Closing the Loop on Agricultural Waste

WEBINAR

Shifting Responsibilities and Expanding Opportunities for Ontario Farm Waste

January 19, 2011

A Webinar on

Ontario Extended Producer Responsibility for the Agricultural Sector

January 19, 2010

AGENDA

	ITEM
1	Welcome and Introductory Remarks
2	EPR Overview
3	Waste Characterization Studies (how much waste and what kinds are being generated on Ontario farms)
4	Farmer Survey – Attitudes and practices in managing ag wastes in Ontario
5	Feedback on EPR for Ontario Ag waste
	Adjourn

PRIMER
for
Extended Producer Responsibility

Closing the Loop on Agricultural Waste

WEBINAR

Shifting Responsibilities and Expanding Opportunities for Ontario Farm Waste

January 19, 2011

Closing the Loop on Agricultural Waste

Shifting Responsibilities and Expanding Opportunities for Ontario Farm Waste

Across Canada, provincial governments are rapidly implementing new regulations aimed at getting more waste materials recycled. These regulations go beyond household recycling programs to target specific sectors and types of waste. These new regulations are based on the principle of Extended Producer Responsibility or 'EPR' and are intended to:

1. Increase recycling of wastes into valuable new products;

2. Ensure the safe disposal of non-recyclable waste; and

3. Shift the financial responsibility of waste management from municipalities and taxpayers to producers of a product.

The purpose of this document is to inform members of Ontario's agricultural sector of the opportunity to help shape public policy for new EPR programs that could affect their industry.

What is Extended Producer Responsibility (EPR)?
EPR requires producers to be responsible for end-of-life management of any waste that is generated from the use of their products. In the agricultural sector this could include waste packaging (like empty pesticide containers) and other products (like used tires, bale wrap, twine, vaccines, pharmaceuticals, old sharps, and other non-organic waste).

In Canada, EPR policies usually assign the responsibility to the producer or the first importer that sells a product in a region (province, territory or country). These producers or importers are called 'Stewards' of the designated product. The intent of these policies is usually two-fold: 1) to ensure designated products are properly managed at the end of their useful life; and, 2) to give a Steward financial incentive to make their products cheaper to manage at end of their useable life, which usually translates into better environmental performance.

Good EPR programs are designed to ensure that an effective collection and recycling/disposal program is in place to ensure that as much material as possible is collected, and then re-used or recycled.

One example of a voluntary EPR program is the empty pesticide container recycling program, administered by CleanFARMS™. As of 2009, the program had collected and recycled over 83 million empty commercial-class pesticide containers from Canadian farmers. Commercial users of pesticides return their empty containers to any one of

about 1,000 designated sites across Canada. The program ensures that collection sites, contractors and processors meet strict health, safety and environmental standards. All costs for the program are borne by the manufacturers or importers of the products and about 63 percent of all containers are recovered.

Instead of filling our landfills, the CleanFARMS™ program has prevented more than 68,000 tonnes of greenhouse gas emissions from entering the atmosphere - this is equal to taking more than 13,000 cars off the road or saving the emissions generated from powering 6,000 homes for a year. Materials that cannot be recycled, such as obsolete pesticides, were also collected and safely disposed through CleanFARMS™ programs.

What laws exist in Ontario on EPR?
Ontario's Waste Diversion Act has been law in Ontario since 2002. It was designed to promote reduction, reuse and recycling. It gives the authority to Waste Diversion Ontario (WDO) to establish waste diversion programs for wastes designated by the Ministry of Environment. The WDO works with industry funding organizations to develop each program; once approved by the WDO and the Ministry of Environment, the industry funding organization manages the program. Since 2002, scrap tires, paint, domestic pesticides and containers, propane tanks, and a host of other products have been designated.

In Ontario, these programs are operated and funded by industry funding organizations, which recover operating costs from "stewards" that sell the designated product into Ontario. There are voluntary programs that operate without regulation. CleanFARMS™, for instance, is a voluntary stewardship organization that has, to date, operated in Ontario without being regulated to do so.

Why is agricultural waste a concern?
Simply put, many agricultural wastes are being inappropriately burned or buried that could be recycled or safely disposed. To illustrate this point, in December 2010, the Ontario Auditor General's Office released an Annual Report that outlines its findings on all waste management in Ontario. The report shows a declining waste diversion rate for the industrial, commercial and institutional sector; the sector is diverting only 12 percent, a drop of 8 percentage points from four years ago.

According to Statistics Canada, in 2008 Ontario ranked only fifth place out of 8 reporting provinces in terms of their success diverting waste products from landfills (Ontario's total diversion rate is 22.6 per cent, far behind Nova Scotia, New Brunswick, British Columbia and Quebec). Additionally, 36 per cent of Ontario's waste has been disposed of in the United States.

The Ontario government has been considering new programs that could include agricultural waste - in 2009, a Minister's Report outlined options that government may

consider to support further waste diversion, including measures like disposal taxes and disposal bans to increase diversion.

What are the issues of concern?

The intention of EPR programs is to improve environmental and financial performance of waste diversion programs. The unfortunate reality is that EPR programs sometimes encounter difficulties. Some issues that have been noted include concerns about not meeting targets; programs being too expensive; and public confusion about the application of eco-fees at the point-of-sale. Most recently, the Ontario government cancelled some eco-fees and the programs to which they were attached, which were introduced the summer of 2010 on a variety of household products.

What's in Ontario agriculture waste?

To determine the size and scope of the Ontario agricultural sector's waste, CleanFARMS™ is completing a series of waste characterization studies in Ontario, which provide some baseline data on non-organic packaging and product wastes such as paper, plastic, glass and metal. Some of these materials are currently recycled, but much of it is not.

For instance, more than 4,000 tonnes of bale wrap, twine and other plastic film wastes are generated each year in Ontario. If they were collected and recycled, thousands of tonnes of greenhouse gases could be avoided, while supporting local recycling industries that manufacture value-added products.

The project being undertaken by CleanFARMS™ is being completed jointly with the Ontario Ministry of Agriculture, Food, and Rural Affairs with funding assistance from Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem and the Canadian Animal Health Institute.

Moving forward for Ontario's agricultural sector

Experience in Ontario and throughout the rest of Canada has illustrated the importance of working closely with the manufacturers, retailers and generators of specific wastes (farmers) before creating new waste diversion policies or regulations. It is widely acknowledged that individual businesses or groups of businesses can best design programs specifically geared to their needs. Programs should ensure full participation of all stewards while supporting competition to keep operations efficient.

Ontario farmers and product stewards can play a vital role in the direction that an EPR program takes in this province. Now is the time to learn what these programs involve and do the ground-work necessary to help guide decision-makers on how best to effectively develop programs that make sense for Ontario, and most importantly, what funding mechanisms make the most sense.

By participating in the January 19th webcast, Ontario farmers can learn and help inform the process. This will ensure that decisions made from here on are based on reliable data targeted to the needs of the agricultural sector, and structured to achieve real environmental benefits.

What will this mean for farmers?

A well-designed EPR program for agricultural waste can benefit farmers in several ways. First, by shifting the responsibility of product or packaging waste to the stewards, farmers can eliminate disposal problems they currently have with various wastes. Second, Ontario farmers can have confidence that these waste products are being handled in an environmentally sound manner. Finally, these programs will help to protect our air, land and water resources from emissions caused by improper disposal of these wastes for safe use in the generations to come.

For more information, visit www.cleanfarms.ca

Ontario Agricultural Waste Webinar

January 19, 2011

Agenda

1. Welcome and Introductions – Barry Friesen
2. Extended Producer Responsibility – Clarissa Morawski
3. Ontario Agricultural Waste Characterization – Barry Friesen
4. Ontario Farmer Survey – Sharon Barker
5. Questions and feedback – Barry Friesen

Special Thanks To:

- Ontario Ministry of Agriculture, Food and Rural Affairs (funder)[1]
- Canadian Animal Health Institute (funder)
- Ontario Veterinary Medical Association
- Ontario Agri-Business Association
- Ontario Ministry of Environment

[1]Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem

ON Ag Waste Study Tasks

2010

- Agricultural Waste Characterization (non-organic)
- Farmer Survey
- EPR Workshop
- Ontario Recycling Handbook

2011

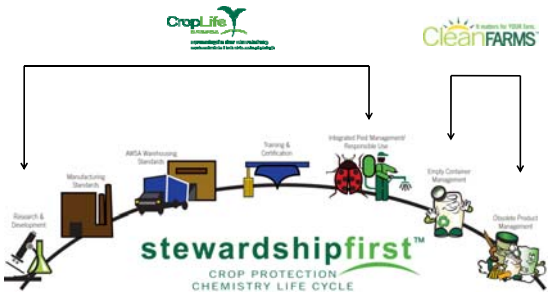
- Risk Assessment
- Collection and Processing Options
- Stewardship Recommendations

Who is CleanFARMS™?

- Industry Stewardship Organization
- Federally incorporated not-for-profit
- General Manager reports to private sector Board
- Members are manufacturers/distributors of crop protection products
- Operate voluntary (except where mandated)

Stewardship Arch for Crop Protection

Responsibilities



CleanFARMS™ Inc.

Two main programs:

Empty container management

Obsolete pesticide collection

Empty Pesticide Container Program

Containers recycled into farm drainage tile

-used back on the farm-

Empty Pesticide Container Program

Key Accomplishments:

- About 1,000 locations across country
- Over 83 million containers collected and recycled since 1989
- 2009 Return Rate – 63%
- Free to farmers and applicators

Obsolete Collection Campaign

Key Accomplishments:

- 2.5 million kilograms collected and safely disposed of since 1998 across Canada
- Other provinces looking at additional materials (i.e. pharmaceuticals, sharps)
- Free to farmers and applicators

Benefit of CleanFARMS' programs

Little regulatory burden

No consumer fees (Eco-fees)

Free to farmers and applicators

Excellent results:

A <u>True</u> industry stewardship program

Other Regulated Stewardship Programs for farm wastes

- Paint
- Used Tires
- Oil containers and filters

Key Messages

1. CleanFARMS is actively pursuing solutions for management of agricultural waste

What is Extended Producer Responsibility?

An Overview

Presenter:
Clarissa Morawski
CM Consulting
January 19, 2011

What is EPR?

