

AG IN MOTION

Waste Diversion Report

2019

Dec. 2019





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Executive Summary

Ag in Motion, Western Canada's fifth annual outdoor farm expo took place on a 300+ acre site northwest of Saskatoon between July 16 and 18, 2019. Ag in Motion is a massive event that in 2019, attracted over 30,000 attendees, over 500 exhibits and a plethora of demonstrations, full crop sites, indoor and outdoor exhibits, learning sessions, live entertainment, food services and much more.

One of the goals of the 2019 event was to initiate a process that would lead to establishing AIM as a 'low waste leader' in the outdoor event space in the years to come. As such, 2019 was a foundational year that saw implementation of new approaches to encourage and measure waste diversion through recycling and reduction of waste and composting.

Cleanfarms Inc. is a non-profit, industry-funded stewardship organization that manages the collection, recycling and safe disposal of certain agricultural plastics materials and old, unwanted pesticides and obsolete animal health products used on Canadian farms in food production. As a sponsor of AIM 2019, Cleanfarms donated its planning and programming expertise and provided on the ground support to establish and execute this foundational waste diversion plan.

This insights from the 2019 program are captured in this report, culminating in a series of recommendations which, if implemented will identify AIM as a leader in low-waste event management outdoor events.

2019 Pilot Program

The waste measurement protocol established for AIM 2019 included:

- Providing a dedicated recycling tent to manage recycling, near the food service area
- Including specific collection systems for different types of recyclables (e.g. containers, deposit containers, cardboard)
- Adding 2 systems to collect organic waste
- Staffing the recycling tent with volunteers to provide guidance and education
- Adding signage and other promotional materials to educate and promote waste diversion behaviours

2019 Recycling Program Results

Diverting waste at large, outdoor events such as this is a challenge but in this first year, there were very clear signs of progress, recovering for diversion:

- 0.5 tonnes of lightweight deposit system containers
- 3.51 tonnes of other recyclable materials
- 0.85 tonnes of organics.

In addition to the materials that were diverted from landfill, this pilot provided ample opportunities to observe the functioning of an event of this magnitude to offer meaningful recommendations to expand diversion in the future.



Three of these include:

Start to finish diversion: From set up through to take down, this is a long event through which considerable amounts of recyclable waste materials are generated. It is important to begin waste diversion efforts of all types early and carry through to the end.

Promotion and Education: An event of this magnitude requires substantial promotion and education as well as personal outreach efforts to make staff, attendees, vendors and exhibitors aware of the many options for waste diversion and to encourage their participation.

Recycling stations work: At this event, there was a single recycling station that was consistently busy. Attendees of all types seem eager to take responsibility for their waste given the opportunity. Providing more stations, bins and signage will lead to increased waste diversion.



Aerial view of Ag in Motion grounds shows the expanse of this event site

1.0 Introduction and Purpose

Waste and plastic pollution is a global concern and events like Ag in Motion (AIM) have been looking at opportunities to reduce environmental impacts by reducing waste generation and implementing better recycling and composting before, during and after its event.

In its fifth year, AIM 2019 took place over a three-day period between Tuesday, July 16 and Thursday, July 18. Spanning a 300+ acre site with indoor and outdoor exhibits, AIM featured various agricultural and livestock demonstrations, learning sessions, live entertainment, over 500 exhibitors and refreshment venues. This is a huge event that attracted 30,470 attendees which was a full 20% more than just one year prior. In short, AIM is a diverse, complex and vibrant annual event.



Aerial view of Ag in Motion 2019

As part of its sponsorship of AIM 2019, Cleanfarms Inc. undertook further development of the existing event's waste and recycling program, with the intention of helping AIM realize its goal of becoming a low-waste leader in events of this scale, in the years to come.

Global attention to environmental issues, including waste management provides the agricultural industry an opportunity to show leadership by demonstrating its willingness to embrace waste diversion through waste reduction, recycling and composting. An event like AIM can also help educate all agricultural stakeholders (which includes farmers, farm households and many more) on the meaningful ways to separate their waste.

