moreover, a wide range of farm plastics are currently not covered by any scheme.

Agrecovery operates a scheme for agrichemical containers and drums, including their residual agrichemicals. Farmers can drop them off at any of the 160 collection sites throughout the country, mostly at agrichemical retailers or council sites. The scheme is funded through fees paid by participating producers. It collects around 50 per cent of containers and drums sold by member companies (around 629.5 tonnes were collected in 2023).[[17]](#footnote-18) Currently, 120 agrichemical brands (estimated to represent the majority of the market) are Agrecovery members.

Plasback operates a user-pays scheme for collecting some farm plastics, mainly bale wrap and silage sheet. Farmers can drop off their plastics for a fee at a Plasback collection point. Alternatively, farmers can buy Plasback bins or liners, which Plasback then collects for a fee from the farm once filled. Plasback collected around 5,500 tonnes of bale wrap and silage sheet for recycling in 2022, and around 6,100 tonnes in 2023.[[18]](#footnote-19) This is about half of the total quantity of these products sold in the preceding year.

Two main factors influence participation in voluntary schemes and, consequently, product recovery rates:

* producers’ incentive to join and fund a scheme
* consumers’ incentive to use a scheme.

Producers may be reluctant to participate in voluntary producer-pays schemes when their competitors can opt out and gain market advantage through reduced costs. In turn, this limits the funds available to the scheme to cover the costs of collecting and managing the end-of-life products. As a result, the take-back service may not be convenient enough, or cover the full list of products, and farmers may not be aware of the scheme or its benefits.

In the case of consumer-pays schemes, the fee-for-service model can also discourage farmers from using this option, leading to instances of on-farm burning and burial.

### Barriers to improving end-of-life management

The current barriers to improving management of end-of-life agrichemicals, their containers, and farm plastics include:

* limited availability of convenient and low- or no-cost alternatives to on-farm disposal
* limited awareness among farmers (and other consumers) of available alternatives
* limited incentives for producers and importers to join voluntary stewardship schemes, which limits the funds available to collect and manage end-of-life products
* lack of farmer awareness of the potential impacts of on-farm disposal such as burning and burial
* difficulty of enforcing any existing regional rules on burning and burying farm waste.

For household pest and weed control products, the main barriers are similar and include:

* limited availability of collection and recycling schemes that are convenient and free or low cost for consumers
* limited awareness of available alternatives to disposal in mixed rubbish
* limited incentives for producers and importers to join voluntary stewardship schemes.

| Questions | | |
| --- | --- | --- |
| 1. | Do you agree with the description of the problem posed by agrichemicals, their containers, and farm plastics? Yes | No. Comments (optional): \_\_\_\_\_\_\_ |
| 2. | What other information should we consider in analysing the problem? |

* 1. Regulated product stewardship

The WMA has various tools for improving the management of waste. One is regulated product stewardship. This is where regulations require producers and importers to take more responsibility for the end-of-life impacts of products they place on the New Zealand market.

Voluntary product stewardship schemes have been accredited under the WMA since 2010. Movement towards regulated schemes started in 2020, when the Government declared six product groups a priority, namely:

* tyres
* electrical and electronic products (e-waste)
* refrigerants and other synthetic gases
* **agrichemicals and their containers (this consultation)**
* **farm plastics (this consultation)**
* plastic packaging.[[19]](#footnote-20)

The declaration was informed by public consultation, which indicated majority support.[[20]](#footnote-21)

Once a product is declared a priority, a stewardship scheme for the product must be developed and accredited as soon as practicable. Regulations can also be made for priority products – for example, to require that they are only sold and distributed in accordance with an accredited product stewardship scheme.[[21]](#footnote-22)

There are two stages in developing regulated product stewardship schemes.

1. A product stewardship scheme is developed and accredited.
2. It is co-designed with stakeholders (eg, industry groups, recyclers, other key stakeholders).
3. The scheme manager applies for accreditation.
4. The Minister for the Environment makes a decision on accreditation.
5. If the new scheme has evolved from an existing accredited voluntary scheme or schemes, a transition period is required until the previous scheme’s accreditation expires or is revoked.
6. The Government may make regulations to support an accredited scheme.
7. **The public is consulted on proposed regulations (this consultation).**
8. The Government makes a decision on proposed regulations, if supported.
9. Regulations come into effect.

If regulations are not made, accredited schemes may operate on a voluntary basis.

The co-design process for agrichemicals, their containers, and farm plastics was completed in 2022. This led to a new scheme, provisionally named the Green-farms Product Stewardship Scheme (Green-farms) according to its accreditation (see [section 2.3](#TheGreenFarms) below). For details of the co-design see [appendix 3](#_Appendix_3:_Co-design).

Information on progress for the other priority products is on our [website](https://environment.govt.nz/what-government-is-doing/areas-of-work/waste/product-stewardship/priority-product-stewardship/).

* 1. The Green-farms Product Stewardship Scheme

The accreditations of the two voluntary schemes run by Agrecovery and Plasback (described in [section 2.1](#VoluntaryInitiatives)) expired in 2024. The new scheme, provisionally named Green-farms, is intended to combine these schemes.

This scheme was accredited in October 2023 but is not yet operational, pending government decisions on supporting regulations. The product stewardship organisation (PSO) managing the scheme is the Agrecovery Foundation, which is a not-for-profit charitable trust governed by a board of trustees (representatives of the primary production sector).[[22]](#footnote-23)

If regulations proceed, it would replace the two voluntary schemes. If regulations are not made, the new scheme could either start operating on a voluntary basis, or not proceed. The latter outcome is more likely, as it was co-designed by industry as a regulated scheme, in line with the broad intent of the priority product declaration.

| Question | | | |
| --- | --- | --- | --- |
| 3. a) | In line with its accreditation, the new scheme's provisional name is Green-farms. Do you support this name? Yes | No | |
| b) | | If you have an alternative suggestion, please specify. |

### Scope

The new Green-farms scheme will initially cover the four farm product categories that generate the most plastic waste on-farm, namely:

* **plastic agrichemical containers and drums** (1,000 litres or less) for recycling and any **residual agrichemicals[[23]](#footnote-24)** for safe destruction (including household pest and weed control product containers and residual chemicals)
* **plastic bale wrap and silage sheet**
* **small plastic bags** (40 kilograms or less when full) that contained products such as seed, feed, fertiliser, soil and crop inputs, farm and animal supplements
* **bulk woven polypropylene bags** (over 40 kilograms when full) that contained products such as seed, feed, fertiliser, soil amendments, minerals and bulk nutrition.

In addition, the scheme may progressively include other plastic waste, based on the schedule in [table 1](#Table1). These categories will not be mandatory, unless further regulations are proposed in the future (this is out of scope for this consultation).

