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Alberta Plastics Recycling Association NEWS

www.recycleyourplastic.ca

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Agricultural plastics such as baler twine, bale wrap, silage wrap, and feed bags have the potential to be recycled into a variety of consumer goods.

Agricultural plastics project moving forward

by Dave Whitfield, Alberta Environment

Although it may not be the largest item in our waste system, agricultural plastics in the form of baler twine, bale wrap, silage wrap, and feed bags of various sizes are very problematic waste for farmers and agricultural business. And far too often, because of a lack of alternatives, these materials end up in a burning barrel – a practice that is dangerous to human health, a source of pollution to our land and air, and illegal for those reasons.

In 2007, the Recycling Council of Alberta (RCA) decided to address the issue and 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 (AENV), and recyclers. There has also been some involvement from Saskatchewan. The working group has met twice, and thanks to research undertaken by Grant Cameron of APRA and input from the recycling sector, we now have a good picture of the nature of the material and the recycling potential.

Polyethylene (sheet materials like silage bags and bale wrap) is expected to be marketed in Alberta in 2008 in the range of 9.5 to 11 million lbs. Those numbers may grow because of the introduction of a storage bag for grain that is gaining popularity. Polypropylene (twine and cord) marketing is expected to be somewhat less at 6.5 to 8.7 million lbs. Although not captured in the above numbers, polyethylene and polypropylene are also used extensively in the manufcture of bulk bags, feed sacks, and lumber wrap. The working group was also very pleased to learn there is interest from Canadian and US firms in material that may be recovered. Potential uses range from the manufacture of new twine to a range of consumer goods.

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The next hurdle for the working group is to assess the potential of collecting sufficient quantity and quality of materials to warrant a full-fledged recycling program. As with any other commodity, sorting and contamination levels are a factor and between plant matter, mud, manure, and just plain bulkiness, agricultural plastics are not easily handled.

We already have some data from the early collection work done by Mountain View County, Newell Recycling in Brooks, and the MD of Rocky View. However, in order to assess the long-term potential of agricultural community support, collection and handling techniques, and program costs, more research over an extended period is required. Over the next few months, the working group will be monitoring

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pilot projects that will consider these questions and also determine whether the program design will have to be modified in

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different parts of the province where feeding and climate conditions are different.

Having looked at those differences, the group has proposed a three-site pilot. Additional sites were invited to join the project. Invitations were accepted by the County of Lethbridge (home to feed-lot activity) and the adjacent Counties of Smoky Lake and St. Paul (a mixed farming area in northeast Alberta). The additional pilot areas are scheduled to join the process in late May/early June 2008.

The goal of the pilots is not focused on maximizing plastics capture, but rather the pilot is designed to gather as much information as possible. This is so all contributors might have a better understanding of how we can grow the program in the future.

A Program Co-ordinator, John Grinde, has been contracted for the term of the pilots (approximately two months). At the pilots' conclusion John will be issuing an assessment.

If you have any questions about this exciting initiative, please contact:

- Christina Seidel, RCA, 403-843-6563;
- Dave Whitfield, AENV, 403-297-8255; or
- Grant Cameron, APRA. 780-452-8611.

A look at APRA's milestones and future initiatives

The Alberta Plastics Recycling Association (APRA) was incorporated in 1991 to fulfill the need for a provincial organization to develop an orderly transition into recycling plastics in Alberta. Prior to 1991, bottle depots were the major plastic collectors in existence, collecting all beverage containers in the province. APRA has assisted recyclers in finding and securing feedstock and has helped in the search for markets for recycled plastics. APRA is dedicated to sustainable plastics recycling and to minimizing plastic waste to landfill.

APRA membership consists of:

- Plastics resin producers;
- Plastic manufacturers, fabricators and converters;
- Packagers and fillers of plastic products;
- Wholesalers and retailers of plastic products and products in plastics packaging;
- Plastics recyclers and the recycling community; and
- Industry associations and interested members of the public.