An environmental policy approach in which a producer's responsibility, physical and/or financial, for a product is extended to the post-consumer stage of a product's life cycle (OECD, 2001)

- Shifts responsibility from municipalities or taxpayers to the producer (usually the brandowner) of a product
- Provides incentive to design more 'environmentally friendly' products (both packaging and contents)
- To date, targets mainly household consumer products (beverage containers, household packaging etc.)
- Now moving to commercial products (i.e. agricultural waste)

EPR in Canada

Source: Stewardship Ontario

3

EPR in Canada

Source: Stewardship Ontario

4

Pesticide EPR Regulations – Five Years Ago

	DOMESTIC Packages	DOMESTIC Contents	COMMERCIAL Packages	COMMERCIAL Contents
BC	●	○	●	●
AB	●	●	●	●
SK	●	●	●	●
MB	●	●	●	●
ON	○	●	●	●
QC	●	●	●	●
NB	●	●	●	●
NS	●	●	●	●
PEI	●	●	●	●
NL	●	●	●	●

● No Regulations
○ Regulations in place
★

5

Pesticide EPR Regulations – Today

	DOMESTIC Packages	DOMESTIC Contents	COMMERCIAL Packages	COMMERCIAL Contents
BC	●	○	●	●
AB	●	●	●	●
SK	★	●	●	●
MB	○	○	○	●
ON	○	○	★	●
QC	○	●	○	●
NB	●	●	●	●
NS	●	●	●	●
PEI	●	●	●	●
NL	●	●	●	●

● No Regulations
○ Regulations in place
★ Regulations planned

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EPR Benefits

- Supports waste reduction, reuse and recycling
- Addresses orphan products and historic product legacies
- Promotes life cycle management
- Supports more efficient and competitive manufacturing

"Full" Producer Responsibility

- Usually requires legislation (may also be voluntary – i.e. CleanFARMS' pesticide container program)
- Assigns 100% of the responsibility – financially and operationally to a company, sector or group
- In general, industry chooses how to finance:
  - internalize the costs into price
  - externalize the costs (such as an "eco-fee")
- Industry must monitor, track, and report program effectiveness

What's in a typical EPR program?

- Definitions
  - Must accurately define the Material (package or product) and the Steward (who is responsible)
- Recovery rates / Performance
  - Recovery rates must be justifiable
  - Accessibility must be available to majority of consumers
- Promotion and Education
  - must facilitate recovery targets
- Financing
  - Must ensure fair financing for all 'Stewards' (large and small)
- Reporting
  - Must accurately report success towards program goals

Challenges with EPR

- Can be difficult for small companies to help lower costs
- Individual company initiatives and voluntary initiatives can be 'lost' or 'ignored' in larger scheme
- There are many varied corporate interests even among large companies
- Difficult to promote design for environment
- Developing legislation is a long process to implement and difficult to 'fix' if problems occur

What is Ontario doing about EPR?

- Waste Diversion Act passed in 2002
- Targeted most household packaging and municipal hazardous/special waste
- MOE announced in 2008 that commercial waste will be targeted next (ag waste is included)
- Ag industry has short time to organize

Next Steps for Agricultural Community

- Identify
  - where we are
  - where we are going
  - how we get there
- Ontario Ag Waste Study will help accomplish the above
- Need feedback from manufacturers, distributors and growers
- Regulators and industry must work together to ensure efficient, low-cost programs

Key Messages

1. CleanFARMS is actively pursuing solutions for management of agricultural waste
2. EPR is coming across Canada and this will extend to the agricultural sector

WASTE CHARACTERIZATION STUDY PRELIMINARY RESULTS

January 19, 2011 – 2CG Inc.

WASTE CHARACTERIZATION STUDY PRELIMINARY RESULTS

Introduction

- A 'waste characterization study' estimates the type and amounts of waste generated
- This study is limited to:
  - Non-organic waste
  - Farm generated waste only
- Farms are as classified by Statistics Canada

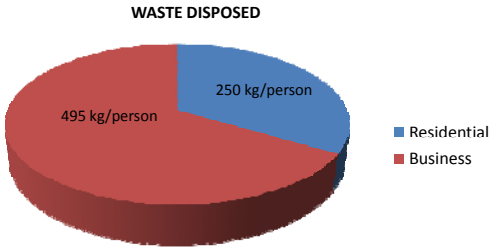
Introduction

- Our purpose is to confirm and quantify:
  - Wastes generated in high quantities
  - Wastes with potential disposal issues (e.g. animal health)
- The outcome of these studies will be used to develop new waste recycling and safer disposal programs

Waste in Ontario – by the numbers

- Ontario waste - 745 kg per person disposed
  - 34% residential
  - 66% non-residential (business)
- Ontario overall Diversion rate – 22.6%
  - High in Nova Scotia of 45%
  - Low in Saskatchewan of 14.2%

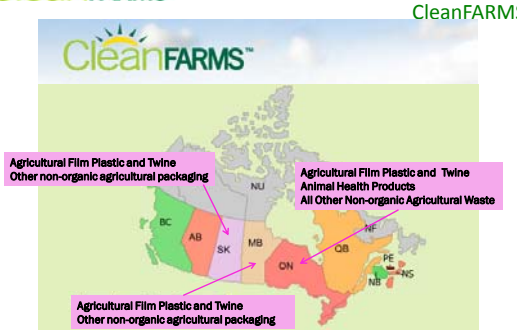
Ontario Statistics



Ontario overall diversion rate - 22.6%

Non-residential (business) diversion rate - 12%

Current Ag Waste Characterization Studies by CleanFARMS



Three Waste Characterization Categories

1. Animal Health Products
2. Agricultural film and twine (bale wrap, mulch wrap, greenhouse film, grain storage) and baling twine
3. All other agricultural waste (non-organic)

Animal Health Care Products

- Includes the following waste types:
  - Pharmaceuticals
  - Vaccines
  - Animal pesticides
  - Medicated feed

Packaging & Product Type "Audit"

Preliminary Results

CleanFARMS Consolidated Report - Packaging

Company:	All Participants									
Report:	Volumes of Packaging									
Date:	Jan - Dec 2009									
	Aerosol Cans (KG)	**Carton (Box-Board) (KG)**	**Inserts (KG)**	**Glass Bottles (KG)**	**Plastic Bottles (KG)**	**Paper Bag (KG)**	**Foil Bag (KG)**	**Plastic Bag (KG)**	**Clamshells (KG)**	**Tube (KG)**
Ontario	TBD*	7,037	843	1,010,119	66,572	TBD	972	TBD	TBD	2,250

*To Be Determined

Glass: both coloured and clear
Plastic Bottles: composition includes LDPE, HDPE, PET, PP

Film Plastic and Twine

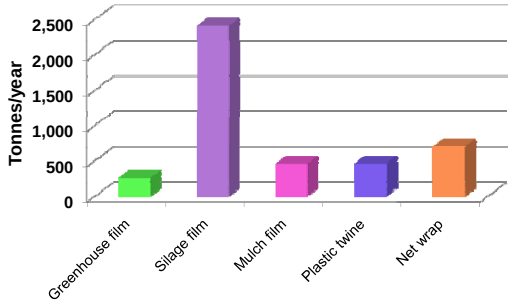
- Includes the following waste types:
  - Greenhouse film
  - Silage film
  - Mulch film
  - Plastic twine
  - Net wrap

Film Plastic and Twine





About 4,250 tonnes of plastic film, twine and net wrap used annually



All Other Wastes

- Includes the following waste types:
  - Plastic film bags
  - Woven plastic bags
  - Plastic jugs
  - Plastic pails
  - Plastic pots trays and cells
  - Paper bags (lined and unlined)
  - Cardboard
- Only includes wastes generated at the business

Other Wastes

Feed and Seed Production

Woven Plastic, Paper Bags (lined and unlined)

Adapted from: http://www.agripak2m.com/agripaken/index.html

Other Wastes

Fertilizer Products

Plastic Bags

Other Wastes – Farm Generation Only

Greenhouse and Nursery

Flower and Plant Productio

Pots , liners, trays and flats






Adapted from: http://www.itml.com/index.php

Other Wastes – Farm Generation Only


Produce Boxes


Bushel Baskets


Baskets

Field and Greenhouse Vegetable and Flower Production
Boxes, Baskets


Mesh and Jute Bags


Wooden crates

Adapted from: http://www.agripak2m.com/agripaken/index.html

Other Wastes – Farm Generation Only

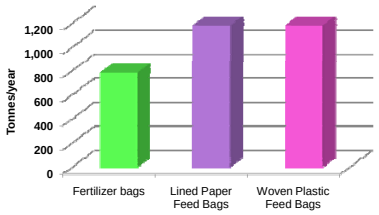
Pesticide Production
Plastic Jugs, Pails, Cardboard boxes

Other Wastes – Farm Generation Only

Sanitation Products
Plastic Jugs and Pails

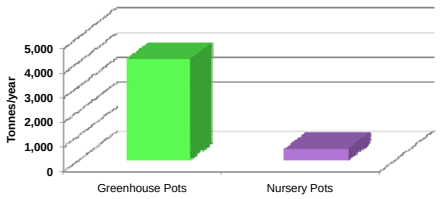
Other Wastes – Preliminary Results

- About 3,000 tonnes of bags used annually



Other Wastes – Preliminary Results

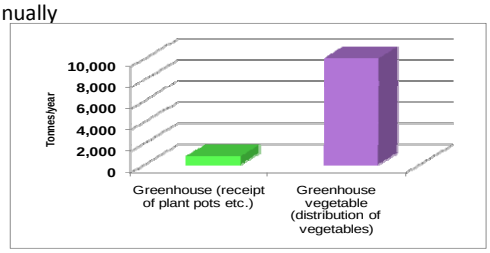
- About 4,500 tonnes of greenhouse and nursery pots, inserts, flats and trays



***NOTE:** These may not be wastes generated at the 'grower' location. As such, these numbers may be reduced substantially to include only 'grower' generated wastes.