On-farm, Cleanfarms already offers a suite of programs to responsibly manage items such as pesticide and fertilizer containers, seed bags, obsolete pesticide and animal health medication collections and grain bags. And more programs are being developed. At the farm household level, municipalities are also increasing the recycling and composting options that are available to residents.

The intention of this program was to demonstrate responsible waste management at the event as well as to create a benchmark for 2019 in order to improve overall waste diversion through recycling and composting.

The purpose of this year's waste and recycling program was therefore threefold:

1. Measure the overall waste generation during the event;
2. Identify areas of improvement for waste diversion; and,
3. Demonstrate how full organics and recycling diversion can be achieved.

Waste generation was divided into three main categories:



1. Waste generation before and after the event
2. Vendor waste generation during the event (including setup and takedown) with two sub-categories
 - a. Regular setup and takedown waste
 - b. Special event waste
3. Patron waste generation during the event

Cleanfarms generated a Waste and Recycling Program for AIM 2019 that included:

- Promotion and education materials including signage (banners and posters), garbage and recycling bin stickers and picnic table covers
- Management of the organics collection and education in cooperation with Rotary
- Provision of this post-event report that includes statistics and recommendations for future events.



2.0 Background

The general public, businesses and governments are looking for ways to reduce solid waste disposal and to eliminate plastic pollution. To this end, in June of 2019, the Canadian federal government announced plans to follow the European Union, several other countries and some US states to ban certain plastics from use. These materials are most notably plastics made into straws, dinnerware, cutlery and bags. The elimination of these materials would seriously impact food delivery during the AIM trade show without a means to address alternate materials.

Other restrictions AIM may face in the future includes eliminating recycling and organic materials from its waste bins. Some provinces, like Nova Scotia, have made it illegal to dispose of many recyclables and organic material in a landfill. This requires much more rigor to ensure waste generated by vendors and the public at the event are placed in appropriate recycling and organic streams.

Fortunately, solutions are available to address these issues. Loraas Disposal is a Saskatchewan-based waste transfer and recycling services company which owns a landfill not far from the AIM event. Loraas has constructed a composting facility on the grounds of the landfill, allowing source separated organics to be composted instead of landfilling. Recycling facilities, also operated by Loraas and others exist to accept virtually all recyclable materials generated at events like AIM, provided they are separated in the proper manner.

Several outdoor events across Canada, from BC to Nova Scotia have started implementing new procedures to divert waste through recycling and composting at the same time as meeting the spirit and intent of the proposed material bans. Most of these events have branded themselves 'zero waste events' and have achieved impressive results.

Squamish, BC hosted a 2019 summer music festival with very impressive results. A news article on the results is available [here](#).

Several Ribfests in Ontario, including the Toronto Ribfest, have achieved great results, some with over 80% waste diversion through their initiatives. These are large scale events with some serving 100,000 patrons per event. Some articles on these events are available [here](#) and [here](#).

A food truck festival in Saskatoon during the summer also achieved significant waste diversion with help from the Saskatchewan Waste Reduction Council. Composting and recycling became the focal point for waste resulting in good waste diversion results.

This document identifies the observations on the results of the event as well as providing recommendations for further improvements.

3.0 Existing Program

Prior to 2019, AIM used four 30 cubic yard roll-off bins provided by Loraas for on-site collection of all solid waste. Two bins were used for recycling and another two were used for waste generated by the show and its vendors, both during and after the event. These bins were located at the north end of the site. The same system was used in the 2019 AIM event recycling.

3.1 Vendor Wastes

Vendors were required to place all of their waste into the roll off bins. and other acceptable recyclables were to be placed into the blue roll off and plastic film and all other wastes into the green roll off.

3.2 Patron Wastes

Throughout the event grounds, open top blue containers and waste containers were located at almost every road intersection to capture deposit containers and all other wastes from patrons visiting the event.

To ensure the maximum deposit returned, each bag of containers was sorted to remove non-deposit containers and to remove caps. These are not accepted on the containers at SARCAN which operates the deposit-refund system in Saskatchewan.