APRA has contributed to many successful programs and initiatives in Alberta. We consistently provide strategic guidance on plastics issues to industry and government and work with municipalities to expand recycling infrastructure. The following are examples of some of the programs and initiatives that APRA has been involved with.

APRA founding members:

- Dave Hubert – Genelytic Sciences
- Doug Flood – Dow Chemical
- Bryan Sullivan – Dow Chemical
- Saj Maqusood – NOVA Chemicals
- Colin Rose – Canada Safeway
- Bill Kennedy – Shell Canada
- John Scott – Scott, Fenrich & Associates

Alberta Used Oil Management Program

The first big hands-on project APRA undertook was the collection and recycling of plastic oil containers in Alberta. APRA Board Members Bryan Sullivan, Doug Flood, and Dennis Hambleton spent many hours on a three-year process with oil companies and all other parties involved, contributing significantly to the Alberta Used Oil Management Association's success in recycling used plastic oil containers.

Dairy Container Recycling Program

In 1998, Alberta Environment requested that the Alberta Dairy Council develop a voluntary plastic milk jug recycling program with full municipal support. APRA stepped up, along with Alberta Action on Waste and the Capital Region Waste Minimization Committee, to facilitate the development of the Milk Container Recycling Program which was launched July 1, 1999. The program was reviewed and extended over the years and was successful in reaching a 59.7 per cent return rate by 2007.

The review of the Beverage Container Recycling Regulation recommends that milk containers now be introduced into the deposit refund system. A decision by the Minister of Environment regarding this recommendation is pending.

The Dairy Container Recycling Program has resulted in the expansion of municipal recycling infrastructure such as community drop-off bins in Calgary.

Agricultural Plastics

Commissioned by APRA, "The Market Feasibility of Recycling/Recovering Post Consumer Polypropylene Baler Twine in Alberta" was completed in March 2000. This study found that there was no economically feasible way of collecting and recycling baler twine in the province at the time.

The issue has since resurfaced (please see story p. 1) and APRA is at the table with the Recycling Council of Alberta (RCA), Alberta Environment (AENV), manufacturers and distributors of twine and bale wrap, and rural municipalities to further investigate the development of a recycling program. APRA offered to do preliminary audit and market trend background work for the group, which, once completed, identified factors that have helped in the design of pilots. A three-county pilot is underway and may lead to a multi-zone or province-wide program as early as 2009.

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Fire Safety

In 2000, the Environment and Plastics Industry Council (EPIC) developed a Fire Safety Planning Guide: "A Guide to Fire Safety at Materials Recovery and Plastics Reprocessing Facilities." Based on these guidelines, APRA worked with its members and fire departments in Edmonton and Calgary to promote the development and implementation of fire safety plans in facilities handling or storing plastics.

Integrated Waste Management Model

APRA organized two workshops, one in Edmonton and one in Calgary, for municipalities interested in assessing the life cycle analysis of their landfills. Fred Edgecombe from EPIC and Tim Marr-Laing from Pembina Institute demonstrated the Integrated Waste Management Model and helped attendees apply their own numbers to the model. Interest in hands-on training was apparent, with 18 attendees in Calgary and 23 in Edmonton.

Waste to Energy

Doug Flood and Randy Conrad partnered in performing a study for the City of Edmonton to estimate the quantities and sources of plastic materials in the Edmonton area. The study, "Quantities and Sources of Plastic Materials in the Metro Edmonton Area," was completed in March 2001 in preparation for an investigation into the feasibility of a gasification plant as part of the City's waste management strategy.

The City of Edmonton is hoping to have an operational gasification facility by the end of 2009.

Doug travelled to Europe with representatives from the City of Edmonton to visit gasification plants that were operating successfully. As a result of a comprehensive investigation of this issue by the City of Edmonton and APRA's contribution, Edmonton is hoping to have its own gasification facility operational by the end of 2009.