Other Wastes – Preliminary Results

- At least 10,000 tonnes of cardboard is generated annually



Conclusions

- To date about 20,000 tonnes of wastes have been identified
- Primarily paper and plastic in nature
- These results are preliminary and may vary substantially
- A final report will be completed in March

BlacksheepStrategy

CleanFARMS
Ontario Farmer Survey

Presentation
January 19, 2011

1

BlacksheepStrategy

Presentation outline

Introduction
Generation of agricultural waste
Disposal of agricultural waste
Container recycling
Attitudes towards the responsible disposal of agricultural waste

2

BlacksheepStrategy

Methodology

Quantitative telephone survey

Random sample of 328 farmers across Ontario

Overall level of accuracy of +/- 5.4% at the 95% confidence level

The survey was conducted in November 2010

3

Regional distribution of respondents (Weighted) N=328

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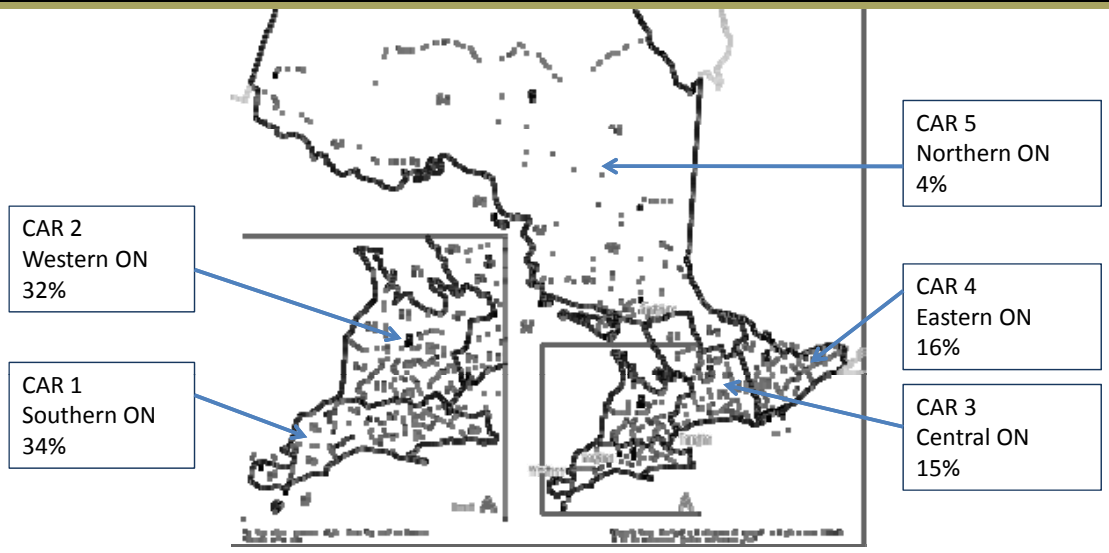

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Respondent Profile

Farm type *	N=328
Crops only	37%
Mixed crops and livestock	36%
Primarily livestock	18%
Horticultural	5%
Orchard, fruit, berries, grapes	6%
Greenhouse, nursery, or other	2%
Farm size	**N=328**
< 125 acres	29%
125 – 249	24%
250 – 499	25%
500+	22%

* Percentages add to more than 100, as multiple responses were allowed

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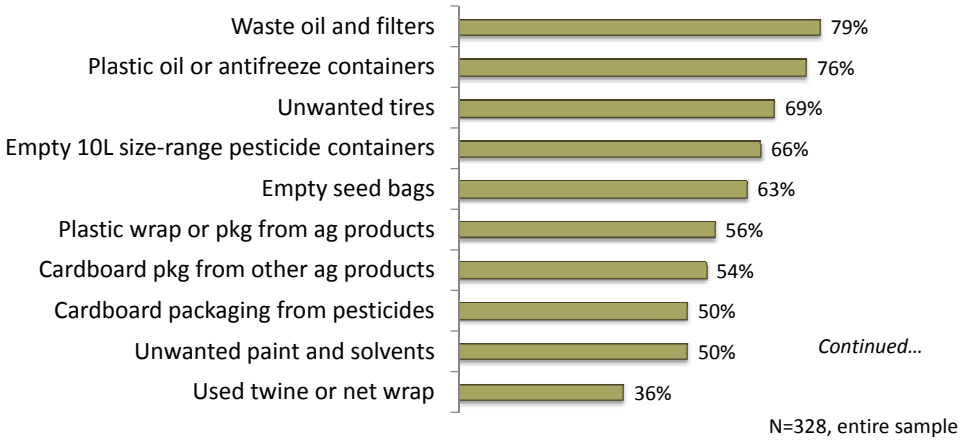
Types of farm waste generated



Continued…

N=328, entire sample

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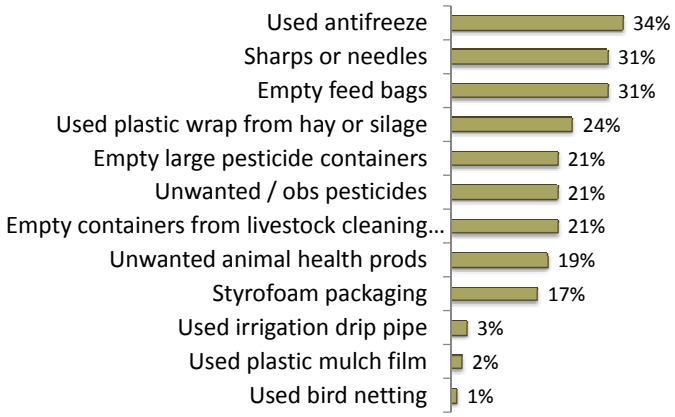
Types of farm waste generated (cont.)



Very small portions of the sample used greenhouse film or plastic pots or trays

N=328, entire sample

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For most common types of waste: Segments more likely to generate each type of waste

N=328	Who is more likely to generate or have on farm?
Waste oil and filters	Central ON, E ON
Plastic oil or antifreeze containers	Central ON, E ON, mid-sized farms
Unwanted tires	E ON, N ON, mid-sized farms
10 litre size range containers	Horticultural, fruit, S ON, larger farms
Empty seed bags	E ON, mid-sized farms, mixed farms
Plastic wrap or packaging	E ON, larger farms, mixed farms, livestock, horticultural

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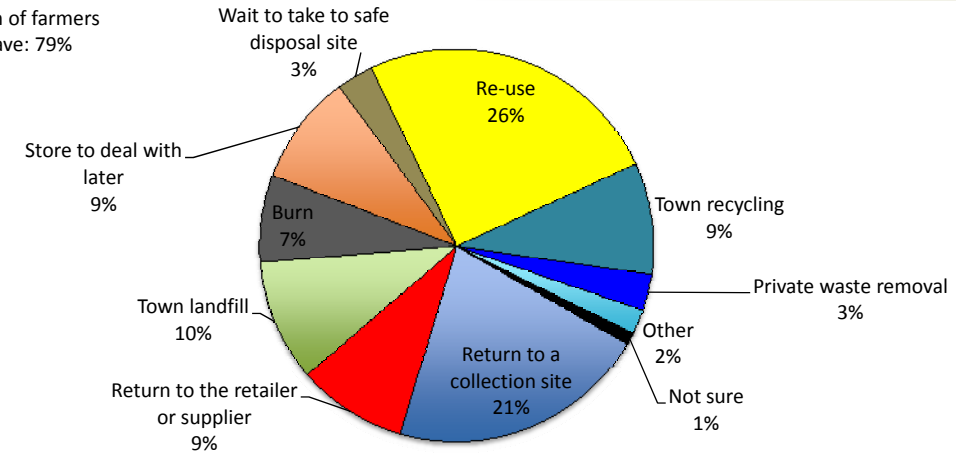
What is done with waste oil and filters?

Portion of farmers who have: 79%
N=259



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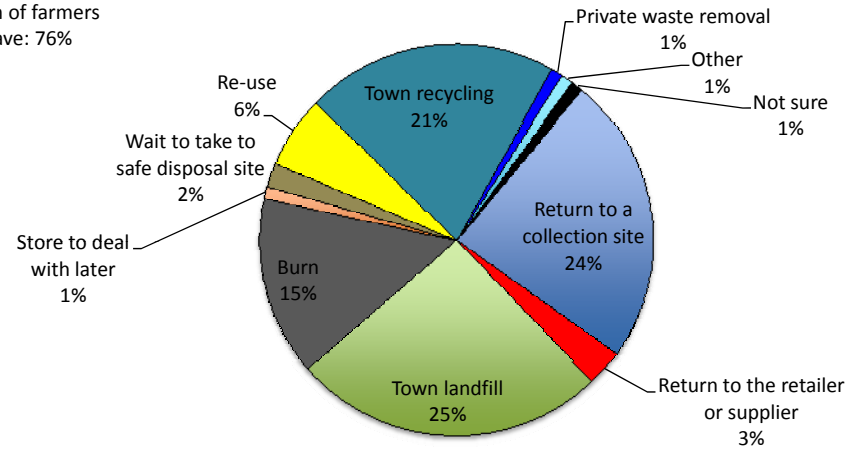
What is done with plastic oil or antifreeze containers?

Portion of farmers who have: 76%
N=248



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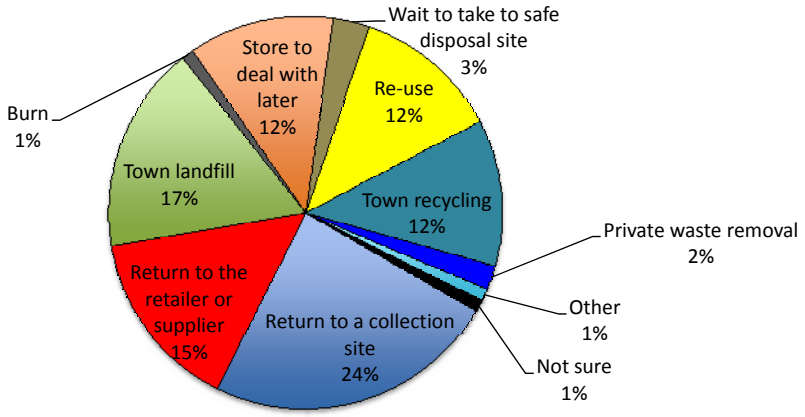
What is done with unwanted tires?

Portion of farmers who have: 69%
N=223



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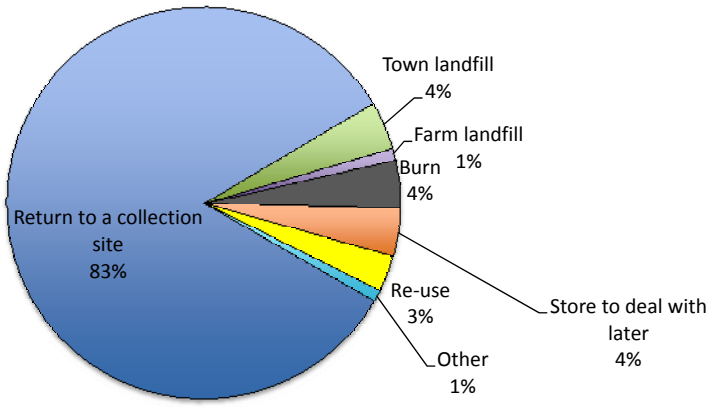
What is done with empty 10L size-range containers?