Table 1: Proposed schedule for phase-in of farm plastic waste streams

|  |  |
| --- | --- |
| **Waste stream** | **Phase-in year** |
| **Category 1 (proposed for regulation through this consultation)**   * plastic agrichemical containers and drums, of 1,000 litres or less (including household pest and weed control products), including their residual chemicals * plastic bale wrap and silage sheet * small plastic bags (40 kilograms or less when full) * bulk woven polypropylene bags (over 40 kilograms when full) | As soon as regulations for these products are in effect |
| **Category 2 (voluntary)**   * irrigation piping * shrink/pallet wrap * tunnel house covers * wool fadges * plastic plant pots | At start of Year 2 after regulations for Category 1 come into effect |
| **Category 3 (voluntary)**   * vineyard netting * hail netting and other coverings | At start of Year 3 after regulations for Category 1 come into effect |
| **Category 4 (voluntary)**  Other plastics, such as:   * bespoke plastics used by farmers and growers * other plastic identified along the supply chain | At start of Year 4 after regulations for Category 1 come into effect |

In the first accreditation period (until 2030), the scheme will not cover plastic products used in farm households (eg, packaging for consumer items), other than household pest and weed control products, which are included in the agrichemicals stream. However, collaboration with other schemes that focus on these products may be an option.

### How it works

As mentioned above, the scheme is not operating yet, pending government decisions on supporting regulations. This section outlines how it will work, according to its accreditation.

As accredited, the scheme will expand a nationwide network of free-to-use take-back sites where farmers and other consumers can drop off their waste in-scope products. The sites will be in or near places that farmers would already be using, such as towns and urban centres, rural supplies merchants, and service providers for the rural sector. More remote farmers and growers, with enough waste, will be offered free on-farm collection. As is the case now, farmers could also contract private waste collectors for more frequent or out-of-scope services.

There will be at least eight regional recovery hubs[[24]](#footnote-25) for farm plastics. These would be responsible for sorting, cleaning, and baling and bundling the plastics for domestic recycling or export. They will be managed under contract by the PSO. The scheme will recycle as much of the collected material as possible. It may be necessary to landfill non-recyclable materials or components.

For recycling, any exports of plastics must comply with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.[[25]](#footnote-26) Although exports are currently necessary, the scheme aims to expand local plastic recycling markets so that exports may not be necessary in the future.

The scheme’s funding model is to recover the cost of collection and management through fees paid by producers or importers. This will provide free-to-use take-back services to farmers and other consumers. The scheme was designed on the assumption that regulations would require producers and importers to sell in-scope products only in accordance with the accredited scheme, and pay a product stewardship fee. In the co-design process the sector supported this approach.

1. Options under consideration
   1. Overview

[Sections 22 and 23](https://www.legislation.govt.nz/act/public/2008/0089/latest/whole.html#DLM1154586) of the WMA set out several regulations that can support product stewardship. To improve timely end-of-life management of the in-scope products, we propose using existing WMA powers, and only considering options that the current legislation can bring into effect. We may look at other options in future if they become available under revised legislation.

We are considering a package of WMA regulations that would support the accredited product stewardship scheme. They cover the following product groups:

* agrichemicals sold in plastic containers and drums of 1,000 litres or less (including household pest and weed control products)
* plastic bale wrap and silage sheet
* small plastic bags (40 kilograms or less when full) containing products such as seed, feed, fertiliser, soil and crop inputs, farm and animal supplements
* bulk woven polypropylene bags (over 40 kilograms when full) containing products such as seed, feed, fertiliser, soil amendments, minerals and bulk nutrition.

The regulated parties would be the scheme manager, and those that sell and distribute the regulated products into the New Zealand market. Farmers, growers and other consumers of these products would not be regulated.

If the Government decides to proceed with regulations, we anticipate these would come into force 6 to 12 months after their publication, to give industry time to prepare.

As outlined in [table 1](#Table1), the accredited scheme may gradually expand to other products, including: irrigation piping, shrink/pallet wrap, tunnel house covers, wool fadges, potted plant pots, vineyard netting, hail netting and other coverings. Although these are also covered by the Declaration of Priority Products Notice 2020,[[26]](#footnote-27) the proposed regulations will not cover them at this stage. Further information and engagement with the sector are required.

The scheme may include these products on a voluntary basis. It will encourage producers and importers of these products to join field trials under the scheme, to determine cost-effective logistics and costings for end-of-life management. When the trials are completed, the scheme will propose an appropriate product fee structure. We may then consider regulations mandating sale in accordance with the accredited scheme and fee payment (subject to further public consultation and government consideration).

[Table 2](#Table2) sets out the regulatory option under consideration, and the no-action option. [Section 3.2](#Option1) and [section 3.3](#Option2) present each option in more detail.

For an overview of discarded options, see the [consultation website](https://consult.environment.govt.nz/waste/agrichemicals-their-containers-and-farm-plastics).

Table 2: Options to address end-of-life agrichemicals, their containers, and farm plastics

|  |  |  |  |
| --- | --- | --- | --- |
| **Option** | **WMA regulations** | **Description** | **Rationale for intervention** |
| Option 1:  Introduce WMA regulations | Obligation to participate  WMA section 22(1)(a): Prohibiting the sale of a priority product, except in accordance with an accredited scheme. | Requires producers/importers placing in-scope products on the New Zealand market to comply with the accredited scheme. | Mandatory participation would establish a level playing field for industry, and ensure producers/importers take responsibility for mitigating the environmental impacts of their products at end of life. It is the main WMA option to address the free-rider issues and costs of voluntary stewardship. |
| Take-back service  WMA section 23(1)(c)(i): Requiring the PSO to provide a take-back service for regulated products, and prescribing requirements for that service. | Requires the PSO to provide a take-back service for in-scope products, meeting set requirements. | The requirement would help ensure the scheme provides a convenient, free-to-use service. |
| Product stewardship fee  WMA section 23(1)(d): Setting fees payable for managing regulated products. | Requires producers/importers placing in-scope products on the New Zealand market to pay a fee to cover end-of-life management. | A fee is necessary to cover the costs of collecting and processing in-scope products.  Fees charged at point of disposal can discourage people from using disposal services. Whereas when fees are charged on import and domestic manufacture, the cost of the take-back service is built into the product price, encouraging use of services that are pre-paid and ‘free to use’.  A mandatory fee proportionate to the amount of products placed on the market ensures an equitable distribution of those costs across producers/importers. |
| Providing information  WMA section 23(1)(i): Setting requirements for specified persons to collect and provide to the Ministry specified information relating to regulations made under WMA sections 23(1)(a) through to (e). | Requires the scheme manager to collect and provide to the Ministry information relating to the above requirements (eg, the fees collected). | The Government is enabled to monitor and enforce the scheme and the sale of products in accordance with the scheme. |
| Recovering costs of monitoring scheme performance  WMA section 22(1)(e): Prescribing charges payable to the Ministry for monitoring an accredited scheme. | The Ministry would monitor the performance of the scheme and recover the monitoring costs from the scheme manager, using part of the stewardship fee revenue. | These costs would be covered by producers/importers rather than taxpayers. |
| Option 2: No action (maintain the voluntary approach) | None | No regulations would be made. The Green-farms scheme would be voluntary, unless it does not proceed. Producers’ and importers’ participation in Green-farms (or any other scheme for these products) and contribution to the costs of running the scheme and managing the products at end of life would be voluntary. | Not applicable |

| Questions | | |
| --- | --- | --- |
| 4. | Do you agree the options presented (Option 1 – Introduce WMA regulations; Option 2 – No action) are the appropriate ones to consider? Yes | No  If not, what other options do you suggest? |