4.0 2019 Pilot Recycling Program

4.1 Pre-Event Recycling

Cleanfarms started its sponsorship and commitment to the 2019 'reduced waste' initiative months prior to the start of the actual AIM event by providing collection bags and bag stands for used pesticide, fertilizer and seed treatment containers used by the various vendors with crop growing plots.

The use of the 30 cubic yard roll off containers for co-mingled recycling (except plastic film) continued to be used this year and were installed for the vendor set-up stage and continued through the event and teardown.

4.2 Event Recycling:

As 2019 was to be considered a new initiative in recycling for AIM, Cleanfarms organized a tent dedicated to separating recyclables, deposit containers and organics in cooperation with and proximity to the Rotary Food Tent.

For the collection of organics, Lorass provided two, one cubic yard green bins with lids and hatches (shown at right). These bins were advantageously located right next to the Recycling Tent.



To collect the organic material in the most effective manner while not making the process uncomfortable to those eating very near the recycling tent, leaf and yard bags were used to collect all fibre, organic and compostable materials. The bags are multi-layered, compostable and hold a significant amount of moisture without compromising their structure. The height of the bags is such that they were placed upon the ground and were at a perfect height for people to throw their organics and compostables directly in without requiring another bin.

The bags are cost effective and readily available at Home Depot, Canadian Tire and Home Hardware, in packs of five or 20.

In addition, small blue plastic recycling bins were used to collect deposit containers for the convenience of those using the Recycling Tent. Other recycling generated by cooking and unboxing food for sale to patrons (e.g. foil pans, boxes etc.) was set aside in the leaf and yard bags and placed with the cardboard for recycling and taken to the large blue Loraas recycling roll-offs in the service area outside the show area.



Two volunteers were available at the tent from 7 a.m. through to closing on each event day, which was sufficient for both throughput and education of the



participants. Many participants comments were favourable and there were many inquiries about the opportunity for curbside organics collection.

Cleanfarms also arranged directly with SARCAN for the delivery of specifically-designed bins to collect deposit beverage containers. These bins have holes cut into the lids that restricts users so they can only place bottles or cans in the container, ensuring that the collection stream is as free of contamination as possible. SARCAN provided 25 containers for this purpose, however it was not readily apparent to what extent and/or where these containers were utilized.

4.3 Promotional Pieces

Cleanfarms generated banners, posters and picnic table covers for the event, encouraging people to bring their organics and compostables to the recycling tent. Promotional materials are shown below.



Recycling Bin Stickers



Poster and Banner



Table Cover



Waste Bin Stickers





The promotional pieces provided direction for participants concerning how to recycle, what to recycle and where to do it. The pieces used simple graphics which have been proven to be useful and easy to understand at a glance.

4.4 Post-Event Recycling

During the post event stage of vendor teardown, the recycling roll offs were used for any packaging material or sales materials that were obsolete as well as other comingled recycling.

The collected bags of containers continued to be hand sorted and the beverage containers returned back to SARCAN for the redemption of the deposit. The 2019 program results which include post-event recycling follow (shown in Table 1)*.