Portion of farmers who have: 66%
N=217



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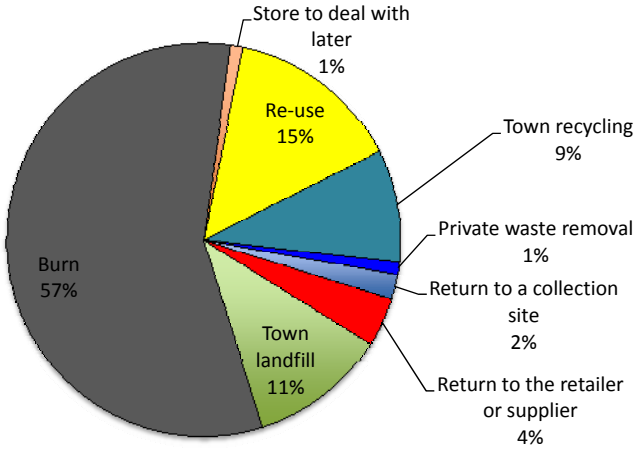
What is done with empty seed bags?

Portion of farmers who have: 63%
N=203



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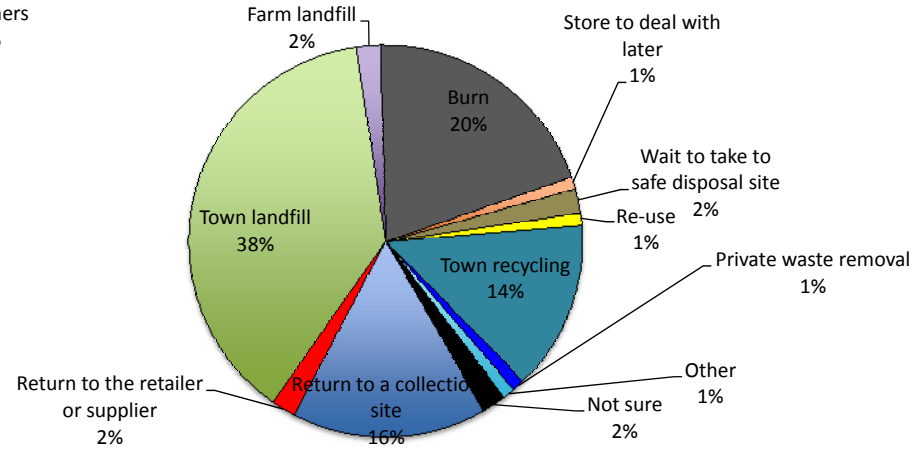
What is done with plastic wrap or packaging from ag products?

Portion of farmers who have: 56%
N=180



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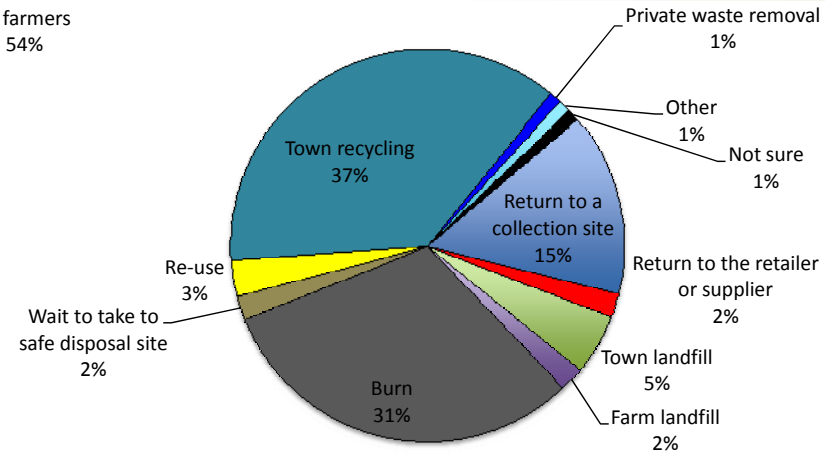
What is done with cardboard packaging from other ag products (not pesticides)?

Portion of farmers who have: 54%
N=176



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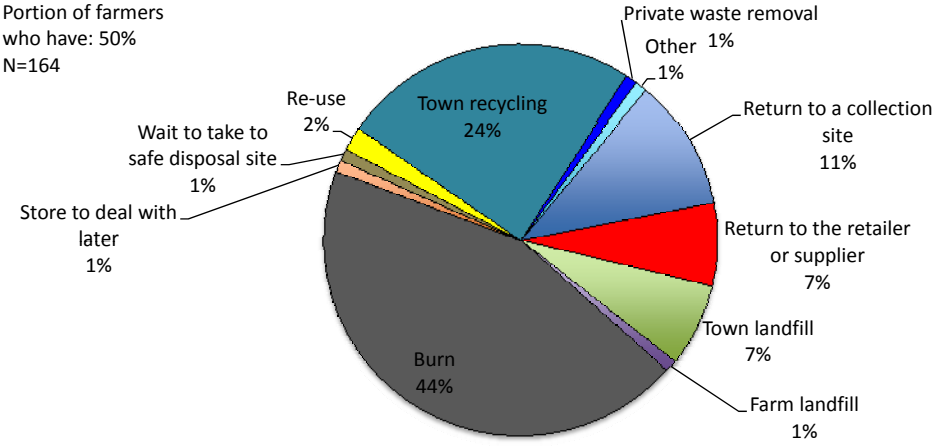
What is done with cardboard packaging from pesticides?

Portion of farmers who have: 50%
N=164



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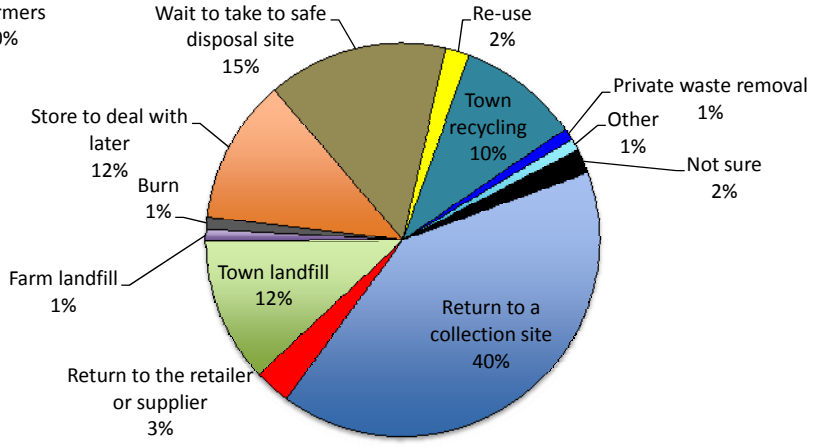
What is done with unwanted paint and solvents?

Portion of farmers who have: 50%
N=164



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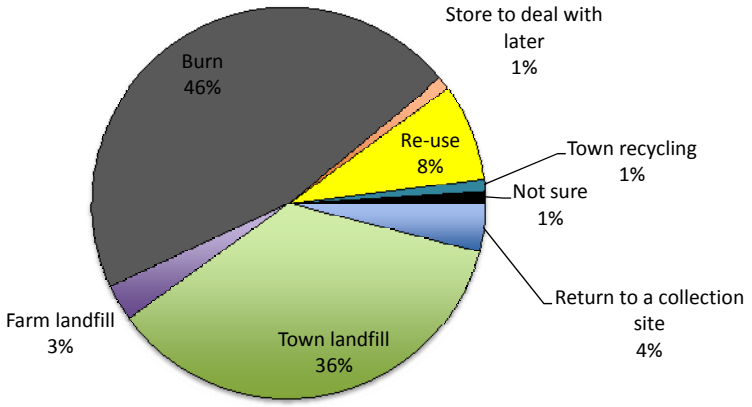
What is done with used twine or net wrap?

Portion of farmers who have: 36%
N=139



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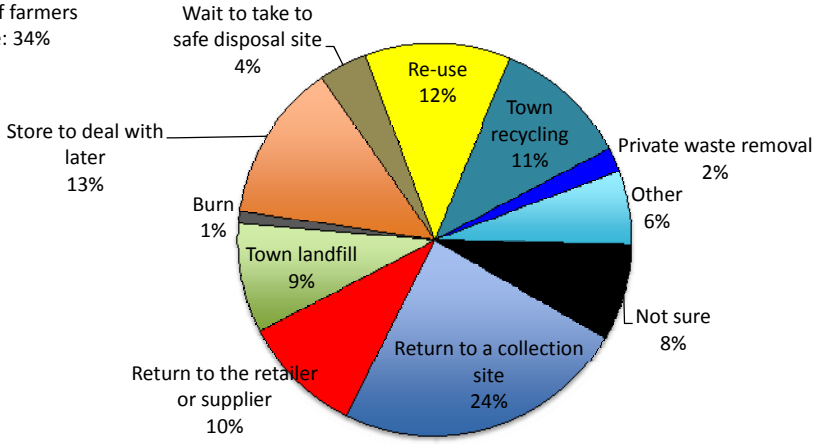
What is done with used antifreeze?

Portion of farmers who have: 34%
N=107

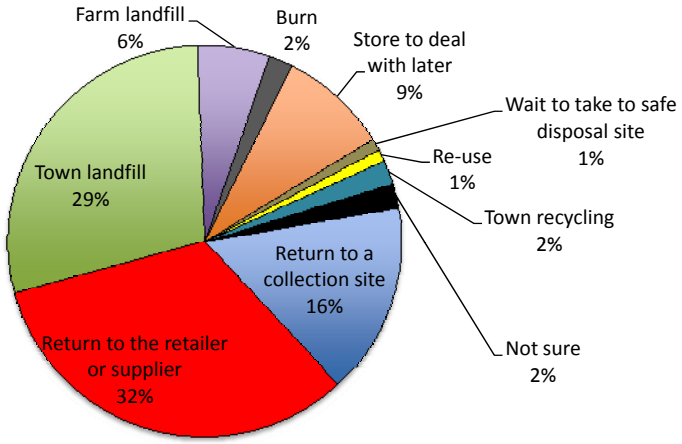


19

BlacksheepStrategy

What is done with sharps or needles from livestock?

