

Glossary

APRG – Agriculture Plastic Recycling Group

EHF – Environmental Handling Fee

EPR – Extended Producer Responsibility

First Sellers – A term used to describe the industry producer or industry manufacture supplying an item that is managed by an Extended Producer Responsibility (EPR) program such as grain bags or twine.

Growers – are the individuals and farmers in the agricultural community that are growing crops or raising cattle

Producer – Under EPR legislation, the producer of a product and it's packaging could be the manufacturer, the first importer, or the first seller of the product and it's packaging.

List of questions found in this document.

1.	What are ag-plastics?	2
2.	What typically happens to ag-plastics?	2
3.	Why is there a need to recycle ag-plastics?	2
4.	Are there any estimates of the amount of ag-plastic generated in Alberta in a year? (Additionally, are there any estimates of the amount of grain bags and plastic twine generated in Alberta in a year?)	2
5.	This pilot project currently includes only grain bags and plastic twine. Why?	2
6.	Are there any plans to expand the scope? Why or why not?	2
7.	When did the pilot project begin? When will it end?	3
8.	How will it be determined if the project is a success?	3
9.	Is there a plan to continue with the collection sites once the pilot has ended?	3
10.	Are there collections sites throughout Alberta?	3
11.	How were the locations determined?	3
12.	What sort of uptake have you had so far?	3
13.	What happens to the materials once they are collected at the collection sites?	3
14.	What are some of the end uses for the recycled materials?	3
15.	What is extended producer responsibility (EPR)?	4
16.	How would an EPR system be funded?	4
17.	Why do many programs opt for a (visible) EHF?	4
18.	Is there value in used ag-plastics?	4
19.	If ag-plastics have value, why do growers need to pay for an EHF?	5
20.	What will be the cost to implement EPR for ag-plastics in Alberta?	5
21.	Under an ag-plastics EPR program in Alberta, will there be an ongoing cost to the municipalities for collection or will producer/first seller funding offset the costs for collection?	5
22.	Will ag-plastic EPR programs in Alberta be managed as a deposit program that will be refunded when the product is returned to a collection site?	5
23.	How can a stakeholder be assured that the revenue being collected through the program is properly handled?	5

1. What are ag-plastics?

- Growers use many tools made of plastics to help them manage agricultural operations to produce food, including small (<23L) chemical containers/jugs and other types of containers such as totes and drums; seed, pesticide, and inoculant bags; twine; grain bags; silage and bale wrap; and tarps.

2. What typically happens to ag-plastics?

- Cleanfarms operates recycling programs for multiple types of ag-plastics (small/large chemical containers; grain bags; twine; silage plastic; bale wrap; seed, pesticide, and inoculant bags) across Canada. These plastics are typically converted into a flake or pellet and used in the manufacturing process of new plastic products. Other ag-plastics that aren't included in Cleanfarms' collection programs are typically landfilled, burned or buried on-farm (the latter two are discouraged and prohibited practices in Alberta).

3. Why is there a need to recycle ag-plastics?

- Municipalities and Waste Commissions have difficulties managing ag-plastic at landfills. The bulk and material properties impede proper landfill cell operation, while twine and netwrap cause issues with packing equipment.
- As mentioned in #2, on-farm burial is discouraged due to the long-term legacy of plastics, while burning is prohibited in Alberta due to the toxic smoke that is emitted.
- Recycling ag-plastic contributes to cleaner farms and farm communities.
- Growers who recycle ag-plastics are adding to their farm sustainability and the stewarding of their land for future generations.
- Recycling ag-plastics recovers these resource materials to be used again, contributing to a circular economy and a better environment.

4. Are there any estimates of the amount of ag-plastic generated in Alberta in a year? (Additionally, are there any estimates of the amount of grain bags and plastic twine generated in Alberta in a year?)