Table 1: Program Breakdown

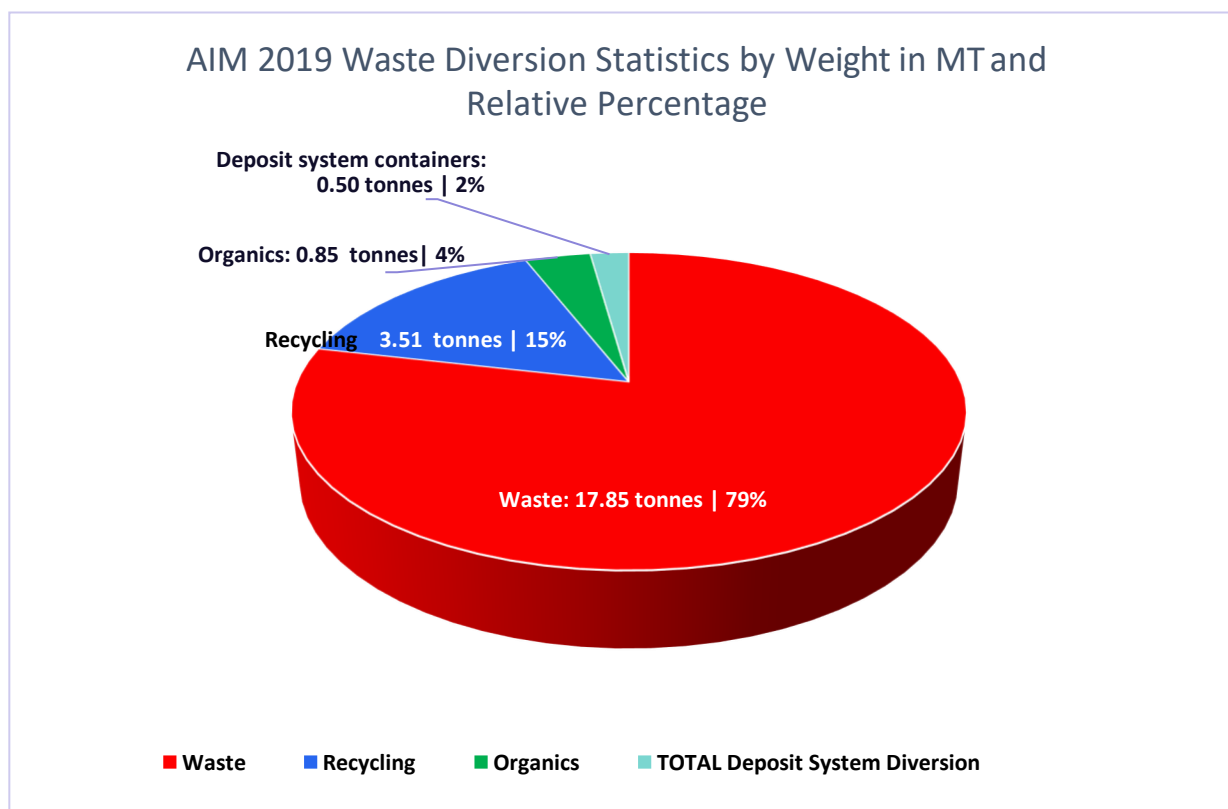
	Pre-Event	Event	Post-Event	Container
Vendor Waste	Cardboard Packaging and general waste for set-up	Food, sales materials	Obsolete sales materials and residual packaging material and film	<ul style="list-style-type: none">• Two-30 cubic yd. roll off waste bins One 30 cubic yd. Recycling roll off bin
Patron Waste	N/A	Food, water and pop bottles, food packaging, utensils and cups	N/A	<ul style="list-style-type: none">• Recycling and waste bins at each of the main intersections• Recycling tent operated by Cleanfarms near the Rotary Food Tent for organic separation and recycling.• Two-one cubic yd. containers for organics and 25 SARCAN beverage container collection bins
Special Waste	Fertilizer, pesticide and seed treatment containers	N/A	Fertilizer, pesticide and seed treatment containers	<ul style="list-style-type: none">• Bag holders and bags provided by Cleanfarms for collection of used containers.

*Please note that these do not include pesticide, seed treatment and fertilizer containers

5.0 2019 Recycling Program Results

The overall waste generated at AIM 2019 was a total of 21.7 tonnes.