* 1. Option 1: Introduce WMA regulations

### What does this option involve?

The sale of agrichemicals and certain farm plastics (listed in [section 3.1](#Overview)) would only be permitted in accordance with the accredited scheme for these products. To sell a product ‘in accordance with the scheme’, producers (including onshore manufacturers, brand owners and importers) would be required to:

* abide by scheme rules, including registering with the scheme and reporting sale or import volumes
* pay a stewardship fee to the scheme per unit of product sold or imported.[[27]](#footnote-28)

### Stewardship fee

The regulated parties liable to pay the fee would be the producers, importers or brand owners that first place the product on the New Zealand market. For agrichemicals and their containers, the fee would be per container of packaged product, based on volume and the chemical management group assigned to that product. For bale wrap and silage sheet, the fee would be collected on rolls of sheet, by weight. For small and bulk bags, the fee would be per bag of the packaged product.

The fee would cover the costs of running the scheme and managing the products at end of life (eg, setting up and running the take-back services, transporting and processing the collected products). A small part of the fee revenue would be transferred by the scheme manager to the Ministry, to cover the cost of monitoring the scheme’s performance. This cost is likely to be up to one full-time equivalent staff member per year, invoiced based on actual time spent on monitoring.

### Take-back service

The PSO would be required to provide a take-back service for the products. Requirements could include, for example, that the collection network has sufficient geographical coverage.

Farmers and other consumers of the products would be able to either:

* drop off their agrichemical containers (including residual agrichemicals) and in-scope farm plastics at no charge to one of the collection sites
* have the products picked up from their premises, if they meet criteria for remoteness and product weight.

This participation would not be mandated by regulation.

The scheme manager would collect and provide data to the Ministry about the above requirements (eg, the fees paid by producers and importers), so the Ministry can monitor compliance. This reporting would be strictly commercial-in-confidence – in aggregate at set intervals, and in detail if enforcement of regulations was required.

### Collecting the fee

The PSO would be responsible for collecting the fee.

Producers and importers would be required to pay the stewardship fee for regulated products at entry into the market. Most farm plastics used in New Zealand are not manufactured here. Because it would not be feasible to collect fees directly from overseas producers, the fee for regulated products manufactured off shore would be collected from importers or domestic downstream first suppliers to the New Zealand market. As is the case now for the Agrecovery agrichemicals scheme, fees would typically be collected from brands within the responsible supply chain.

Producers, importers or downstream suppliers would have to declare to the PSO (for example, every three months) the amount of products sold or imported. Based on these self-declarations, the PSO would charge the applicable fee. This is the approach with the voluntary Agrecovery scheme. The PSO would also verify the self-declared data – for example, through independent audit as required – and resolve any discrepancies.

### Proposed fee rates

As part of the accreditation process, the PSO calculated a fee rate for each product stream. This takes into account the total estimated costs of delivering the take-back and recycling services for each stream at a national scale, and the forecast sale quantities of the products. [Table 3](#Table3) sets out the proposed fee rates.

Table 3: Proposed stewardship fee rates – agrichemicals and farm plastics

|  |  |  |
| --- | --- | --- |
| **Category** | **Product** | **Fee rate ($)** |
| **Agrichemicals and their containers** | Packaging part of fee | Per litre |
| Containers up to 60 litres | 0.10 |
| Containers over 60 litres, and less than Intermediate Bulk Containers (IBC) | 0.025 |
| IBC (approx. 1,000 litres) | 0.02 |
| Chemical part of fee | Per litre |
| Group 1 – chemicals unlikely to be brought for disposal (the consumer typically uses them up) | 0.01 |
| Group 2 – chemicals with lowest disposal cost | 0.03 |
| Group 3 – chemicals with higher disposal cost   * In containers up to 60 litres | 0.04 |
| * In containers of 60 litres or more | 0.06 |
| Household pest and weed control products | |
| Cost per container | 0.10 |
| Group 1 - Chemicals unlikely to be brought for disposal (per kilogram or litre) | 0.02 |
| Group 2 - Chemicals with lowest disposal cost (per kilogram or litre) | 0.08 |
| Group 3 - Chemicals with higher disposal cost (per kilogram or litre) | 0.10 |
| **Farm plastics** | Bale wrap and silage sheet | Per tonne |
| Bale wrap | 462.02[[28]](#footnote-29) |
| Silage sheet | 462.02 |
| Bags | Per bag |
| Small bags | 0.20 |
| Large bags | 3.58 |

### What are the expected impacts of this option?

The current schemes are financed through voluntary fees from participating producers[[29]](#footnote-30) or payments by farmers, who are invoiced the cost of collection.[[30]](#footnote-31) Voluntary producer participation creates free-riding opportunities, and fees charged to consumers at the point of disposal may discourage people from using those services.

A requirement to act in accordance with the scheme, and for brands to pay a regulated fee, would:

* ensure that all producers and importers of in-scope products contribute to the cost of managing these when they become waste or unwanted
* help avoid free-riding
* ensure that there are enough resources for taking back and managing the products.

Through the increased revenue from fees, the scheme could expand take-back service coverage. The scheme would also raise awareness of available services among farmers and other users. Improved user access and awareness is expected to lead to increased collection of end-of-life agrichemical containers and farm plastics.

Overseas evidence suggests that regulated schemes can achieve higher rates of collection than voluntary ones. For example, the regulated Irish farm plastics recycling scheme reached a collection rate of 90 per cent in 2021.[[31]](#footnote-32)

In turn, increased collection would reduce inadequate disposal, such as burning or burial. This translates to lower emissions of toxic substances, with a corresponding drop in the risk of harm to the environment and human health. If the collected waste is recycled rather than sent to landfill, the option also prevents a lost economic opportunity associated with landfilling of recyclable waste.

By ensuring national coverage of take-back services compared to the voluntary schemes, a regulated scheme would make it easier for farmers to safely dispose of their residual agrichemicals and waste plastics, and to meet market demand for sustainably produced farm products. Key overseas markets for New Zealand’s meat, dairy and horticultural products (eg, major EU and UK supermarket chains) now require evidence of sustainable production. Farmers using Agrecovery and Plasback schemes have been able to document sustainable practices in initiatives such as Fonterra’s Co-operative Difference programme,[[32]](#footnote-33) and to benefit from higher payouts.

The proposed fee would be paid by producers and importers placing the regulated products on the New Zealand market, and the take-back service would be free to farmers and other consumers. Ultimately, the fee would likely be passed on to consumers through the sale price of the in-scope products. Since the proposed fees are a relatively low proportion of product cost, the cost impact on consumers is expected to be low. In some cases, where voluntary fees are already being paid, the proposed fees may result in reduced costs.

The impact of the fee on the price of in-scope products will depend on how much of the fee the producer passes on to the consumer. The full cost of the fee is estimated at less than 0.2 to 1.73 per cent of the product price, depending on product type (see [table 4](#Table4)).