Portion of farmers who have: 31%
N=121

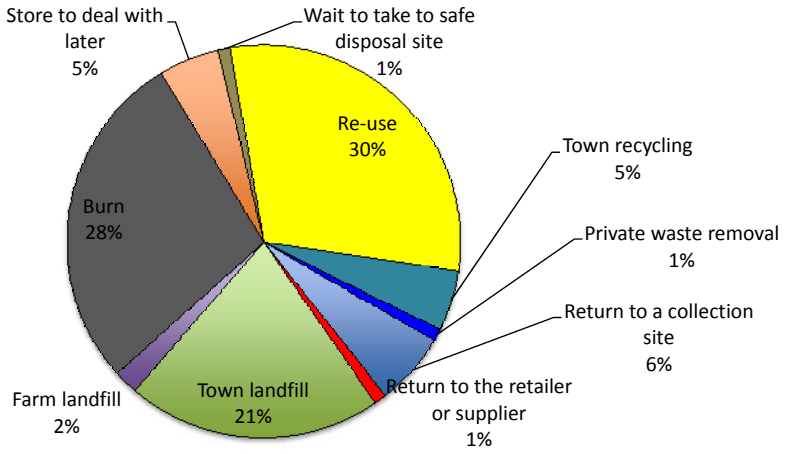


20

BlacksheepStrategy

What is done with empty feed bags?

Portion of farmers who have: 31%
N=118

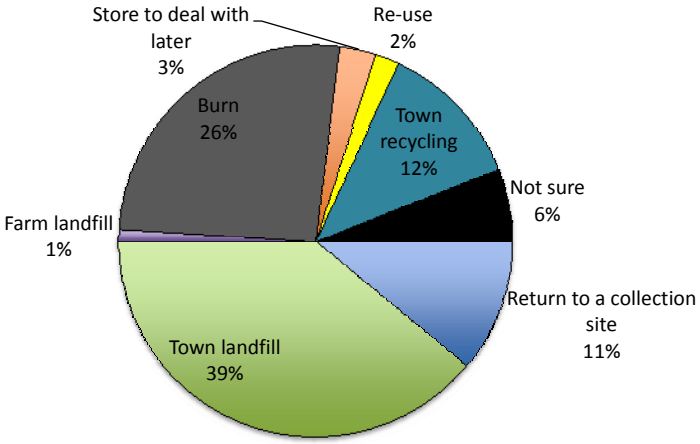


21

BlacksheepStrategy

What is done with plastic wrap from silage or hay bales?

Portion of farmers who have: 24%
N=89

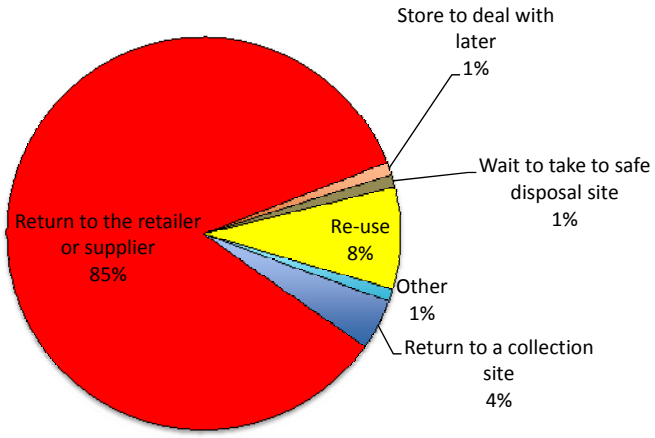


22

BlacksheepStrategy

What is done with empty large containers (totes, drums)?

Portion of farmers who have: 21%
N=70

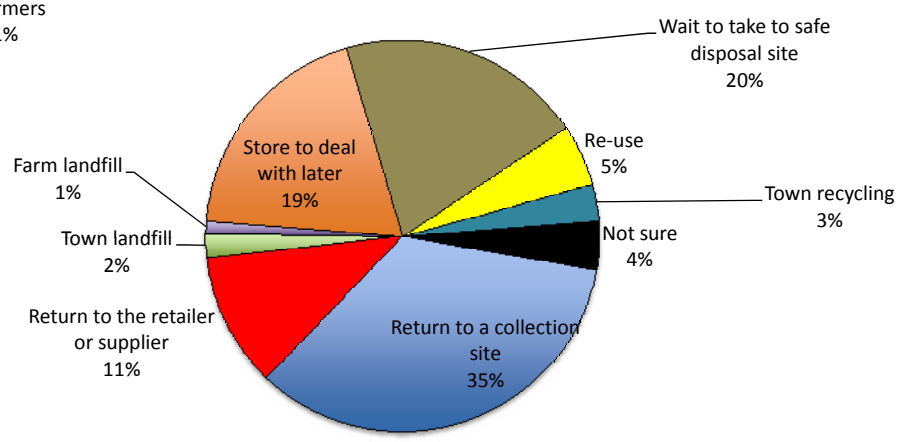


23

BlacksheepStrategy

What is done with unwanted, old or obsolete pesticides?

Portion of farmers who have: 21%
N=69

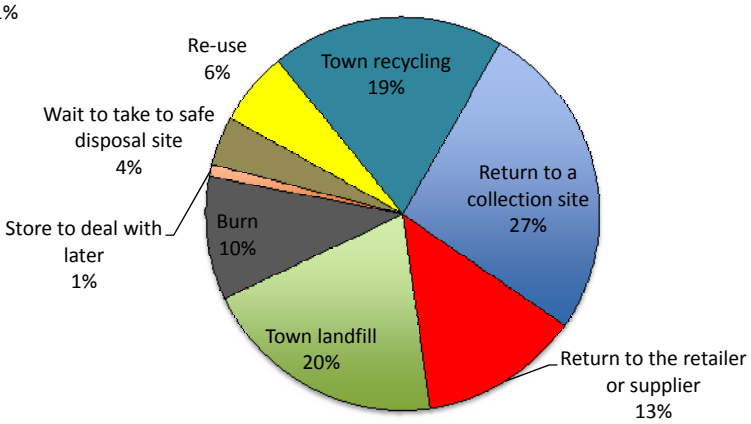


24

BlacksheepStrategy

What is done with empty plastic livestock disinfectant product containers?

Portion of farmers who have: 21%
N=64

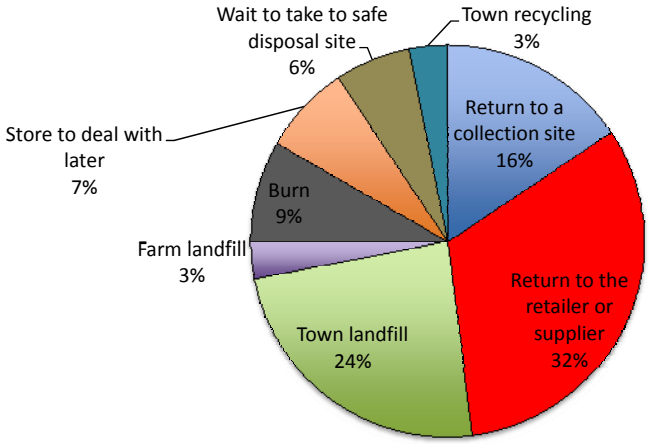


25

BlacksheepStrategy

What is done with unwanted animal health products or pharmaceuticals?

Portion of farmers who have: 19%
N=58

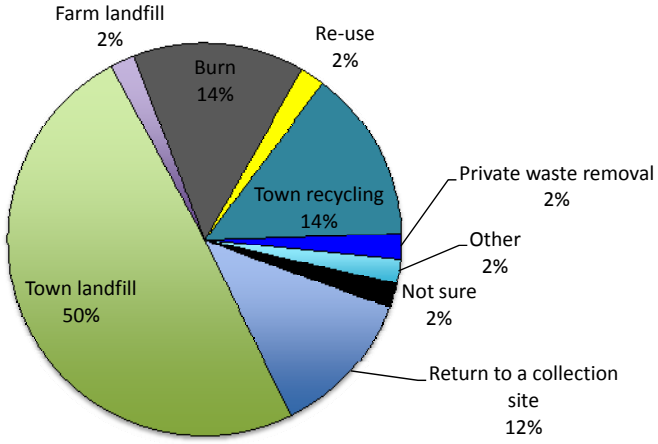


26

BlacksheepStrategy

What is done with Styrofoam packaging from ag products?

Portion of farmers who have: 17%
N=55



27

BlacksheepStrategy

Summary of more prevalent materials and / or those that are being burned or put in landfill

- Plastic oil, antifreeze containers - a high portion has them, and 40% get burned or put in landfill
- Empty seed bags - a high portion has, and two-thirds get burned or put in landfill
- Plastic wrap or packaging - a high portion has, and most gets put in landfill or burned
- Cardboard packaging - a high portion has, and a high portion gets burned
- Twine or net wrap - a high portion gets put in landfill or burned
- Sharps or needles – a lower portion has, but a high portion gets put in the landfill
- Empty feedbags – a lower portion has, but a high portion gets burned or put in the landfill
- Plastic wrap from hay or silage bags – a lower portion has, and most of it is burned or put in landfill
- Empty plastic livestock disinfectant containers and unwanted animal pharmaceuticals – about a third is burned or put in landfill
- Styrofoam packaging – while 17% generate, about two-thirds ends up in landfill or being burned

28

BlacksheepStrategy

Do farmers have materials they don't know how to dispose of?

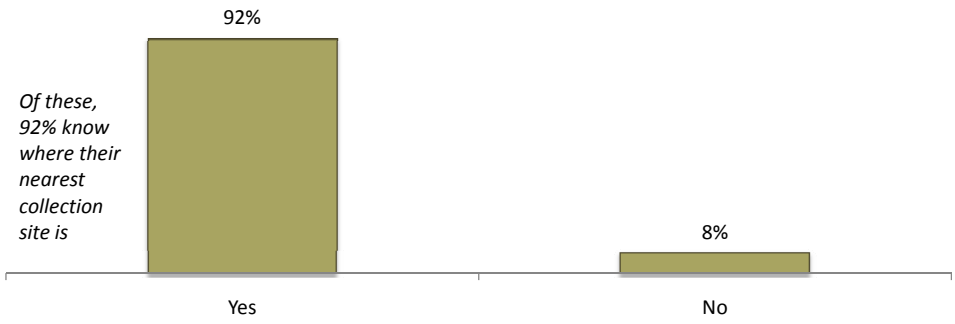
Do you have any material on your farm that you are concerned about recycling or safely disposing of, or that you are unsure of how to dispose of? (N=328)	
Plastic wrap and film, silage wrap, bale wrap	3%
Oil	3%
Antifreeze	2%
Chemicals, pesticides	2%
Containers	2%
Oil filters	2%
Seed, feed, sand bags	1%
Animal health items	1%
Tires	1%
Other	2%
Nothing, no concerns	82%

29

BlacksheepStrategy

Awareness of container recycling program

Before now, were you aware that there is a collection and recycling program for these containers? (N=217, those who generate containers)