Figure 1: AIM 2019 Waste Diversion Statistics



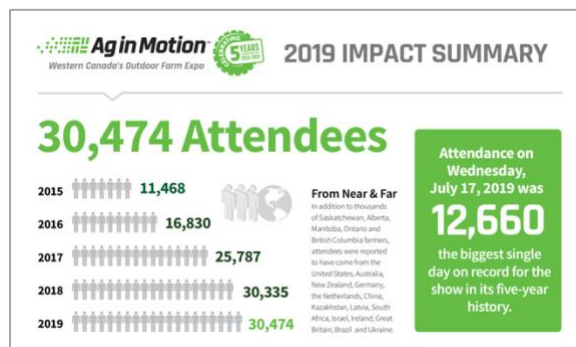
The breakdown of waste is as follows:

Waste:	17.85 tonnes equal to 79% of total waste generated
Recycling:	3.51 tonnes equal to 15% of total waste generated
Organics:	.85 tonnes equal to 4% of total waste generated
Deposit system containers:	.5 tonnes equal to 2% of overall waste generated

6.0 Future AIM Recycling Program Recommendations

The 2019 AIM event was distinguished by factors that include but are not limited to:

- Site geography – occurring over 300+ acres
- Diversity of activities, participants and vendors with over 30,000 attendees, 500+ exhibitors and 20% growth over 2018
- Indoor and outdoor exhibit space
- The variety of waste which includes but is not limited to construction and demolition waste from set up and tear down, paper and packaging waste, special wastes from crop plots, demos, exhibits, events and food/compost and container waste from food service.
- It is recognized that the 2019 event faced some significant reduction in its volunteer workforce at the last minute due to the sudden passing of one of the volunteer groups key organizers.



Excerpt from Ag in Motion
2019 Impact Summary

As this year was viewed as a benchmark by which future AIM recycling programs can measure their successes, the following offers recommendations to build on this year's program toward continuing success in waste diversion at future AIM and similar events.

6.1 Pre-Event

1. *Timing:* Begin pesticide, seed treatment and fertilizer container collection earlier and record the number of bags that are returned to the system.
2. *Fine-tuning organics collection:* Start collecting organics generated from the meals catered for the employees as soon as catering commences. Locate an organics collection cube in the same area to collect the food waste, compostable utensils and paper plates and cups and capture this diversion in overall event waste management metrics.
3. *Awareness:* Ensure onsite crop growers are aware of stations at which they can recycle their pesticide, seed treatment and fertilizer containers on site.
4. *Monitor bin usage:* Materials such as wood, metals, refrigerators and other heavy items were observed in the waste bins. Monitor what is going in the bins to identify items that can be set aside for separate collection and to help reduce waste disposal expenses.
5. *Staff education for 30 cubic yard bins:* Educate staff about what recycling materials can go into the 30 cubic yard bins to maximize the amount of recycling and reduce the amount of waste placed in these containers.



6. *Information for vendors:* Provide instructions for vendors as to what can be recycled and what materials are designated for the waste bins.

6.2 Event and Post Event

1. *Recycling locations:* Identify locations of food generation areas (i.e. food truck area, beer garden tents, etc.) and allow for a recycling tent to be located nearby.
2. *Sign placement:* add more signs to indicate the location of recycling tent.
3. *Directional signage:* Use signage to help participants select the appropriate bin for refuse to decrease material contamination and over time, reduce the number of volunteers needed to guide attendees.
4. *Sign Placement:* Place signage *behind* beverage container recycling bins rather than on them, to encourage attendees to use the correct bins and to remind them to remove the caps. Over time, this should eliminate the need for sorters as the bin quality improves with attendee practice.
5. *More opportunities for recycling:* Increase the number of recycling tents: three tents in total would be optimum. Including an additional tent at Field of Stars would provide an excellent recovery point which can be moved or dismantled after the event.
6. *Bins:* Use beverage container recycling bins that feature lids with round cutouts, similar to the SARCAN bins. This should eliminate the need for sorters and reduce the number of staff or volunteers.
7. *Training:* Provide staff training concerning placement of materials in appropriate bins, including in the service area. This will help address points of confusion (i.e. that large Loraas large blue bins were for cardboard only when in fact they are intended for comingled recycling which to be sorted at the Loraas Material Recovery Facility).

Building on the foundation established in 2019 and adding new procedures and protocols based on this experience, it is anticipated that AIM will continue to make progress toward its goal of becoming a low-waste leader in events of this scale in the years to come.