AGRICULTURAL FILM PLASTIC RECYCLING

New Challenges, Opportunities and Partnerships in Minnesota

www.recycleminnesota.org
Agricultural Plastic

- Silage Bags/Bunker Covers
- Bale Wrap
- Twine
- Grain Bags/totes
- Nursery film
- Hoop film
Who Identifies this as an Issue?

- Farmers
- Solid Waste & Recycling Managers
- Agricultural plastics suppliers
- State agricultural and environmental agencies
- Rural residents and local officials
Scope of Issues

- Increase in agricultural film plastics presenting disposal problem
- Reliable market for collected plastics critically important
- Collection and storage
- Transport
- Environmental concerns
Stakeholder Partnerships

- Bring agricultural and solid waste/recycling communities together
- Identify the end users in Ag, marine & horticultural industries
- Identify and include plastics manufacturers and distributors
What’s Out There?

- 10+ million pounds of Ag Plastic / Year
- 460,000 dairy cows in MN
- 15-20 lbs of plastic used per cow per year (est)
- Minnesota has approximately 21.4 million tillable acres
- 1 Paper Seed bag (41 to 46 lbs.) – plants ~ 2 acres
  ~ 15% of tillable farm land is planted by seed bags
  3,210,000 acres / 2 = 1.6 MILLION BAGS used per year
Boat Wrap
Current Disposal Methods

- Landfilling/ Waste to Energy
- On- Farm burning/ burying
**TERMS - DEFINITIONS**

**WTE** = Waste to Energy - permitted incineration facility which generates energy, captures the ash and filters emissions.

**RDF** = Refuse Derived Fuel (see above)

**MRF** = Materials Recovery Facility - where collected recyclables are sorted, baled and sent on to a processor or manufacturer.

**Tip Fee** = Fee charged by MRF, WTE or Landfill to drop off materials at their site.
Solid Waste Assessment = Fee charged to residents/businesses to offset costs incurred by a county or city to manage the solid waste generated in their jurisdiction.

Recycled = Items which were processed and made into new products from materials that were once something else. (cardboard from paper, carpet from pop bottles)

Recyclable = Items which can be processed and made into new products from materials that were once something else.

PE = Polyethylene  PET = Polyethylene terephthalate
PP = Polypropylene  LDPE = Low density PE
Challenges for Waste to Energy and Recycling Facilities

- Long, large, bulky plastic ag bags and bunker covers cause equipment /handling problems
- Need to shut down to remove plastic obstructions
- Rocks in plastic damage equipment
- Plastic types need to be separate not tangled together
Success Stories

**McLeod County MRF  Hutchinson**
- Recycled 20T of ag film in 2015
- Haubenschild Farms - 26,000 # of ag bags
- Untied Vegetable Farm Plastic from 115 hoop houses +

**Tri-County (Sibley, Nicollet & Le Sueur)**
- Recycled ~20.18 Tons total
  - 25,320 # Ag bags, 15,040# Boat Wrap

**Rural Solid Waste Commission – Dakota Co.**
- 21,920 pounds collected & recycled
McLeod County -
Now taking many types of ag plastic in unlimited quantities

- No tip fee/ no payment for plastic
- May “spot” a semi-trailer but not pay transport
- Weight needed to make a load- 40,000 #
- Shake out rocks- some dirt/manure not big issue
Current Status Plastic Twine

Polypropylene Twine
Accepted at I-90 Recycling

Beginning March 2016
- Accept any quantity if dropped off at their facility
- Must be reasonably clean (2-5% contamination)
- Will pay for loads over 10,000 # delivered
- For semi-load loose (35-38,000#) will pick up
Current Status  January 1, 2016

**Identified Recyclers:**

- McLeod County
- Republic Services
- Choice Plastics
- Up North Plastics
- I-90 Recycling
- GreenForest Recycling
Most Important Factors for success in Ag plastic film recycling:

#1  MARKETS

#2  Willingness on the part of all stakeholders to shoulder a share of the issue.
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