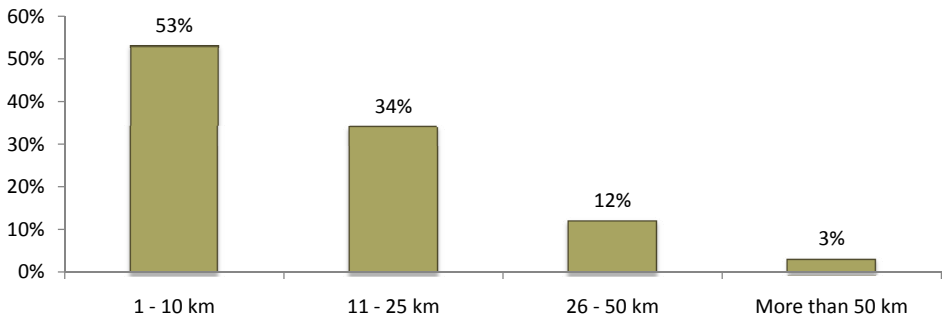


30

BlacksheepStrategy

Distance to drive to return containers

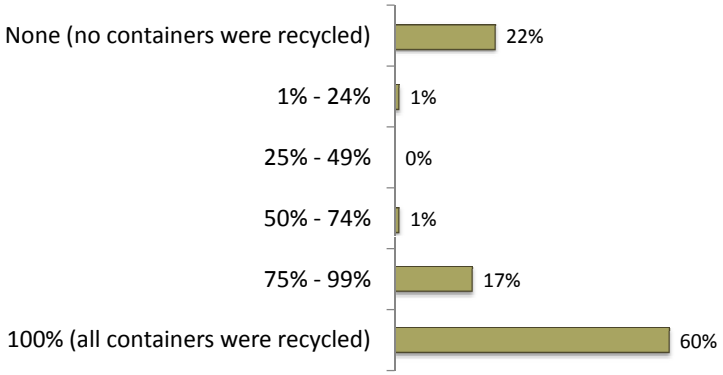
About how far would you have to drive to return containers?



31

BlacksheepStrategy

Portion of containers recycled

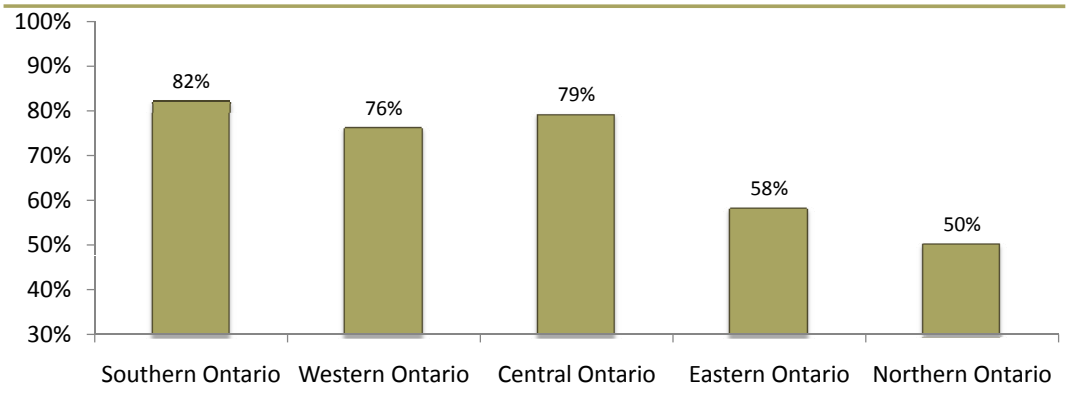


N=220, those who generate 10L size-range containers

32

BlacksheepStrategy

Average portion of containers recycled by region

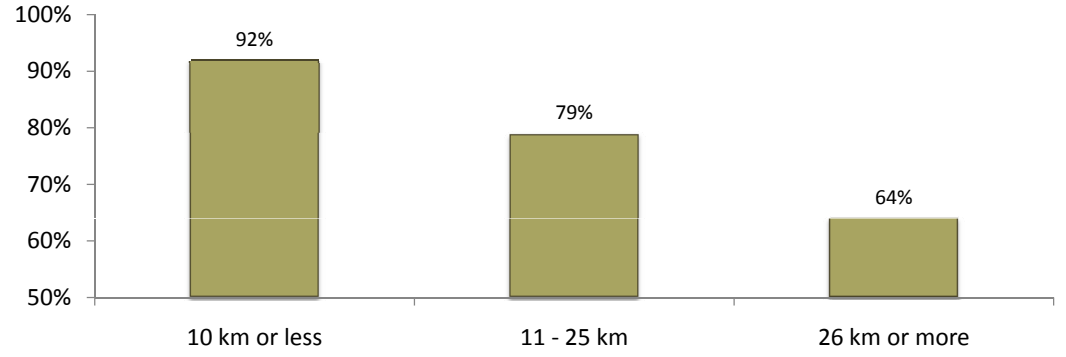


N=220, those who have or generate 10L size-range containers

33

BlacksheepStrategy

Portion of containers returned by distance to collection point



N=170, those farmers who are aware of program and know where their recycling point is

34

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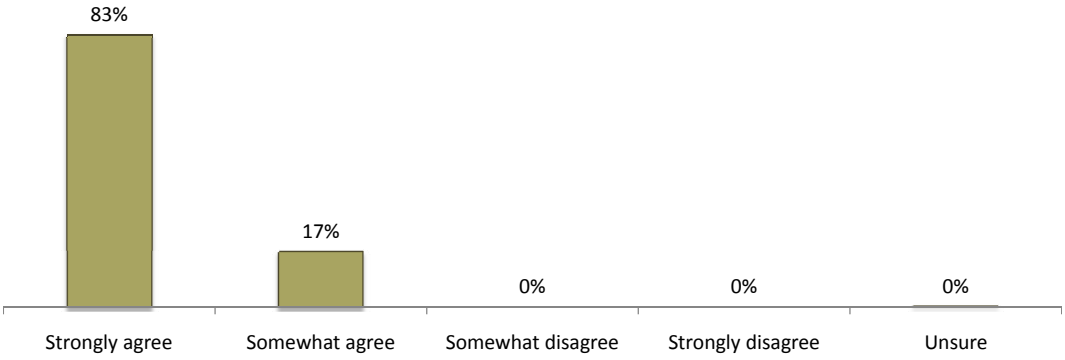
Attitudes towards responsible disposal of agricultural waste

Responsible disposal of agricultural waste is very important to me (N=328)

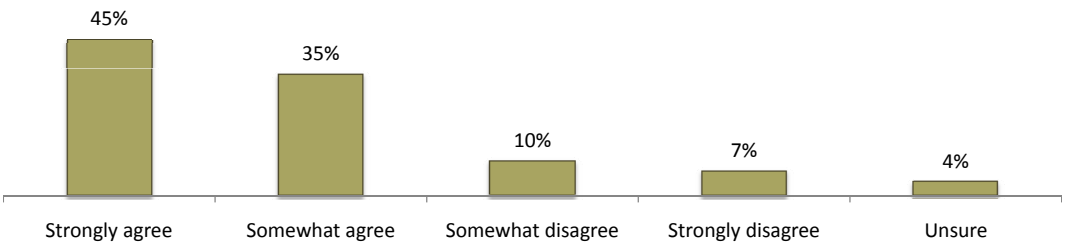


35

BlacksheepStrategy

Do farmers think industry is doing enough?

The agricultural industry is doing enough to ensure there are responsible ways to dispose of the waste from their products (N=328)



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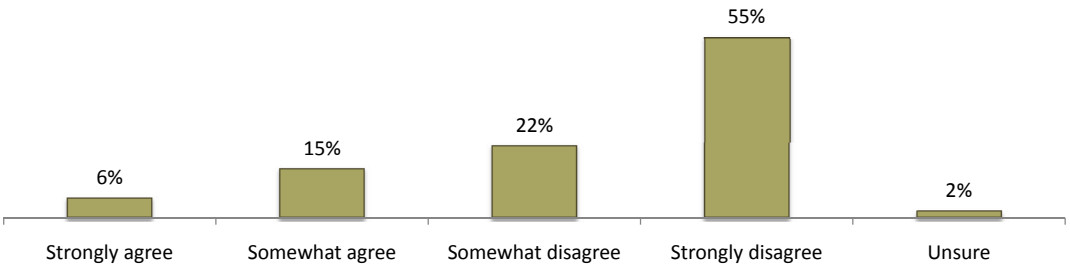
BlacksheepStrategy

Do farmers have waste that they don't know how to dispose of safely?

I have a lot of waste materials around my farm that I am unsure of how or where to safely dispose of (N=328)

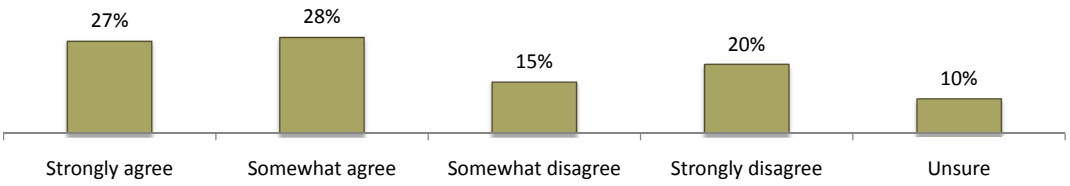


37

BlacksheepStrategy

Do farmers see alternatives to landfill or burning?

I am uncomfortable burning or putting certain products in my own or other landfills, but don't see any alternative (N=328)



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BlacksheepStrategy

Thank you.
Any questions?

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Key Messages and Feedback

January 19, 2011

Key Messages

1. CleanFARMS is actively pursuing solutions for management of agricultural waste
2. EPR is coming across Canada and this will extend to the agricultural sector
3. Ontario's agricultural sector can help shape the future for new EPR programs
4. In Ontario, many agricultural waste materials are being buried or burned
5. Farmers believe that proper management and stewardship of agricultural waste is important

Participate in the follow up Survey

- Survey Monkey follow up survey

https://www.surveymk.com/s/Agricultural_Waste_Webinar_Survey

EPR Webinar Feedback Survey
Survey Results
February 11, 2011

1. Introduction

This document presents the results of an online survey of participants at CleanFARMS' EPR webinar, held January 19, 2011. Following the webinar, participants received an email with a link to the survey.

This document provides

- A summary of responses (Section 2.0)
- Implications (Section 3.0)
- Detailed Survey results (Section 4.0)

The detailed survey results include the frequencies for each question, as well as the verbatim comments to the open ended questions. It is well worth reading through the verbatim comments – there is a great range and depth of ideas and insights that are not possible to fully capture in the summary.

