



Merlin Plastics

Agricultural Plastics Initiative

Who are we?



- Western Canada's leading plastic recycler
- Established in 1987 with four employees
- Continued growth to more than 100 million lbs annually
- Three facilities: BC, AB, CA
- >200,000 sq ft of production
- Over 100 employees



Plastic processing



- Grind, wash, dry, and extrude recyclable plastics
- Patented wash technologies used for post consumer and post industrial plastics
- Extrude recyclable plastics to produce a marketable commodity for the manufacture



Customers & Suppliers



- Long term, successful relationships with customers and suppliers across North America
- Alberta, British Columbia, Saskatchewan, California, Oregon, Washington, the Midwest & Southern US
- Ie: Dow Chemicals, Nova Chemicals, Celanese, AT Films, Encorp Pacific, ABCRC, SARCAN and many other organizations

Partners & Memberships



- Successful history of partnerships with Dow (Canada), Dupont (Canada), Esso Chemicals, and the BC Ministry of the Environment
- Member of APRA (Alberta Plastics Recycling Association)
- Member of RCA (Recycle Council of Alberta)

Why Ag plastics in the field?



- Low application costs
- High durability
- Reduced handling time and transportation
- Equipment is design based on plastics use
- Markets in Alberta and N. A. are growing and significantly lag European markets in usage

Alberta's Ag Plastics Pilot Program



- What did Merlin learn?
 - Separation of Ag Plastics is essential for recycling
 - PP twine and PE film must be segregated
 - Contamination must be less than 10%
 - Ag plastic must be compacted or densified, not loose
 - Conventional recycling methods do not work – not the same as container recycling
 - Poorly supervised locations have a difficult time managing collection and minimizing contamination

Ag Plastics Recycling



- What does not work?
 - Non plastic waste materials comingled with Ag Plastics
 - Examples: Tires, garden hose, vinyl mattresses, swimming pools, steel wire, leather harness, canvass tents, manure, etc.
 - Loose Ag plastics delivered to Merlin Plastics
 - Conventional collection methods and sorting lines designed for plastic containers

What we will accept



- **Clean Ag Plastics!**
 - Field inspected and examined
 - Contamination <10%
- **Compacted or Densified Ag Plastics**
 - Twine & cordage
 - Silage cover
 - Bale wrap & bale bags
 - Grain bag
 - Greenhouse film

How will we accept



- **Acceptable**
- Rolled Ag film
- Baled Ag film
- Bagged Ag twine
- Baled Ag twine



We will not accept



- **Unacceptable**
- Loose comingled plastic
- Loose Ag Film or
- Contaminated Ag film



Delivery to Merlin Plastics



- Merlin Plastics will accept recyclable Ag plastics that have been field inspected and approved
- Our Calgary facility will be used for receiving and consolidation
- Acceptable Ag plastics will be processed at our PE/PP facilities in Delta, BC



Benefits for Municipality



- Alternative to burning
- Savings on burial costs
- Diversion of recyclable plastic waste from landfill
- Increased life of landfill

Costs to Municipalities or Participants



- Sorting
- Disposal of rejected plastic
- Bags or liners for PP twine
- Densification for PE film - rolled or baled
- Transportation
- Education

What's next?



- Our tonnage goal for 2010 is 1,000 mt
- A limited number of partnerships, with municipal authorities, will be established in 2010
- APRA will provide assistance with identification and the selection of partnerships

Continued development



- Education at all levels
- Further effort is needed to define sorting and densification methods
- Transportation: determine methods and define costs
- Collection sites need storage and equipment
- Processing: refine technology
- Markets

Thank you



- Stay tuned!

