

Agricultural Plastics Recycling in Alberta – Whitepaper

April 27, 2018

Executive Summary

This document intends to provide an update on the state of agricultural plastics management in the Province of Alberta. It provides a history of the recycling pilot programs, surveys and research that have been done in the past decade and the current need for a provincial agricultural recycling program. It also explores the programs in other provinces as positive examples of environmental stewardship. It is the Agricultural Plastics Recycling Group's (made up of 15 stakeholder associations and connected members and partners) recommendation for the Government of Alberta to put in place recycling legislation for grain bags and twine as soon as possible.

This whitepaper will be reviewed and updated at each APRG meeting with current information. This draft is dated **April 25, 2018**.

Introduction: The Agricultural Plastics Recycling Group (APRG)

In December 2016, a working group formed to advance the discussion and action on the topic of agricultural plastics recycling. The APRG gathered stakeholders for further discussion about a provincial solution for ag plastics recycling because of concerns over the lack of options for the waste material, combined with the absence of policy for a provincial agricultural plastics diversion program. From January to June 2017, the group met with over half a dozen producer groups and communicated to over 30 producer groups in the province (representing dairy, beef and crop agricultural producers among others) to update them on the topics and issues of ag plastics waste and recycling.

In August of 2017, a group of 70 representatives from municipalities and producer groups gathered for discussions about challenges and opportunities around agricultural plastics recycling. This was the start of discussions to form policy recommendations to present to the Government of Alberta.

To include a wide group of stakeholders, the APRG extended invitations to join to agricultural producer groups, retailers, manufacturers and others in November 2017 and now, in early 2018, is proceeding to discuss policy recommendations.

Managing Ag Plastics Waste – Background

Agricultural plastics, in the form of baler twine, grain bags, bale wrap, silage plastic and feed bags of various sizes and materials are a problematic waste for agricultural producers and agricultural businesses and pose an environmental threat. Anecdotal evidence, as well as data from surveys (see links throughout the document), suggest plastics use is increasing with limited options for safe disposal. In 2013, CleanFARMS Inc., in partnership with Alberta Agriculture & Rural Development (ARD), initiated an [Alberta Agricultural Waste Characterization Study](#), to identify and quantify significant sources of paper and plastic waste on Alberta farms. The study showed that the total agricultural film waste, including grain bags and silage plastic, is an estimated 3300 to 6400 tonnes per year in Alberta. At the same time, estimates for waste twine were 2000 to 6000 tonnes per year. These volumes represent a significant waste of resources, as well as pose a logistical waste management challenge. Landfills may prohibit or limit the disposal of some agricultural plastics, more specifically twine, because of the handling challenges it presents such as potential damage to equipment. Burning on farms was listed as one of the top disposal options for four out of five agricultural plastics categories in a [2012 Agricultural](#)

[Plastics Recycling Agricultural Producers Survey](#) (pg.20). Research shows that harmful compounds are released from burning plastic at low temperatures such as open burning, and emissions such as dioxins and furans accumulate in soil and bio-accumulate in fat as they move up the food chain.

“Overall, 82% of agricultural plastics users say they are concerned about how they deal with agricultural plastics, while 87% say it is important to them to be able to recycle agricultural plastics – in fact, just under half (44%) say it is very important. The majority, however, do not feel that they can do so – 74% say it is difficult for them to recycle agricultural plastics, with half (48%) saying it is very difficult, and 63% are dissatisfied with their current access to recycling agricultural plastics.” [2012 Agricultural Plastics Recycling Agricultural Producers Survey](#) (pg.20)

Prior to these surveys, in 2007, the Recycling Council of Alberta (RCA) established a working group with representatives from the Alberta Plastics Recycling Association (APRA), the plastic manufacturing sector, retailers, recycling project operators, Alberta Agriculture, Alberta Environment, and recyclers to look at options for agricultural plastic waste. This working group established a number of initiatives, including a series of pilot projects, to assess the viability of recycling agricultural plastics in this province. One of the conclusions of the group’s work was the need for a provincial environmental stewardship program to provide sustainability for agricultural plastics recycling. As evidence from the pilot program shows, a provincial program would create equal access to recycling in all parts of the province, as well as guarantee volumes of waste to create economies of scale for plastics recycling.

Since the conclusion of the pilot projects, pockets of recycling have been established, and an increasing number of communities are interested in developing recycling programs. For example, Mountain View Regional Waste Management Commission has funded agricultural plastics recycling for a number of years. At the same time, counties, including Rocky View, Yellowhead, and Wheatland are collecting film materials such as grain bags and silage plastic, for recycling into products like garbage bags. The only challenge is, these programs only supply a recycling option to a very small percentage of the population.

Agricultural plastics management practices have been researched by the Alberta Government in a number of studies that point for the need for proper management including: [Market-Based Solutions for Used Agricultural Plastics: Survey of Municipalities](#), [Market-Based Solutions for Used Agricultural Plastics Part 2: Survey of Municipal Waste Authorities](#), [Agricultural Plastics Recycling – Agricultural Producers Survey](#), [Agricultural Plastics Recycling – Municipal Waste Authorities Survey](#).

The Solution

The largest challenge to expand recycling opportunities to all areas of the province remains the lack of a provincially-regulated ag plastics recycling program. With a provincial program, accessibility to recycling would increase, and agricultural producers in all agricultural-intensive regions of the province would have access to a well-resourced and environmentally beneficial recycling program. Environmental stewardship programs also ensure financial fairness, as those benefiting from the use of the product are the ones who contribute funding to have the material recycled.