Electronics in Recycling

In 2000, APRA in co-operation with Alberta Action on Waste completed a study titled "Background Document on Recycling Waste From Computers." The study was to pave the way for a volunteer, non-legislated approach to averting the major environmental problems associated with this rapidly growing waste stream. In 2001 the Alberta-wide Computer Recycling Program was launched.

The Alberta-wide Computer Recycling Program averts the major environmental problems associated with electronics waste.

Partnerships promote wise use and recycling of plastic bags

The Environment and Plastics Industry Council (EPIC) has long been involved in pioneering and researching plastics recycling processes and systems in Canada. This more than 20-year history has led EPIC to take a firm stance when it comes to plastic bags. This stance is one that promotes the wise use, reuse, and recycling of plastic bags as a better policy over the use of bans or taxes.

EPIC firmly believes that taxing or banning plastic bags is not the solution. In Ireland, which is often cited as a successful example of a plastic bag tax, consumers responded by switching to heavier gauge plastic bags (like "kitchen catchers"). The check-out counters reported a 90 per cent reduction in the number of bags being handed out, but sales of the heavier bags increased by 400 per cent and the overall use of plastic film within Ireland increased by 21 per cent (Packaging and Films Association, 2006). A *Toronto Star* article (February 1, 2007) confirms this, citing Ireland's Department of the Environment as having said that the tax has "...not reduced levels of plastic going to landfill" because households that previously used plastic shopping bags to line kitchen bins have switched to buying conventional garbage bags.

Plastics bags are recycled into many items such as new bags and plastic lumber used for decking, siding and park benches.

The Canadian plastics industry, as a whole, has invested millions of dollars in research to support plastic recycling, including extensive work in the collection, sorting, market development, and consumer education for all types of plastics packaging, such as bottles, tubs, polystyrene, and film.

With plastic bags, in particular, EPIC has recently been working closely with municipalities and retailers in Ontario to

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provide technical assistance and to promote partnerships among communities to increase reuse and recycling. Partnerships have been developed in many areas, including Sault Ste. Marie, the City of Ottawa, the Regional Municipality of Halton, and the Regional Municipality of Durham.

> ***"Only by working together can we continue to make headway and divert more plastic bags from landfill."***

Each of these partnerships builds on the efforts of several different parties. For example, the Regional Municipality of Durham became "Partners in Diversion" with A&P Canada, Loblaw Companies, Sobeys Ontario, and EPIC to increase consumer awareness of reduction, reuse, and in-store recycling programs for plastic bags. In Ottawa, the City partnered with Loeb Canada, the United Way, and EPIC. In Sault Ste. Marie, the partnership brought together local retailers, the municipality, EPIC, and students. The Regional Municipality of Halton also worked with EPIC and several leading retailers, including Fortino's, Food Basics, Dominion, A&P, Real Canadian Superstores, Wal-Mart, Zellers, and The Bay.

"These types of partnership programs are very positive and constructive," says Cathy Cirko, vice-president, Environment and Health, EPIC/CPIA. "These programs are models for the rest of the province and the rest of the country because they focus on traditional stewardship principles – the 3Rs – and emphasize working partnerships. Only by working together can we continue to make headway and divert more plastic bags from landfill."

Retailers across the country are now offering consumers reusable bags and are trying to increase consumer awareness of reduce, reuse, and recycling options. At-store recycling of plastic bags got its start in the Maritimes when Sobey's began working with a plastic bag manufacturer to promote in-store recycling. Retailers in other parts of the country followed suit. Major chains in the west, such as London Drugs, Safeway, Overwaitea, Thrifty, and Save-On Foods offer at-store recycling programs for plastic bags.

Ontario has experienced a 258 per cent increase in the number of stores offering at-store recycling programs for plastic bags from 2005 to 2007. Alberta and Sakatchewan have also experienced strong growth, increasing by 86 and 108 per cent respectively over the same time period.

EPIC's dedicated plastic bag web site (www.myplasticbags.ca) offers a list of retailers in each province that offers in-store plastic bag recycling.