1.1 Respondents and tone of responses

A total of 29 respondents started the survey. Of these, 27 answered most of the questions (2 dropped off). This represents just under half of webinar participants. Note that this sample is "self selected", in that participation in the survey was voluntary, and we are dealing with a small sample. Although this doesn't constitute a quantitative sample that would provide high statistical accuracy, the results do provide some excellent directional feedback for CleanFARMS. Further, there was a good level of response to the open ended questions, which provides some rich qualitative input.

Eight of the respondents were from government or regulatory agencies (mostly government). Another seven were involved with agricultural associations, while five were with waste management, stewardship or environmental groups. Three were manufacturers or first importers. Two were farmers, and two were processors of recycled plastics. Two were classified as "other."

The tone of responses is very positive, and respondents seem genuinely interested and engaged. They appear to believe that the webinar was worthwhile and perceive it to be an effort to educate the industry and open up a dialogue. The perception was that the webinar was a high-level attempt to raise awareness and create discussion of the issues. If anything, the desire was to work toward further "closure" around some of the issues. There seems to be good acceptance and support of CleanFARMS' role in bringing this issue to the industry – a few also expressed a wish that CleanFARMS would be more explicit in its goals and how it interprets the various studies and developments.

2. Summary of Responses

2.1 Ratings of the Webinar

Respondents rated the various sections of the webinar. For all three of the main sections of the webinar (EPR backgrounder, waste characterization, farmer survey), 93% of respondents gave a rating of very or somewhat useful. The presentation on the survey findings was rated as very useful by 64%, followed by the waste characterization presentation at 61% and the backgrounder on EPR at 58%. Only 7% (two people) rated the presentations as not useful. The feedback and discussion session was rated as very useful by 11%, but most (63%) rated it as somewhat useful.

When asked for their suggestions as to how to improve the webinar, seven respondents provided comments. These included:

- Make it shorter – one hour instead of two. (one respondent)
- Improve the sound quality. (one respondent)
- Two respondents wanted more conclusions and/or more closure. One wanted to hear more of the "so what" – what are the implications and next steps. The other wanted more time for discussion of and closure around the issues raised.
- One respondent would have liked more introduction of the companies giving the presentations, and identification of the people who were answering the questions.

2.2 Importance of key messages

Respondents were presented with five key messages from the webinar, and asked how important they thought each was.

- The message with the highest portion thinking it is "very important" was: *EPR is coming; across Canada, provincial governments are rapidly implementing new regulations aimed at getting more waste materials recycled, and this will extend to the agricultural sector.* Almost three-quarters (74%) said this message was very important.
- All of the other messages were also considered to be important, with about two-thirds of respondents considering all these messages as "very important."

2.3 What actions should the agricultural industry be taking?

Fifteen of the respondents had comments on what actions they think the agricultural industry should be taking. There was a range of comments that did not centre around any one aspect. Some of the themes include:

- Some comments related to the educational component of getting farmers not to burn waste materials. One respondent advocated on-farm composting of waste materials.

- Other comments centred around the processing side – creating more options for recycling and making new items out of the waste materials, and creating new markets for the waste materials.
- Other comments related more to creation of collection systems that make it easy for farmers to return waste materials.
- Some comments related to reduction of packaging.
- A few expressed concern over the extent to which waste materials are being burned, and suggested programs to educate farmers on the health impacts. They also suggested development of programs to target collection of the materials that are most predominantly being burned.

2.4 Importance of and priorities for waste collection and disposal

All respondents believe that it is important to improve the collection / disposal options for agricultural waste, with 85% believing it is "very important" and 15% saying it is "somewhat important."

When given a list and asked to indicate the top five waste products that they thought the industry should focus on, following are the top products selected:

- Used plastic wrap from silage or hay bales (56% select this in their top five)
- Plastic wrap or packaging from agricultural products (52%)
- Unused or unwanted animal health products such as vaccines or pharmaceuticals (48%)
- Sharps or needles (44%)
- Waste oil and filters (33%)
- Used twine or net wrap (30%)
- Empty plastic containers from livestock cleaning and disinfectant products (30%)

2.5 Issues for farmers

When asked what they thought the main issues are for farmers, many emphasized "cost and convenience" and "reasonable and practical solutions." Programs need to be easy to use, convenient and not come at a high cost in terms of time, hassle, or comparative cost of using the program (driving, etc) versus the cost of disposing in the ways that they have always disposed of products (ingrained disposal methods that have been acceptable in the past).

Others brought up the need for good communication and education regarding where to go to dispose of materials, which materials are most hazardous, what are the risks of burning, how to safely dispose of materials, etc.

2.6 Reaction to concept of EPR

Respondents were asked to what extent they agree that the producer or first importer is responsible for creating environmentally sound options for disposal of the product and / or

the product packaging. Just over two-thirds of respondents strongly agree with this, and another 19% somewhat agree. Interestingly, 11% somewhat disagree with this, and 4% are unsure.

2.7 What more would they like to learn?

Twelve of the twenty-seven respondents had suggestions on what more they would like to learn. This seems to indicate a high level of interest and engagement. There was a variety of suggestions, including:

- Interest in what the processing / marketing options are, are there creative options being thought of, can there be demonstration of these options
- Interest in options for organic waste
- Comparison to other sectors – effectiveness of recycling efforts, trends, adoption, etc.
- Comparison to other countries – what is being done, what is effective that might work here, etc
- Some would like to hear from the manufacturers and brand owners – what is their response to EPR?
- What are the options being explored, interest in tracking along (in future webinars) with the progress being made in developing and promoting these options
- Cost / benefit analysis of various options
- Interest in understanding what CleanFARMS wants

2.8 Final comments

Respondents were given an opportunity to provide any final comments. There were several positive comments about the webinar itself and about CleanFARMS. As well, some expressed optimism that the industry can / will work together to govern itself. A few other comments related to specific process items related to container collection, obsolete pesticide program, etc.

3. Implications

- The webinar was well received and all three parts of it were highly rated. Little change is needed in terms of the content.
- For future webinars, there are some technological improvements that could be ironed out (e.g. sound quality).
- Future webinars could provide a little more information about the speakers and their companies (without a lot of time spent), as well as the identification of who is answering the questions.
- Timing of future webinars could be tightened somewhat.
- Honing of key messages – emphasis on the message "EPR is coming …" but including all the other key messages.
- It is very clear that respondents do think that the ag industry needs improved collection / disposal options, with fairly strong consensus that the priority should be on plastics and animal health products (pharmaceuticals and sharps).
- There was no clear consensus on specifically what steps the industry should be taking – it runs the gamut from developing easy, convenient cost-effective collection programs to developing processing and marketing options. The scale may tip slightly towards the processing end of it, and there is interest in learning about the processing options and creative ways to deal with the recycled materials, and what other countries or sectors are doing in this regard.
- Although most respondents were not farmers, they thought that the key issues for farmers will be cost and convenience. Cost is thought of in terms of the time / hassle / out of pocket cost of the farmer participating in waste disposal programs versus other methods of disposal (burning or other).
- Many felt that there is an educational component required to demonstrate the risks of burning waste materials.
- CleanFARMS might want to consider distributing a summary of the results of this survey back to webinar participants.

3.0 Survey Frequencies

1. Please tell us in which of these categories you would fit (if more than one category applies to you, please select the one that best describes you in the role in which you participated in the webinar):

Type of Respondent (N=29)	
	Number
Government / regulatory	8
Involved with an agricultural association	7
Waste management, stewardship organization	5
Manufacturer or first importer of agricultural products	3
Farmer	2
Processor of plastics for recycling	2
Other	2

2. Overall, how would you rate the usefulness of the following parts of the webinar:

Ratings of Webinar (N=27 to 28)					
	Very useful	Somewhat useful	Not very useful	Not at all useful	Unsure
Backgrounder on Extended Producer Responsibility (N=27)	56%	37%	7%	-	-
Presentation on waste characterization in Ontario (N=28)	61%	32%	7%	-	-
Presentation on Ontario farmer survey (N=28)	64%	29%	4%	3%	-
Feedback and discussion (N=27)	11%	63%	7%	-	19%

3. Please provide any comments or advice as to how we could make this webinar better: (7 comments)

- 2 hours is a long time -- I'd suggest 1 hour max
- Better sound quality. Presentations were very difficult to hear through the telephone
- Have a more clear ending. What does the research to date lead you to believe about EPR. You said this was the first step in farmers, etc. helping to develop public policy. But, then the 'how' was never answered. What did you want stakeholders to do as a result of the presentation?
- I would have preferred more time dedicated to discussion and q/a. Your webinar raised quite a range of questions and considerations in my mind and I was looking for more closure.
- It was fine for what it was billed as. Not everything applied to me because I am not from Ontario, but I didn't expect it to.

- For people who are participating would be nice to have a name who answers were asked questions. And also would be nice to know the name of the companies
- Was not able to log on early enough for the whole backgrounder presentation but what I did listen in on was useful

4. Following are some of the key messages the webinar was trying to convey. For each, please indicate how important these are as key messages, as the agricultural industry (including manufacturers, distributors, retailers, importers, farmers) considers its stewardship options and priorities for the future.

How important are these are as key messages, as the agricultural industry (including manufacturers, distributors, retailers, importers, farmers) considers its stewardship options and priorities for the future. (N=27)					
	Very important	Somewhat important	Not very important	Not at all important	Unsure
CleanFARMS is a non-profit industry stewardship organization that is actively pursuing solutions for the proper management and disposal of agricultural waste.	63%	33%	4%	-	-
EPR is coming; across Canada, provincial governments are rapidly implementing new regulations aimed at getting more waste materials recycled, and this will extend to the agricultural sector.	74%	22%	4%	-	-
Ontario's agricultural sector has the opportunity to help shape the future for new EPR programs that could affect their industry.	63%	26%	7%	-	4%
In Ontario, many agricultural waste materials are being buried or burned.	65%	23%	8%	-	4%
Farmers believe that proper management and stewardship of agricultural waste is important, and are looking for alternatives to burning or burying	67%	26%	7%	-	-

Comments on Q4 (7 comments):

- Although the agricultural community may vocalize a desire to be environmentally responsible operators, the reality is that many widely accepted past practices are not entirely consistent with this goal. CleanFARMS Ltd. can and does play an important role in educating farmers in more environmentally safe and sustainable use of numerous chemicals and materials.
- Food production is an economically driven process, practical low cost solutions are what is needed
- I recall a very mixed message coming out of your farmer survey. I saw that many farmers think they have solutions right now and are happy with them. That sounds like a tough sled from where I sit.