- Please see the Alberta Agricultural Waste Characterization Study, completed in 2019 for the most up to date estimates in Alberta: <https://cleanfarms.ca/wp-content/uploads/2019/10/Alberta-Ag-Waste-Characterization-Study-Update-Oct-2019.pdf>
- All Ag-Plastics (estimated 7,044 – 11,384 metric tonnes)
- Grain bags (estimated 1,480 - 2,500 metric tonnes)
- Twine (estimated 1,320 - 3,000 metric tonnes)

5. This pilot project currently includes only grain bags and plastic twine. Why?

- Grain bags and twine have the most stable end markets and are easiest to recycle compared to some of the other ag-plastics. Cleanfarms intends to develop programs for the other ag-plastics as the recycling options evolve.

6. Are there any plans to expand the scope? Why or why not?

- Funding for this pilot project was for grain bags and twine only. However, Cleanfarms is continually expanding its program base to encompass other materials. Currently, Cleanfarms

operates a separate pilot program for the collection of silage plastic and bale wrap in Alberta (April 1, 2020, through March 31, 2023). The program is funded in part by Agriculture and Agri-Food Canada's Canadian Agricultural Strategic Priorities Program (CASPP).

7. When did the pilot project begin? When will it end?

- The program is being funded through a grant from the Government of Alberta (initially \$1 million over three years; 2019 - 2022) and is financially administered by Alberta Beef Producers. The program is led by the multi-stakeholder Agricultural Plastics Recycling Group (APRG), while Cleanfarms, Canada's agricultural stewardship organization, operates the program. The pilot program has been granted additional funds to continue collection until December 31, 2025.

8. How will it be determined if the project is a success?

- The goal of the pilot is to test logistics and to assess costs and resources for the implementation of a permanent program including collecting, managing, and recycling materials.

9. Is there a plan to continue with the collection sites once the pilot has ended?

- Currently, the APRG is gathering letters of support from commodity groups to present to the ministry of Ag and Environment and show them that growers want this program to continue.

10. Are there collection sites throughout Alberta?

- As of December 1, 2023, there are 47 collection partners with 148 collection locations which accept either grain bags, or twine, or both. The complete list with a map, directions, collection style, and site contact details can be found here: <https://cleanfarms.ca/alberta-ag-plastic-recycle-it-program-details/#collection-sites>

11. How were the locations determined?

- Sites were selected based on several factors, including meeting minimum site requirements for the safe handling and storage of material, prior experience in managing agricultural plastics for recycling, willingness to participate, and geographic distribution to ensure accessibility across the province.

12. What sort of uptake have you had so far?

- Agricultural growers in Alberta are keen to be able to recycle grain bags and twine. We know from studies that 92% of Alberta agricultural growers (crops or livestock) would be very (68%) or somewhat (24%) likely to participate in a recycling program for grain bags if a collection site was in their area. Similarly, 86% said they would be very (56%) or somewhat (30%) likely to participate in a twine recycling program if a collection facility was in their area. Every year, as more growers become aware of the program, collection volumes increase.

13. What happens to the materials once they are collected at the collection sites?

- Currently, grain bags are shipped to one of three recycling facilities, two in Alberta and one in the US, while twine is shipped to one of two recyclers in the US for cleaning, processing, and pelletizing.

14. What are some of the end uses for the recycled materials?

- Grain bags are converted into plastic pellets, those pellets are then used to manufacture new film plastic products such as industrial garbage bags and plastic lumber; research and development is

allowing a growing percentage of these pellets to be used in the manufacturing of new grain bags and silage cover.

- Twine is recycled into plastic pellets and those pellets are then blended with other plastic resins to manufacture things like planter pots, cars parts, and plastic lumber.

15. What is extended producer responsibility (EPR)?

EPR is a policy approach that not only requires producers of products and packaging to take responsibility for the end-of-life management for their products and packaging, but it also encourages them to design products that are more durable and recyclable, so materials and components continue to be used in the economy for as long as possible. An example of design change in agriculture is the reusable 1000L tote that, in some cases, is used to replace individual 23L single-use pesticide and fertilizer containers.

Under EPR legislation, the producer of a product and its packaging could be the manufacturer, the first importer, or the first seller of the product and its packaging.