Table 4: Examples of proposed stewardship fees relative to product cost[[33]](#footnote-34)

| Product | Fee per product ($) | Typical purchase price per unit of full product | Fee as a percentage  of product cost |
| --- | --- | --- | --- |
| Bale-wrapped feed | 0.52 | $30–$60 per bale[[34]](#footnote-35) | 1.73%–0.87% |
| Large fertiliser bag | 3.58 | $400–$1,000 per bag | 0.9%–0.36% |
| Small feed or fertiliser bag | 0.20 | >$100 per bag | <0.2% |
| 20 litre container of agrichemicals in Group 2 | 2.60 | Ranges widely (eg, $181–$1,516 for products of the biggest provider of agrichemicals in New Zealand) | 1.4%–0.17% |

Without the regulations proposed in this option, the following outcomes are expected.

* There would not be a level playing field among producers and importers of agrichemicals and farm plastics, as no party would be required to participate. This would result in continuation of the free-rider issues currently experienced by voluntary schemes and the majority of producers and importers already paying into them.
* The PSO would not receive enough funding for the safe and cost-efficient management of end-of-life products and associated infrastructure at a national scale.
* It is unlikely that the current rates of disposal to landfill, burning or burying on-farm would decrease significantly.

| Questions | |
| --- | --- |
| 5. | Do you support a national take-back and recycling scheme for agrichemicals, their containers, and farm plastics? Yes | No. Comments (optional): \_\_\_\_\_\_\_ |
| 6. a) | Do you support the proposal to only allow sale of the following products in accordance with an accredited product stewardship scheme?   * Agrichemicals sold in containers and drums of 1,000 litres or less (including household pest and weed control products). Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Plastic bale wrap and silage sheet. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Small plastic bags (40 kilograms or less when full) containing products such as seed, feed, fertiliser, soil and crop inputs, farm and animal supplements. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Bulk woven polypropylene bags (over 40 kilograms when full) containing products such as seed, feed, fertiliser, soil amendments, minerals and bulk nutrition. Yes | No. Comments (optional): \_\_\_\_\_\_\_ |
| b) | If you answered no for any of the product categories above, what changes could we make to the proposal to gain your support? |
| 7. a) | Do you support the proposal to set a product stewardship fee on the following imported or domestically manufactured products, to cover their end-of-life management?   * Agrichemicals sold in containers and drums of 1,000 litres or less (including household pest and weed control products). Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Plastic bale wrap and silage sheet. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Small plastic bags (40 kilograms or less when full) containing products such as seed, feed, fertiliser, soil and crop inputs, farm and animal supplements. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Bulk woven polypropylene bags (over 40 kilograms when full) containing products such as seed, feed, fertiliser, soil amendments, minerals and bulk nutrition. Yes | No. Comments (optional): \_\_\_\_\_\_\_ |
| b) | If you answered no for any of the product categories above, what changes could we make to the proposal to gain your support? |
| 8. | Do you think that any particular products in the four proposed categories should be exempt from regulation? Yes | No.  If yes, please specify which products, and provide details. |
| 9. | From the following list of products proposed to be in scope of regulations, are you aware of any imported products that are subsequently re-exported in the same packaging without being used in New Zealand?   * Agrichemicals sold in containers and drums of 1,000 litres or less (including household pest and weed control products). Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Plastic bale wrap and silage sheet. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Small plastic bags (40 kilograms or less when full) containing products such as seed, feed, fertiliser, soil and crop inputs, farm and animal supplements. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Bulk woven polypropylene bags (over 40 kilograms when full) containing products such as seed, feed, fertiliser, soil amendments, minerals and bulk nutrition. Yes | No. Comments (optional): \_\_\_\_\_\_\_ |
| 10. | The following products are out of scope of the regulations proposed through this consultation. However, they may be considered for regulation in future. Do you support their inclusion in a regulated product stewardship scheme in future, subject to further government consideration?   * Irrigation piping. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Shrink/pallet wrap. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Tunnel house covers. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Wool fadges. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Potted plant pots. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Vineyard netting. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Hail netting and other coverings. Yes | No. Comments (optional): \_\_\_\_\_\_\_ * Other agricultural plastic products. Yes | No. If yes, please specify which ones. |
| 11. | Do you support the proposal to require the product stewardship organisation to provide a take-back service for in-scope products, and to prescribe requirements for that service (eg, that the collection network covers enough of the country)? Yes | No. Comments (optional): \_\_\_\_\_\_\_ |
| 12. | Do you support the proposal that the Ministry will charge the accredited scheme to recover the costs of monitoring the performance of the scheme? Yes | No. Comments (optional): \_\_\_\_\_\_\_ |
| 13. a) | Do you agree with the description of the expected impacts of Option 1: Introduce WMA regulations?  Yes | No. Comments (optional): \_\_\_\_\_\_\_ |
| b) | Are you aware of other data or information that would help us assess the impacts of this option?  Yes | No. If yes, please specify. |

* 1. Option 2: No action (maintain the voluntary approach)

### What does this option involve?

Under this option, no WMA regulations would be introduced to support product stewardship of agrichemical containers, residual agrichemicals, and farm plastics. Producers’ and importers’ participation in stewardship schemes for these products would remain voluntary.

If regulations are not made, the new scheme could either start operating on a voluntary basis, or not proceed (see [section 2.3](#TheGreenFarms)). If the new scheme does not proceed, Agrecovery and Plasback may continue their voluntary schemes. However, this is not guaranteed, and both schemes face challenges, primarily due to free-riders and to the inability to increase capacity and create efficiencies under a voluntary framework.

### What are the expected impacts of this option?

Under this option, producers’ and importers’ participation in Green-farms (or other product stewardship schemes) is unlikely to increase beyond current levels. Without additional revenue from new participating producers and importers, the scheme could not expand current take-back services to keep up with demand from farmers. Continuing with only one collection truck each for the North Island and South Island, some parts of New Zealand would likely continue to be poorly serviced (especially in the North Island).

Free-riding would continue to be a burden on the voluntary scheme and the producers and consumers who are participating already. It is not always possible to identify and exclude products from non-participating brands at collection.

Some of the producers currently in the Agrecovery scheme voluntarily may decide to withdraw if their competitors are not paying fees (meaning those competitors can therefore keep their prices lower).

At the same time, it would not be financially viable for the scheme to invest in additional processing infrastructure unless higher quantities of materials are collected, to ensure new equipment operates at full capacity.

| Questions | | |
| --- | --- | --- |
| 14. a) | Do you agree with the description of the expected impacts of Option 2: No action (maintain the voluntary approach)? Yes | No. Comments (optional): \_\_\_\_\_\_\_ |
| b) | Are you aware of other data or information that would help us assess the impacts of this option?  Yes | No. If yes, please specify. |

1. Responsibilities of participants under the proposed regulations

[Table 5](#Table5) shows the proposed regulated responsibilities of key participants, as well as the voluntary actions they may take under the proposed regulatory option.

The regulated parties would be the accredited scheme manager, and those that sell and distribute in-scope agrichemicals and farm plastics. Farmers and growers would not be regulated.