Another important point to note when it comes to plastic bags is that Canadian consumers are reusing them. A Decima Research study showed that an estimated 92 per cent of Canadians are reusing their plastic bags for typical applications like lunch bags, carrying garbage or recyclables to the curb, and picking up after pets. Canada has an established recycling infrastructure in place to promote the wise use, reuse, and recycling of plastic bags, making it different from other countries around the world which are considering bans or taxes. A lot of those countries don't have dedicated waste management systems, let alone recycling systems. The Decima Research poll also found that close to 70 per cent of Canadians were against a plastic bag tax.

With such a strong system in place to promote the wise use, reuse, and recycling of plastic bags, Canada has a unique opportunity to build upon existing plastic bag recycling programs through the application of the 3Rs. "Reduce, reuse, and recycle" has been a long-standing mantra of many a Canadian consumer and is one that will continue to be valid with regard to the wise use and recycling of plastic shopping bags.

Stores in Canada with plastic bag recycling programs

AB	BC	MB	NB	NFLD	NS	ON	QC	SK	PEI	TOTAL
240	291	120	66	41	60	427	27	173	17	1,462

APRA has a new and improved website

You can now find us on the web at www.recycleyourplastic.ca.

Let's set the record straight on Expanded Polystyrene

Plastics continue to be a staple in news coverage of all things environmental. While this media attention may be seen as a challenge to our industry, it also provides those in the plastics field with opportunities to respond with facts and information. As marketplace participants, let's set the record straight and help change opinion wherever we can.

Lately, Expanded Polystyrene (EPS) has been a focus of media scrutiny as media follow isolated proposed municipal bans or restrictions on EPS in the waste stream. That focus has been primarily on take-out food containers. Because of the narrow focus, there has been scarce coverage on the tremendous advantages of EPS 's low-cost, high-performance, and versatility in a form that is easily recycled. EPIC recently prepared a fact sheet to help explain EPS's important role (see highlight to right.)

Want to know more about EPS recycling? Call or email APRA (see p. 6 for contacts).

POLYSTYRENE GETS THE JOB DONE!

Many people are aware of the tremendous versatility of polystyrene. The most recognizable forms of polystyrene packaging are:

- Expanded Polystyrene – used to make cups, bowls, plates, trays, clamshells, meat trays and egg cartons, as well as protective packaging for shipping electronics and other fragile items.
- High Impact Polystyrene – used in products such as cutlery, yogurt and cottage cheese containers, drinking cups, and clear bakery and produce containers.

POLYSTYRENE FAST FACTS

Environmental impact

- Polystyrene food service foam packaging, in most cases, has an environmental footprint over the life cycle of the package that is lower than or comparable to alternative packages studied. [1]
- Polystyrene foam 16 oz. cup for hot beverages uses a 1/3 less energy, produces 1/3 less greenhouse gases (GHGs) and 50 per cent less solid waste by volume compared to a paperboard 16 oz. cup with a sleeve. [1]
- Polystyrene foam 5" clamshell uses around the same amount of energy but produces 25 per cent less GHGs compared to a fluted paperboard 5" clamshell. [1]
- Polystyrene foam 32 oz. cup for cold beverages uses 50 per cent less energy, produces 25 per cent less GHGs and almost 50 per cent less solid waste by volume compared to a wax-coated paperboard 32 oz. cup. [1]
- No chlorofluorocarbons (CFCs) are used in the manufacturing of foam polystyrene, helping to reduce the damage to the earth's ozone layer.

Effective insulator

- Foam polystyrene offers excellent insulation properties and strength. It is widely used for packaging of take-away meals, hospital meals, and cups for hot and cold beverages.
- Wasteful practices like "double cupping" are not needed. This significantly reduces the number of containers being used and natural resources used to make them.