In Alberta, EPR legislation for ag-plastics such as grain bags and twine, would place responsibility on first importers and sellers of these two materials to ensure recycling outcomes are achieved.

Benefits of EPR include:

- Transfers cost and liability from municipalities and taxpayers to producers of products and packaging (i.e., the manufacturers, first importers, or first sellers)
- Provides incentive for producers of products and packaging to improve design for reuse and recycling
- Encourages a circular economy because producers of products and packaging have a direct role in the system
- Provides provincial program consistency
- Economy of scale provides market resilience
- Harmonization enhances benefits

16. How would an EPR system be funded?

- In an EPR system, the producers of products and packaging are responsible for covering program costs. Those costs can be recouped through an environmental handling fee (EHF) or simply incorporated into the product price (as they do with any other cost). First sellers can decide how, and if, that cost is passed on to the end-user. In Saskatchewan's EPR program for grain bags, for example, they have chosen an EHF so it is visible to the customer at the point of purchase.

17. Why do many programs opt for a (visible) EHF?

- The reason is that growers and first sellers typically prefer this approach. They would rather see this cost externalized rather than have it incorporate in the product pricing.

18. Is there value in used ag-plastics?

- Yes ag-plastics have value.
- Recyclers collect and process ag-plastics, turning them into recycled plastic pellets. These recycled pellets are sold to manufacturing companies who use them to add recycled content into their product and make new products (see FAQ #14).

19. If ag-plastics have value, why do growers need to pay for an EHF?

- Although used ag-plastics do have value, that value usually does not cover the collection and transportation of the plastic to the recycler and other costs associated with extended producer responsibility.
- Transportation to recyclers is the largest cost, which is why efficient transport (maximizing the density of the used plastic) is key to successful programs.

20. What will be the cost to implement EPR for ag-plastics in Alberta?

- Because no EPR regulations have been established for ag-plastics in Alberta, costs have not yet been determined for Alberta-based programs. As an example, however, under Saskatchewan's regulated EPR program for grain bags, the program uses an EHF cost recovery model. The EHF is based on the weight of the plastic and varies with the size of the grain bag. It ends up being about 5% to 7% of the cost of the grain bag. Below is a list of some of the most common grain bag sizes used in Saskatchewan and the associated EHF in 2021.

Size (ft)	10 x300	10 x 250	9 x 250	10 x 400	9 x 300
EHF amount*	\$50	\$42	\$37	\$66	\$45

*costs applied to 2021 Saskatchewan grain bag purchases

21. Under an ag-plastics EPR program in Alberta, will there be an ongoing cost to the municipalities for collection or will producer/first seller funding offset the costs for collection?

- Because no EPR regulations have been established for ag-plastics in Alberta, this is undetermined. In Saskatchewan's model, the revenue generated through an EHF is used to cover the costs of the program which includes compensating collection sites for their role in the program as outlined in a collection site agreement with the program operator.
- Additionally, in Saskatchewan's program, collection sites are permitted to provide additional services to growers/program users at a cost.

22. Will ag-plastic EPR programs in Alberta be managed as a deposit program that will be refunded when the product is returned to a collection site?

- When talking to growers about ag-plastic recycling programs, there is a strong desire to keep things simple but also many questions about deposit systems. Deposit systems significantly increase a program's complexity and cost because of additional administration associated with refunding deposits and extra work on behalf of the collection sites. However, this does not mean that a deposit system cannot be implemented in an ag-plastic EPR program in Alberta. The flexibility inherent to EPR programs, allows stewardship organizations and/or first sellers to design the recycling programs however they need to meet the collection requirements set out in the regulations.

23. How can a stakeholder be assured that the revenue being collected through the program is properly handled?

Not-for-profit organizations, who typically run these types of programs use the following best practices:

- The organization running the program undergoes a yearly financial audit.
- A finance and audit committee is established to monitor financial accountability.
- Stewards/first sellers are subject to compliance reviews to ensure that reporting is accurate.