Table 5: Responsibilities under proposed regulations

| Participants | Responsibilities | Optional voluntary actions |
| --- | --- | --- |
| Producers (first entry to market) of Category 1 products[[35]](#footnote-36)  Brand owners, domestic manufacturers, importers | Sell in accordance with the scheme as follows.   * Register with the scheme. * Report to the scheme their quarterly volumes placed on the market. * Pay to the scheme the stewardship fees for their products. * Keep records of fee payments and provide these to the Ministry on request. | * Encourage their customers to engage with the scheme. * Encourage innovation of packaging and product design to reduce mixed polymers[[36]](#footnote-37) and improve labelling for ease of recycling. |
| Distributors of Category 1 products  Wholesalers, retailers, farm contractors | None | * Actively engage with and promote the scheme to their customers and suppliers. * Provide collection sites as negotiated with the scheme. * Inform the PSO of Category 1 product brands they distribute. |
| Producers (first entry to market) of Category 2 and Category 3 products[[37]](#footnote-38)  Brand owners, domestic manufacturers, importers | None | * Participate in field trials for the take-back and recycling of those products, and contribute to field trial costs as negotiated with the scheme. * Encourage their customers to engage with the scheme. * Encourage innovation of packaging and product design to reduce mixed polymers and improve labelling for ease of recycling. |
| Distributors of Category 2 and Category 3 products  Wholesalers, retailers, farm contractors | None | * Actively engage with and promote the scheme to their customers and suppliers. * Provide collection sites for trials as negotiated with the scheme. |
| PSO | * Meet scheme objectives within the proposed timeframes and regularly report as specified in accreditation application. * Manage the scheme, including collection of fees and provision of take-back and recycling services in line with regulations. * Collect specified information and provide this to the Ministry on request. * Pay monitoring fee to the Ministry. | * Encourage innovation of packaging and product design to reduce mixed polymers and improve labelling for ease of recycling. * Develop additional agrichemical and farm plastic take-back systems and fees, and propose for future regulation. |
| **Consumers**  Farmers, growers, other product users | None | * Take unwanted regulated products to a collection site, or use on-farm collection service if available. * Select farm contractors that actively support the scheme. * For dairy farmers, participate in Fonterra’s Co-operative Difference scheme,[[38]](#footnote-39) and inform the accredited scheme about their participation. |
| **Others**  Collection site managers, collectors, transporters, recyclers | Fulfil any contractual obligations with the accredited scheme (existing responsibility, not introduced by the regulations). | * Actively engage with and promote the scheme to customers and suppliers. |

| Question | | |
| --- | --- | --- |
| 15. | If you had to take part in the proposed regulated scheme, how would this affect your business?  Please give details of anticipated costs, benefits and any other impacts. |

1. Compliance monitoring and enforcement

The Ministry would be responsible for any monitoring and enforcement related to the proposed new regulations under the WMA. Monitoring and enforcement will not be delegated to the accredited scheme, but the PSO will have contractual relationships with the obligated parties. The WMA allows for enforcement proceedings. Infringement offences are not provided for.

Where there are alleged breaches or non-compliance, WMA enforcement tools may be used to bring about positive behaviour change and to deter future offences. Enforcement measures would be proportionate to the seriousness of the non-compliance, following an investigation. Penalties for contravening regulations include fines of up to $100,000 ([sections 65](https://www.legislation.govt.nz/act/public/2008/0089/latest/whole.html#DLM1154586) and [67](https://www.legislation.govt.nz/act/public/2008/0089/latest/whole.html#DLM1154586) of the WMA).

As part of selling the products exclusively in accordance with an accredited scheme, the PSO would set up agreements with participants. Matters set out in such agreements would include record-keeping, declaring product quantities sold, paying the stewardship fee and informing consumers at point-of-sale about the recycling services. If liable parties do not comply, the PSO may escalate the matter to the Ministry for potential investigation and enforcement.

1. How to have your say

The Government welcomes your feedback on this consultation document. The questions throughout this document are a guide only and you do not have to answer them all.

To ensure your point of view is clearly understood, you should explain your rationale, and provide supporting evidence where appropriate.

## Timeframes

This consultation starts on 31 March 2025 and ends on 1 June 2025.

When the consultation period has ended, we will consider the feedback, and announce decisions on the regulations for the in-scope products.

## How to provide feedback

There are two ways you can make a submission:

* via Citizen Space, our consultation hub: [Whakawhiti kōrero – Have your say](https://consult.environment.govt.nz/)
* by writing your own submission.

If you want to write your own submission, you can provide this as an uploaded file in Citizen Space.

We request that you don’t email or post submissions, as this makes analysis more difficult. However, if you need to do so, please send written submissions to: Resource Efficiency Policy team, Ministry for the Environment, PO Box 10362, Wellington 6143. Please include:

* your name or organisation
* your postal address
* your telephone number
* your email address.

If you are emailing your feedback, send it to [rps@mfe.govt.nz](mailto:rps@mfe.govt.nz) as a:

* PDF or
* Microsoft Word document (2003 or later version).

**Submissions close at 11.59pm, 1 June 2025.**

## More information

Please direct any queries to one of the addresses below.

Email: [rps@mfe.govt.nz](mailto:rps@mfe.govt.nz)

Postal: Resource Efficiency Policy team, Ministry for the Environment, PO Box 10362, Wellington 6143

## Publishing and releasing submissions

All or part of any written comments (including names of submitters), may be published on the [Ministry for the Environment’s website](http://www.environment.govt.nz/). Unless you clearly specify otherwise in your submission, the Ministry will consider that you have consented to website posting of both your submission and your name.

Contents of submissions may be released to the public under the Official Information Act 1982 (OIA) following requests to the Ministry (including via email). Please advise if you have any objection to the release of any information contained in a submission and, in particular:

* which part(s) you consider should be withheld
* the reason(s) for withholding the information.

We will take into account all such objections when responding to requests for copies of, and information on, submissions to this document under the OIA.

The Privacy Act 2020 applies certain principles about the collection, use and disclosure of information about individuals by various agencies, including the Ministry for the Environment. It governs access by individuals to information about themselves held by agencies. Any personal information you supply to the Ministry in the course of making a submission will be used by the Ministry only in relation to the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the Ministry may publish.

# Appendix 1: Annual sale quantities of agrichemical containers and other farm plastics

The figures below show the estimated product quantities sold in New Zealand for the categories covered by the accredited scheme.

The 2017–2019 data for small bags, large bags, bale wrap and silage sheet is based on a survey of retailers and producers by PwC for Agrecovery in 2020.[[39]](#footnote-40) The results were extrapolated for subsequent years by applying an estimated annual growth rate per product type.[[40]](#footnote-41)

For agrichemical containers, the data are based on actual sales data from companies participating in Agrecovery’s current voluntary scheme, as recorded in their Statement of Service Performance Report 2019. These data were increased by 25 per cent to account for non-participating brands. The quantities were extrapolated for subsequent years by applying an estimated annual growth rate of 6 per cent.