Health & safety

- Today's consumer can be assured about the safety of prepared food served on the sanitary surfaces of disposable polystyrene food service packaging.
- Reusables require strict attention to proper washing and drying techniques to prevent the spread of disease. They require water and energy to clean.
- Safe Food Handling Practices, particularly those associated with un-cooked meats, have become much easier to ensure with the use of polystyrene packaging which captures but does not absorb fluids like pulp trays. Modern meat packaging, distribution, and retailing, using polystyrene packaging has reduced the risk of Salmonella and other serious food-borne health risks. There are no equally safe economic alternatives.

Economical

- Polystyrene food service products are two to three times less expensive than paper board and can save businesses tens of thousands of dollars per year.
- Choosing polystyrene affords businesses the ability to keep costs low for consumers.

Recycling

- Polystyrene can be, and is being, recycled into various products like picture frames, coat hangers, seedling trays, cornices, moldings, base boards, and office supplies.
- Most single-use coated paperboard food service packaging materials are not recycled.

Landfill

- Polystyrene is an inert material and is not designed to break down and release substances in landfill.
- Polystyrene, on average, takes up less than 1 per cent of all landfill space. [2]
- Major contributors to municipal landfill are: Organics 45 per cent, Paper 22 per cent, Plastics 9 per cent, Glass 5 per cent, and Metals 3 per cent. [2]

Litter

- Urban litter audits found that polystyrene cups, trays and clamshells were 1.5 per cent of total littler found. [3]

1. Final Peer-Reviewed Report: Lifecycle Inventory of Polystyrene Foam, Bleached Paperboard and Corrugated Paper Food Service Products, Franklin Associates Ltd.
2. Stats Canada, Environmental Accounts and Statistics Division
3. Litter Audits from Communities in Ontario, York Region, Peel Region, Durham Region, City of Toronto. 2003-2006

Recycled plastics — Historical pricing data for May 19, 2008

Source: *Plastics News*

Resin/Grade	Clean regrind or flake	Pellets
ABS		
Mixed colors, industrial	↓ 46 - 55	↓ 50 - 59
POLYCARBONATE		
Clear, industrial	85 - 95	--
Mixed colors, industrial	62 - 72	72 - 82
POLYETHYLENE		
HDPE:		
Natural, post-consumer	↑ 48 - 52	↑ 67 - 81
Mixed colors, post-consumer	↑ 38 - 46	↑ 53 - 60
Mixed colors, industrial	↑ 38 - 46	↑ 46 - 55
HMW-HDPE film, post-consumer	--	38 - 44
LLDPE stretch film	--	39 - 45
Clear, post-consumer	--	51 - 55
Colored, post-consumer	25 - 30	35 - 40
PET BOTTLES		
Clear, post-consumer	46 - 54	58 - 66
Green, post-consumer	38 - 42	48 - 52
POLYPROPYLENE		
Industrial	↓ 35 - 39	↓ 45 - 49
POLYSTYRENE		
Industrial	↑ 52 - 55	↑ 67 - 82
High-heat crystal, post-consumer	40 - 50	52 - 62
PVC		
Clear, industrial	↑ 37 - 43	--

Prices are in US cents per pound for prime resin, unfilled, natural color, FOB supplier, unless otherwise indicated. ↑ indicates a market-price increase in the past week. ↓ indicates a market-price decrease in the past week.

Prices are generated from interviews with North American buyers and suppliers. The information provided is based on sources believed to be reliable but its accuracy or timeliness is not guaranteed and no warranties of any kind are provided. *Plastics News* does not intend to specify the price of the materials listed. For price quotes on specific materials, contact the supplier.

For pricing information on recycled resins, call *Plastics News* reporter Mike Verespej at (202) 662-7325, or fax him at (202) 638-3155.

APRA is a non-profit association dedicated to making Alberta a model of effective plastic waste management. ***APRA*** is affiliated with ***EPIC***, the Environment & Plastics Industry Council of ***CPIA***, the Canadian Plastics Industry Association.

If you have any comments, information or an article you would like to have relayed through this newsletter please contact us.

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