- It seemed to me that one of the main challenges facing farmers is how to get relatively small quantities of hazardous waste to an appropriate facility at a reasonable cost.
- There was one key message missing: there is a lot of waste generated in our industry that could be the target of regulation because it's not being managed in green way.
- These are very good, clear, and important messages. I couldn't improve upon them.
- Ultimately, who is going to pay for the disposal?

5. After seeing this webinar, is there any action that you would like to see the agricultural industry take? Why? (15 comments)

- Start a stewardship program. Educate producers on why burning is a bad idea
- Awareness positive at this time for BC
- Closer collaboration with the Netherlands, seminar with speakers from Canada and the Netherlands to share innovative approaches and best practices, trade missions
- Develop EPR solutions for agricultural plastics […] Strong collection systems are supported by EPR programs. EPR programs achieve high recovery rates, which create consistent volumes of recyclable material.
- Do more recycling Make packing and products easier to recycle more uses for recycled products Better public image the more that is recycled and possibly fewer rules and regulations or better able to have more positive input on regulations
- I think an emphasis on the reduction of plastic that gets sent to farms is a critical piece of the path forward.
- I think the educational component of how to manage waste needs to be improved -it was shocking how many people didn't know what other options beyond burning exist. I think that markets / options need to be developed for those materials that are being burned onsite -those pose the greatest environmental / human health risks...
- I would like to see more emphasis on on-site composting. I realize that "organics" were not included in this webinar, but paper and cardboard were included. In many cases, it may make more sense to use these materials on the farm, rather than ship them God knows how far to recycle them. They can be used as mulch or incorporated in composting systems that also compost manure, crop residues, deadstock, etc. We need more emphasis on on-farm composting for several reasons: first, the addition of compost to agricultural soils is one of the best ways to sequester carbon available to us; second; increasing the soil's organic matter content results in a host of environmental and agronomic benefits, including climate-change adaptation; and third, it is probably the most cost-effective solution for many different organic ag wastes.

- I'd like to see more effective diversion of hazardous waste such as contaminated containers, sharps and such. There isn't a lot of it, but it's nasty. Hospitals have to pay through the nose to get rid of similar materials responsibly, and I can see that this would not be practical for farmers. Nevertheless, some of this material cannot be dealt with appropriately at an incinerator or landfill without some processing.
- Market opportunities are key to a strong stewardship response. It would be very wise to review how waste materials in agriculture are currently being made into other products and what could be done to enhance markets for continued market development. Related to this is a need for demonstration projects for CleanFARMS to support and advertise. The more you do to show you are on top of new options and opportunities, the better for EPR in Canada.
- Producers must continue their efforts to reduce packaging and make more effort to educate farmers how to recycle used products (beyond just pesticide containers).
- Sounds like this is a decision already made with not much room for dialogue. How much dialogue has the CFO, OFA had for input in the current situation of recycling, re-use, disposal? Is there a cost benefit analysis of putting animal health waste in the blue box (bottles, plastic containers) compared to the proposed system?
- Spread the costs and responsibility across all stakeholders. Encourage recycling but spend the effort on the 80% of material that is easiest to access and recycle.
- Think plastics needs more cooperation from these people and businesses to help expand our program.
- Ways to improve the collection of acceptable material from farmers to facilitate recycling /disposal.

6. How important do you believe it is to improve collection / disposal options for certain agricultural waste products? Would you say it is:

How important do you believe it is to improve collection / disposal options for certain agricultural waste products? (N=27)				
Very important	Somewhat important	Not very important	Not at all important	Unsure
85%	15%	-	-	-

7. In the context of improved waste disposal options, please select the 5 (five) agricultural waste products from the list below that should be a top stewardship priority for the agricultural industry.

Please select the five agricultural waste products from the list below that should be a top stewardship priority for the agricultural industry. (N=27)	**Portion who selected in their top five**
Used plastic wrap from silage or hay bales	56%
Plastic wrap or packaging from agricultural products	52%
Unused or unwanted animal health products such as vaccines or pharmaceuticals	48%
Sharps or needles	44%
Waste oil and filters	33%
Used twine or net wrap	30%
Empty plastic containers from livestock cleaning and disinfectant products	30%
Cardboard packaging from pesticides	22%
Unwanted tires	22%
Plastic oil or antifreeze containers	22%
Unwanted paint and solvents	22%
Cardboard packaging from other agricultural products	19%
Used antifreeze	19%
Used greenhouse film	19%
Used plastic mulch film	15%
Styrofoam packaging	11%
Empty seed bags	7%
Empty feed bags	7%
Used irrigation drip pipe	7%
Used plastic plant pots or trays	4%
Empty sand bags	0%
Used bird netting	0%

Comments on Q7 (6 comments):

- Contaminated containers are relatively small volume, expensive to deal with properly and a low-grade hazard wherever they wind up. The other products fit fairly easily into existing municipal and IC&I waste management systems.
- Not being from Canada, it is hard for me to know which is the most important, but I will guess anyway on the basis of likely volume and hazard

- On the prairies, grain bags are a big issue. My province has stewardship programs for tire, oil, oil containers, and paint and outlets for cardboard. I would like to see stewardship programs for ag products and packages where not other option exists.
- So many are important!
- There are already programs in place such as the blue box program for cardboard. Oil and antifreeze and containers are part of the MHSW program and tires (depending on size/type)may be a part of the OTS program.
- Wood waste in BC from orchard removals (conical piles of wood chips can be seen on satellite imagery); bladders from wineries; PVC irrigation (differs from drip line); paper pesticide bags

8. What do you believe are the most important issues or main concerns for farmers, related to the development of options to deal with these waste products? (21 responses)

- Cost. Availability in terms of geography (i.e. how far would a farmer have to drive to properly dispose of the product)
- 1) Knowledge - what can I return/recycle & where do I take it? 2) More knowledge - what is safe to take to the dump versus what clearly should not be landfilled 3) Uncontrolled burning represents a huge personal health risk.
- Become aware of how to safely dispose of non-organic waste produced on the farm
- Being convinced that burning is not a great idea and showing why with data. And, then showing farmers that reasonable and practical solutions are at-hand, but they will need to do some source separation to make them a reality. It is their world and they must do what they can to protect it.
- Collection/delivery (drop-off) options; suitable containers for storage of material until collection/delivery. In other words, make it easy for them.
- Convenience and cost
- Cost and ease of participation
- Cost in terms of hours spent sorting on the farm, actual assessment cost to any party in the manufacturing to application chain, the actual amount that gets recycled versus is sorted and still ends up in the garbage
- Cost of disposal convenience of disposal
- Cost to transport and/or dispose of materials. Hence the burning; no cost.
- Cost. Farmers aren't making huge profits, their waste management needs don't match any existing sector exactly. Please bear in mind that I'm inexperienced in this area of waste management, so my opinions are relatively uninformed. I was here to learn, so although I don't mind offering my opinion, it should be considered in context.
- Ease and convenience of disposal solution for the farmer
- Easy access, effectiveness & costs
- I think the ease of recycling programs seems to be the number one driver in success of the program.
- That this is part of ongoing sustainable agriculture.

- The rural aspect of collection. It is more challenging to develop collection from rural areas vs urban centers.
- The solutions need to be relatively convenient and not expensive for farmers. Most of the relevant wastes can be easily stored on farms until a mobile collection unit is in the area. This would make more sense for a lot of items than making a farmer drive too far or putting up seldom-used depots in remote areas.
- Think plastics needs farmers to cut and store the product better before taking it to the transfer sites
- This is a question for farmers. I am not one. My guess would be "how will this system be paid for?"
- Unsure, not a farmer
- Who pays for the disposal of products

9. To what extent do you agree or disagree that the manufacturer or first importer of a product is responsible for creating environmentally sound options for disposal of the product and / or the product packaging? Would you say you:

To what extent do you agree or disagree that the manufacturer or first importer of a product is responsible for creating environmentally sound options for disposal of the product and / or the product packaging? (N=27)				
Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Unsure
67%	19%	11%	-	4%

10. What additional information would you be interested in learning, if there were to be a follow-up webinar? (12 responses)

- Companies producing creative stewardship products from ag wastes and more on organic waste options. Might be nice to have a farm organization or coop participate. Under the right conditions, I believe that CleanFARMS can create some joint ventures with agricultural producing organizations and private markets that will give farmers a vested interest in being their own best friend by directly contributing to stewardship and getting pay-back in the form of credits, product preferences, or cash from the company. There you go.
- How efficient are recycling efforts in other sectors (tires, oil, bottle returns for Beer and LCBO, crop chemical containers) and the relative adoption rates and the trends of the adoption rates in the past three - five years.
- I would like to hear what brand owners and first importers have to say. Best if they presented themselves
- I would like to see what CleanFARMS wants to be stated clearly -- are you trying to build a following / get support from existing members / etc.
- I would very much be interested in following along with the development of ag. plastics recycle efforts. The reverse distribution (i.e. collection) of the products may be more of a challenge than their actual recycle.
- Learn more about urgent issues and seek to work with forward looking municipalities who are willing to initiate pilot or demonstration projects with innovative technology

- Manufacturer/Distributor commitment to quality , quantity and recyclability of packaging with the least negative effect on the environment.
- Organics (see my previous note on this). I would like to see a discussion on how farmers could be encouraged to compost on their farms.
- Progress being made and options i.e. new opportunities being looked at
- The efforts of hazardous farm waste producers to embrace EPR.
- Think plastics would like to know the progress on getting help from these programs
- What is being done in other countries cost-benefit analyses of disposal options

11. Please use the space below to provide any final comments, suggestions or feedback. (12 comments)

- As I said earlier, I was here to learn, not express opinions. However, this seems clear to me: EPR is the key to allowing farmers to dispose of their waste responsibly without incurring unaffordable expense.
- Availability and ease of access in a timely manner will result in more uptake of any programs developed
- Do one again in the future.
- Excellent presentations. Very well thought out. Touched on many aspects of numerous important (and challenging issues). CleanFARMS - keep up the good work!
- Good job CleanFARMS for the work done so far!
- Good job.
- I think the CleanFARMS fees should be tied more closely to the weight of plastic packaging rather than the number of containers. Having to pay for weight would encourage manufacturers to improve packaging design to decrease the amount of plastic used.
- I would like to be somewhat engaged in the discussions and other activities you may develop
- If an obsolete pesticide collection program is implemented in BC, have the capacity to accept other items that are not accepted at landfills or legal to burn or bury
- If we all stay united and continue networking and possibly lobbying the government. There is a very good chance we could solve these environmental problems that exist
- The actual webinar and presentations were professionally delivered