Figure 1: Quantity of bags and agrichemical containers sold annually

Figure 2: Quantity of bale wrap and silage sheet sold annually

# Appendix 2: Amount of farm plastics collected by Agrecovery and Plasback

Table 6: Agrichemical containers and other farm plastic quantities collected by Agrecovery, 2021–23 (tonnes)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Product | Plastic type | 2021 | 2022 | 2023 |
| Bale wrap | Linear low-density polyethylene (LLDPE) | - | - | 826 |
| Small bags | Low-density polyethylene (LDPE) | 3 | 5 | 27 |
| Small bags | Woven polypropylene (PP) | - | 4 | 18 |
| Containers and drums | High-density polyethylene (HDPE) | 473 | 532 | 629.5 |
| Bulk bags | PP | 125 | 146 | 82 |
| Wool fadges | HDPE | - | 111 | 34 |
| Twine | PP | - | - | 25 |
| Animal health products | HDPE and LDPE | - | - | 0.5 |
| Hail netting | HDPE | - | - | 20 |
| **Total** | | **601** | **798** | **1,662** |

Source: Agrecovery. 2024. Personal communication.

Table 7: Farm plastic quantities collected by Plasback, 2021–23 (tonnes)

|  |  |  |  |
| --- | --- | --- | --- |
| Plastic type | 2021 | 2022 | 2023 |
| LLDPE | 2,100 | 4,900 | 5,500 |
| LDPE | 22 | 16 | 83 |
| Medium density polyethylene (MDPE) | - | 120 | 21 |
| HDPE | 150 | 45 | 138 |
| PP | 329 | 412 | 370 |
| Total | 2,601 | 5,493 | 6,112 |

Source: Plasback. 2024. Personal communication.

# Appendix 3: Co-design of the Green-farms Product Stewardship Scheme

The Agrecovery Foundation led two co-design processes with stakeholders (funded by the Waste Minimisation Fund) for product stewardship schemes covering:

* agrichemicals and their containers, reporting in 2020
* farm plastics (including an update to the co-design for agrichemicals and their containers), reporting in 2022.

The elements of both schemes were combined into the Green-farms scheme and proposed to the Ministry in June 2022.

[Table 8](#Table8) lists the stakeholders consulted in the two co-design processes.

Table 8: Stakeholder engagement in the Green-farms co-design[[41]](#footnote-42)

| Dates | Activity | Participating stakeholders |
| --- | --- | --- |
| 1 April 2019 /  17 June 2019 /  26 August 2019 | Three stakeholder meetings, as part of the  co-design process for a scheme covering only agrichemicals and their containers | * 3R Group * Agcarm * Agrecovery * Ballance Agri-Nutrients * Chemwaste Industries * Ecolab * Federated Farmers * GEA FIL * Fonterra * Gisborne District Council * Horticulture New Zealand * MSD * PGG Wrightson * Ravensdown * Rural Contractors * Sustainable Winegrowing NZ * Syngenta * Synlait Milk * Timaru District Council * True North Consulting * Wairarapa Weedsprayers * Waste Management Technical Services * WasteMINZ |
| November–December 2019 | Survey of agrichemical brand owners on proposed fee rates for different categories of agrichemicals, to understand financial impact | Survey circulated to 61 brand owners, of which about 50% responded |
| 22 June 2020 | Webinar: Farm Plastics Product Stewardship | Attended by 56 stakeholders |
| June–July 2020 | Survey (by PwC) to quantify farm plastics used in 2017, 2018 and 2019, and gather perceptions of existing services for farmers and growers to manage disposal of farm plastics | Survey sent to 42 retailers and producers of seed, feed and fertiliser bags and crop packaging films, who together represented the largest participants in the sector – response rate was 71%, including all major sector participants |
| 19 August 2020 /  4 May 2021 / 15 December 2021 | Farm Plastics Advisory Group meetings | Producers, industry associations in the agricultural sector |
| 2 November 2020 | Farmer Reference Group Meeting, discussing scheme options | Six representatives from farmer and grower groups |
| November 2020 | Nine one-stop shop events in Canterbury, trialling drop-off centres for farm plastic waste  Interviews with farmers and growers to understand their preferences and determine if the centres would work | Farmers and growers |
| January 2021 | Farmer and grower survey, gathering feedback on preferences for farm plastics recycling schemes | Survey sent to all members of Federated Farmers and Horticulture NZ – 132 responses received |
| 24–25 March 2021 | Sixteen interviews with farmers and growers during the South Island Agricultural Field Day in Kirwee, Canterbury | Farmers and growers |
| 14 May 2021 | Meeting with Plasback, discussing scheme options and Ministry guidelines for product stewardship schemes | Plasback |
| 14 June 2021 /  17 November 2021 | Bale Wrap and Silage Film Reference Group meetings | Six producers of bale wrap and silage film |
| 25 August 2021 | WasteMINZ webinar, presenting an update on the Farm Plastics Project | WasteMINZ Product Stewardship Sector Group |
| 15 September 2021 | WasteMINZ webinar to the Territorial Authorities Officers Forum, updating on the Farm Plastics Project, followed by one-on-one engagement with several territorial authorities | Territorial Authorities Officers Forum |
| 4 November 2021 | Visit of farm retail stores in Fielding to understand the small seed, feed and fertiliser bag market | Farm retailers (Farm Source, PGG Wrightson, Farmlands) |
| 11 November 2021 | Presentation to Between the Domes Catchment Group, giving an overview of the Farm Plastics Project, with a pitch to run a trial in Southland to test the design thinking | Between the Domes Catchment Group |
| 17 March 2022 | Presentation to the NZ Feed Manufacturers Association | NZ Feed Manufacturers Association |

# Appendix 4: Preliminary assessment of the policy options

Through the proposed policy measures, our aim is to significantly reduce harm to people and the environment arising from agrichemicals, their containers, and farm plastics when they become waste.

We have assessed the options under consideration based on three criteria, which are outlined in [table 9](#Table9).

Table 9: Criteria for assessing the options

|  |  |
| --- | --- |
| Criterion | Description |
| Effectiveness | Is the option likely to support achievement of the policy objective (ie, significantly reduce harm to people and the environment arising from agrichemicals, their containers, and farm plastics when they become waste)? |
| Supply chain responsibility | Is the option likely to:   * move a fair share of costs and responsibilities for product impacts from the public and councils to the producers and consumers * encourage full sector participation and shared responsibility for achieving the policy objective? |
| Efficiency (costs and benefits) | * Does the option add costs to affected parties? * Do the expected additional benefits of the option (relative to the status quo) outweigh the expected additional costs? |

The objective and assessment criteria directly relate to the problem identified in [section 2.1](#_2.1_What_is). The criteria also align with the objective of product stewardship in [section 8](https://www.legislation.govt.nz/act/public/2008/0089/latest/whole.html#DLM1154586) of the WMA, namely to:

…encourage (and, in certain circumstances, require) the people and organisations involved in the life of a product to share responsibility for—

1. ensuring there is effective reduction, reuse, recycling, or recovery of the product; and
2. managing any environmental harm arising from the product when it becomes waste.