This assertion has been supported by a number of organizations, including the recent resolutions passed by Alberta’s Agricultural Service Boards in 2016, that the Ministry of Environment and Parks and the Ministry of Agriculture and Forestry research, develop, and implement an agricultural plastics recycling program modelled after the pilot program in the Province of Saskatchewan. *See appendix for the full resolution.*

Who will oppose?

ARPG's participants include organizations representing industry, agriculture, municipalities and recyclers, who support agricultural plastics recycling program as a provincially-regulated program. Questions from the stakeholder groups include costs (such as environmental handling fees) that could be associated with a program. Cost is the largest area of apprehension for the producer groups representing agricultural producers. However, agricultural producers are a key stakeholder in this issue as the primary users of agricultural plastics, and those burdened with a lack of sustainable options for management of waste plastics. The majority agree that there is greater demand for recycling solutions than concern over cost and that an effective program will include consultation and communication about costs before the program starts.

Impacts to the Public

The stakeholder group has also considered the perspectives of the broader public and how they may be impacted, despite not being directly involved in the purchase, use, or end of life management of agricultural plastics. In many cases today, Albertans that live in municipalities with local recycling programs for agricultural plastics are paying for these programs through their municipal taxes. This cost-burden will be reduced or eliminated if the recycling program is transferred away from the municipality, toward those that either make or use the plastics. It is unknown whether the creation of an agricultural plastics program will result in increased costs of consumer products and those changes will depend if agricultural producers pass along any increased costs from their operation. It is believed that if this were to occur, the increased cost would be negligible. There are more perceived benefits to the public, from a change in practice to recycling from the current practice of burning plastics on farm, than negative impacts.

Accountability – advisory group

The APRG also feels that policy should allow for an advisory committee where producer groups and stakeholders actively participate in the development of the program and contribute to decisions. Because a program would be designed as a service to the agricultural producers who use the plastic, it is logical that they would contribute to discussions about the program design.

Scope of materials

With input and representation from the users of the plastics (the agricultural producers and their organizations) and the recyclers and processors of the material, the APRG believes grain bags and twine offer a good starting point for a provincial program. These are the two largest contributors to material volumes and have current available markets. Collection, processing and transportation logistics have also been established through current collection and past pilot programs.

Research and pilots will be conducted on the potential to recycle an expanded list of materials, with the goal to revisit the regulation after the initial material collection has been implemented successfully, to consider expanding collection to other types of agricultural plastics.

Other plastics materials, include but are not limited to:

- Bale wrap, silage plastic, boat/machinery wrap, green house plastic, net wrap, rope (square bale and other), mineral bags, and feed/seed bags

Other Provinces

In Saskatchewan, [The Agricultural Packaging Product Waste Stewardship Regulations](#), introduced after [agricultural waste stewardship research](#), has made it mandatory that every grain bag seller develop and fund a program to recycle grain bags.

In Saskatchewan's EPR model, the first importers are responsible to ensure there is a program to recycle grain bags. In their case, the importers have selected an organization to run the program for them and to charge an environmental handling fee of 5-7% to cover the costs of the grain bag collection and recycling.

A series of [government-funded pilot programs](#) are available in Manitoba to recycle bale/silage plastic, twine and grain bags. Going forward, there is interest in taking an approach similar to Saskatchewan's.

Efficiencies and harmonization among provincial programs are particularly important for agricultural plastics recycling because of the importance of a level playing field to the agricultural industry. A Western solution would also prevent issues such as cross-border shopping.

Prepared by the Agricultural Plastics Recycling Group (APRG):

Organization	Sector/Representation
Agricultural Service Board	Ag Fieldmen
Alberta Agriculture & Forestry	Government (ex officio)
Alberta Barley	Barley Producers
Alberta Beef Producers	Livestock
Alberta Cattle Feeders Association	Livestock
Alberta CARE	Recycling and waste management
Alberta Environment	Government (ex officio)
Alberta Plastics Recycling Association	Plastics Recycling
Rural Municipalities Association (RMA)	Municipalities
RPC BPI Agriculture	Material Manufacturer
CleanFARMS	Industry Stewardship
Crop Sector Working Group	Crop Producers
Merlin Plastics	Recycler
Recycling Council of Alberta	Recycling and Resource Conservation

Attachments:

- a. Ag Service Board's Resolution
- b. AAMDC Resolution

Summary of Endorsed ASB and AAMDC Resolutions Related to Ag Plastics Recycling		
12-15 (ASB)	<p>Agriculture Plastics Recycling</p> <ul style="list-style-type: none"> • <i>Resolution Ask</i> <ul style="list-style-type: none"> ○ Implement a stewardship program with funding for collection and recycling of agricultural plastics • <i>Resolution Response</i> <ul style="list-style-type: none"> ○ Environment – not currently considering a recycling program but working on an education program in collaboration with Agriculture on environmental impact of burning plastics and current options for disposal ○ Would need a regulation to implement a stewardship program and would require environmental fees ○ ARMA – not currently within mandate to act on ag plastics ○ Will be reviewing with Board of Directors and Minister and will provide input informally 	Resolution Status: Unsatisfactory
7-15F (AAMDC)	<p>Agriculture Plastics Recycling</p> <ul style="list-style-type: none"> • <i>Resolution Ask:</i> <ul style="list-style-type: none"> ○ That Alberta Environment and Parks develop a recycling program for agricultural plastics in Alberta • <i>Resolution Response</i> <ul style="list-style-type: none"> ○ Agriculture and Forestry – Worked with Environment and Parks and CleanFARMS on a study showing that agricultural plastics contributed only 1% of waste sent to landfills. AF currently sits on a committee with AAMDC and other stakeholders to develop policy options for ag plastic recycling. ○ Environment and Parks – Not currently considering a regulated recycling program for ag plastics. 	Resolution Status: Intent Not Met