[Table 10](#Table10) presents a preliminary assessment of the two options against these criteria.

Table 10: Preliminary assessment of the options

| Criterion | | Option 1 – Introduce WMA regulations | Option 2 – No action (maintain the voluntary approach) |
| --- | --- | --- | --- |
| **Effectiveness**  Is the option likely to help us achieve the policy objective (ie, significantly reduce harm arising from agrichemicals, their containers, and farm plastics when they become waste)? | | ***Yes***  The obligation to ‘act in accordance with the scheme’ and pay stewardship fees is likely to increase product collection (since the fees will generate the funding for take-back services, which farmers can use for free).  This reduces the incentive for burning or burying on-farm. It also reduces the harm from landfilling and losing recyclable resources, as the product is collected for recycling. | ***No***  If the current voluntary approach continues, producers’ and importers’ participation in stewardship schemes is unlikely to increase significantly. Without the higher fee revenue from increased producer/importer participation and efficiencies of scale, take-back and recycling services are unlikely to expand significantly, and some parts of the country would remain poorly serviced. Also, it is not guaranteed that the voluntary schemes would continue to operate.  Therefore, on-farm disposal of in-scope products is unlikely to decrease. |
| **Supply chain responsibility**  Is the option likely to: | Shift a fair share of costs and responsibilities to producers and product consumers? | Yes  There would be a fee on imports and domestic manufacture of agrichemicals sold in specified containers, and on the most-used farm plastics (bale wrap and silage sheet, small and large bags). The fee would cover end-of-life management.  The fee would likely be passed on to consumers through the price of the products, but take-back services would be free of charge to consumers. The end-of-life costs are therefore shifted from councils and communities to producers and consumers. | ***No***  Under the current voluntary approach, only those agrichemical producers / importers who opt in to the Agrecovery scheme and those farmers (and other consumers) who choose to pay for Plasback collections share costs and responsibility for the end-of-life management of their products.  It is not always feasible for the Agrecovery collection to exclude non-participating brands. This adds costs, borne by the participating producers. |
| Encourage full sector participation and shared responsibility for achieving the policy objectives? | ***Yes***  All producers and importers of the regulated products must participate in and comply with the accredited scheme. This creates a level playing field for those sectors. | ***No***  It is unlikely that sector participation will increase if the current voluntary arrangements continue. |
| **Efficiency (costs and benefits)** | Does the option add costs to affected parties? | ***Yes***  There would be costs for regulated producers and importers (eg, record-keeping, reporting to the PSO, paying stewardship fees). For agrichemical producers and importers that already participate in the Agrecovery voluntary scheme, these costs would replace (at least partly) the voluntary scheme fees.  The stewardship fee will likely be passed on to farmers and other consumers through the price of in-scope products. However, the proposed fees are a small proportion of the overall product cost (typically around 1 per cent or less).  For consumers who currently pay for Plasback collections, the regulated fees will replace those costs and, in some cases, may result in savings. | ***No***  No regulated stewardship fee would be introduced, hence no new costs for producers, importers and consumers. |
| Do the expected additional benefits of the option (relative to the status quo) outweigh the expected additional costs? | ***Yes***  A provisional cost-benefit analysis by the Ministry for the Environment with support from Agrecovery indicates that the net present value (over 30 years) of expected additional benefits is higher than the net present value of additional costs. | ***Not applicable***  This option represents the status quo. |

1. For in-scope agrichemicals, the fee only covers the end-of-life management of residual agrichemicals in the containers that farmers (and other consumers) give back to the scheme. For non-residual/bulk agricultural chemical recovery and disposal, Agrecovery will continue its user-pays service. [↑](#footnote-ref-2)
2. New Zealand Government. 2020. *New Zealand Gazette*.[Declaration of Priority Products Notice 2020](https://gazette.govt.nz/notice/id/2020-go4533) (updated 29 September 2020). [↑](#footnote-ref-3)
3. Product stewardship is where people and organisations involved in the life cycle of a product (eg, producers, importers, retailers and consumers) share responsibility for minimising environmental harm and maximising net benefit from the product at the end of its useful life. [↑](#footnote-ref-4)
4. In liquid or solid form and excluding gases. [↑](#footnote-ref-5)
5. New Zealand Government. 2020. *New Zealand Gazette*.[Declaration of Priority Products Notice 2020](https://gazette.govt.nz/notice/id/2020-go4533) (updated 29 September 2020). [↑](#footnote-ref-6)
6. Ministry for the Environment. 2019. [*Proposed priority products and priority product stewardship scheme guidelines: Consultation document.*](https://environment.govt.nz/assets/Publications/Files/proposed-priority-products-and-priority-product-stewardship-scheme-guidelines.pdf) Wellington: Ministry for the Environment. [↑](#footnote-ref-7)
7. Environment Canterbury Regional Council. 2015. [*New Zealand Rural Waste Minimisation. Phase 1 Risk Assessment. Summary Report*](https://ndhadeliver.natlib.govt.nz/delivery/DeliveryManagerServlet?dps_pid=IE25637408). Report No. R15/145, prepared for Environment Canterbury by True North Consulting Ltd. [↑](#footnote-ref-8)
8. For example, the 2023 cyclonic floods in Hawke’s Bay, or the landfill spill-over into the Fox River in 2019. [↑](#footnote-ref-9)
9. For example, after decades of waste agrichemical collections co-funded by regional councils and the Government, the Government co-funded a DDT Muster to collect the remainder. This project found many examples of stored DDT which could not be collected for destruction, due to user-pays constraints (Ministry for the Environment. 2019. [*Proposed priority products and priority product stewardship scheme guidelines: Consultation document*](https://environment.govt.nz/assets/Publications/Files/proposed-priority-products-and-priority-product-stewardship-scheme-guidelines.pdf). Wellington: Ministry for the Environment.p 40). [↑](#footnote-ref-10)
10. Agrecovery and a number of other commercial companies provide these services. [↑](#footnote-ref-11)
11. See, for example, Ministry for the Environment. [Research into attitudes to waste and recycling](https://environment.govt.nz/facts-and-science/waste/research-into-attitudes-to-waste-and-recycling/). Retrieved 21 March 2025. [↑](#footnote-ref-12)
12. Agrecovery Foundation. 2022. [*Green-farms Product Stewardship Scheme Co-Design Report*](https://agrecovery.co.nz/wp-content/uploads/2020/09/GREEN-FARMS-Product-Stewardship-Scheme-Co-design-Report-Final-July-2022.pdf)*.* pp 15–16. [↑](#footnote-ref-13)
13. Hepburn I, Keeling C. 2013. [*Non-natural Rural Wastes - Site Survey Data Analysis: Summary Report*](https://api.ecan.govt.nz/TrimPublicAPI/documents/download/1931111)*.* Environment Canterbury Report No. R13/97. Prepared for Environment Canterbury.

    Matthews J. 2014. [*Rural waste surveys data analysis Waikato & Bay of Plenty*](https://www.waikatoregion.govt.nz/assets/WRC/WRC-2019/TR201455.pdf). Waikato Regional Council Technical Report 2014/55. Prepared for Waikato Regional Council by GHD Ltd.

    Reynolds, S. 2022. [*Burning Plastic. Understanding the behavioural patterns of Sheep and Beef farmers related to farm waste streams*](https://ruralleaders.co.nz/wp-content/uploads/2022/04/Burning-Plastic-Sam-Reynolds.pdf). Report prepared as part of the Kellogg Rural Leadership Programme. [↑](#footnote-ref-14)
14. That is, the [Hazardous Substances (Disposal) Notice 2017](https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/GHS2/Consolidated_Hazardous_Substances_Disposal_Notice_2017.pdf) and [Health and Safety at Work (Hazardous Substances) Regulations 2017](https://www.legislation.govt.nz/regulation/public/2017/0131/latest/DLM7309401.html). [↑](#footnote-ref-15)
15. Verma R, Vinoda KS, Papireddy M, Gowda ANS. 2016. [Toxic Pollutants from Plastic Waste - A Review](https://doi.org/10.1016/j.proenv.2016.07.069). *Procedia Environmental Sciences* 35: 701–708. [↑](#footnote-ref-16)
16. Food and Agriculture Organization of the United Nations (FAO). 2021. [*Assessment of agricultural plastics and their sustainability: A call for action*](https://doi.org/10.4060/cb7856en)*.* Rome: FAO. [↑](#footnote-ref-17)
17. See [table 6](#Table6) in [appendix 2](#_Appendix_2:_Amount). [↑](#footnote-ref-18)
18. See [table 7](#Table7) in [appendix 2](#_Appendix_2:_Amount). [↑](#footnote-ref-19)
19. New Zealand Government. 2020. *New Zealand Gazette*.[Declaration of Priority Products Notice 2020](https://gazette.govt.nz/notice/id/2020-go4533) (updated 29 September 2020). [↑](#footnote-ref-20)
20. Ministry for the Environment. 2020. [*Proposed priority products and priority product stewardship scheme guidelines: Summary of submissions*](https://environment.govt.nz/assets/Publications/Files/priority-products-summary-of-submissions.pdf). Wellington: Ministry for the Environment. [↑](#footnote-ref-21)
21. For the list of regulations, see [section 22](https://www.legislation.govt.nz/act/public/2008/0089/latest/DLM1154586.html) and [23](https://www.legislation.govt.nz/act/public/2008/0089/latest/DLM1154587.html) of the WMA. [↑](#footnote-ref-22)
22. Agrecovery trustees represent Federated Farmers, DairyNZ, Horticulture New Zealand, Animal and Plant Health New Zealand, Rural Contractors New Zealand, distributors of agrichemical and animal health products, and local government. [↑](#footnote-ref-23)
23. For non-residual/bulk agricultural chemical recovery and disposal, Agrecovery will continue to provide a user-pays service. It will also work with local government to support the agrichemical component of hazardous waste collections, where these are provided. [↑](#footnote-ref-24)
24. The eight regions are: Southland and Otago; Canterbury; Nelson, Marlborough and the West Coast; Wellington, Manawatu and Whanganui; East Coast, North Island; Waikato and Central North Island; Bay of Plenty and Thames Valley; Auckland and Northland. [↑](#footnote-ref-25)
25. For more information, see Ministry for the Environment. [Basel Convention](https://environment.govt.nz/what-government-is-doing/international-action/basel-convention/). Retrieved 21 March 2025. [↑](#footnote-ref-26)
26. New Zealand Government. 2020. *New Zealand Gazette*.[Declaration of Priority Products Notice 2020](https://gazette.govt.nz/notice/id/2020-go4533) (updated 29 September 2020). [↑](#footnote-ref-27)
27. Such a requirement has recently been put in place for tyres. See [Waste Minimisation (Tyres) Regulations 2023](https://www.legislation.govt.nz/regulation/public/2023/0263/latest/LMS823610.html?search=ts_act%40bill%40regulation%40deemedreg_Waste+Minimisation+(Tyres)+Regulations+2023_resel_25_a&p=1), which entered into force on 1 March 2024. [↑](#footnote-ref-28)
28. Plasback estimates that a tonne would typically include about 40 rolls of stretch film, and each roll would conservatively make about 22 large bales. The cost per bale would therefore be about $0.52. [↑](#footnote-ref-29)
29. In the case of the Agrecovery scheme for agrichemicals and their containers, and a recently commenced small bags trial. [↑](#footnote-ref-30)
30. In the case of the Plasback scheme for farm plastics. [↑](#footnote-ref-31)
31. Irish Farm Film Producers Group. 2022. [Operational report 2021](https://farmplastics.ie/wp-content/uploads/2023/05/IFFPG-Ops-report-21-Web.pdf), p.3. [↑](#footnote-ref-32)
32. For more information, see Fonterra. [Together we make the difference](https://www.fonterra.com/nz/en/campaign/make-the-difference.html#what-co-op-diff). Retrieved 21 March 2025. [↑](#footnote-ref-33)
33. Product cost estimates provided by Agrecovery, and for bale wrap by Plasback. For bale wrap, the proposed fee on a full roll of stretch film would be about $11.50, which would make about 22 large bales. This results in an estimate of $0.52 per bale to run an expanded take-back and recycling system. [↑](#footnote-ref-34)
34. This is the typical charge to farmers for cutting, baling and wrapping a bale of feed. [↑](#footnote-ref-35)
35. The products in Category 1 are: agrichemicals sold in plastic containers and drums, of 1,000 litres or less (including household pest and weed control products); plastic bale wrap and silage sheet; small plastic bags (40 kilograms or less when full); bulk woven polypropylene bags (over 40 kilograms when full). [↑](#footnote-ref-36)
36. Products made of mixed plastic types are more difficult to recycle. [↑](#footnote-ref-37)
37. The products in Category 2 are: irrigation piping, shrink/pallet wrap, tunnel house covers, wool fadges, and potted plant pots. The products in Category 3 are: vineyard netting, hail netting and other coverings. [↑](#footnote-ref-38)
38. For more information, see Fonterra. [Together we make the difference](https://www.fonterra.com/nz/en/campaign/make-the-difference.html#what-co-op-diff). Retrieved 21 March 2025. [↑](#footnote-ref-39)
39. Agrecovery Foundation. 2020. [*Farm Plastics Priority Product Stewardship Scheme: Materials Flow Analysis*](https://agrecovery.co.nz/wp-content/uploads/2020/09/Farm-Plastics-Materials-Flow-Analysis-web.pdf). Prepared for the Agrecovery Foundation by PwC. [↑](#footnote-ref-40)
40. Small feed bags: 6% per year; small seed bags: 5% per year; small fertiliser bags: 0% per year; large bags: 3% per year; bale wrap and silage sheet: 4% per year. [↑](#footnote-ref-41)
41. Agrecovery Foundation. 2022. [*Green-farms Product Stewardship Scheme Co-Design Report*](https://agrecovery.co.nz/wp-content/uploads/2020/09/GREEN-FARMS-Product-Stewardship-Scheme-Co-design-Report-Final-July-2022.pdf)*.* pp 110–114. [↑](#footnote-ref-42)