

Opportunities for Agricultural Plastics Recycling

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Introduction

- Melissa Kono, Professor with University of Wisconsin-Madison and Community Development Educator for Clark and Trempealeau Counties
- I travelled to the Dominican Republic to work with banana farmers on recycling their plastic with USAID and to the International Silage Conference in Beijing, China
- I partner with plastic products companies to pick up collected plastic for recycling, one of the companies provides ag plastics recycling dumpsters and regular pick up service to farms at no cost to the farmer.
- I organize recycling events for farmers to bring plastic for recycling
- The plastic is processed in the United States and recycled into products (silage plastic, garbage can liners, deck material)



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The plastics problem

- Plastics used in agriculture tend to be dirty, light weight and undesirable to recyclers
- While illegal, burning plastics typically goes unenforced due to costs
- In the past, collection events were successful in collecting plastics, but it was difficult to find a recycler



Agricultural Plastics in Wisconsin

- ▶ Major waterfronts: great lakes of Superior and Michigan, and Mississippi River
- ▶ #1 Dairy Producing State
- ▶ 15 million lbs of Ag Plastic used per year
- ▶ Seasonality of usage



Ag Plastics Recycling in Wisconsin

- ▶ According to the Wisconsin Department of Natural Resources, 15-20 pounds of agricultural plastics are generated per cow every year
- ▶ 1.2 million cows in Wisconsin
- ▶ 2/3rds of farms surveyed are using bunker covers
- ▶ 2015 survey:

<https://dnr.wisconsin.gov/topic/Recycling/agplastics.html>



Cross Sector Partnership



- ▶ Revolution Plastics provides ag plastics recycling dumpsters and regular pick up service to farms at no cost to the farmer.
- ▶ The plastic is processed in the United States and recycled into products

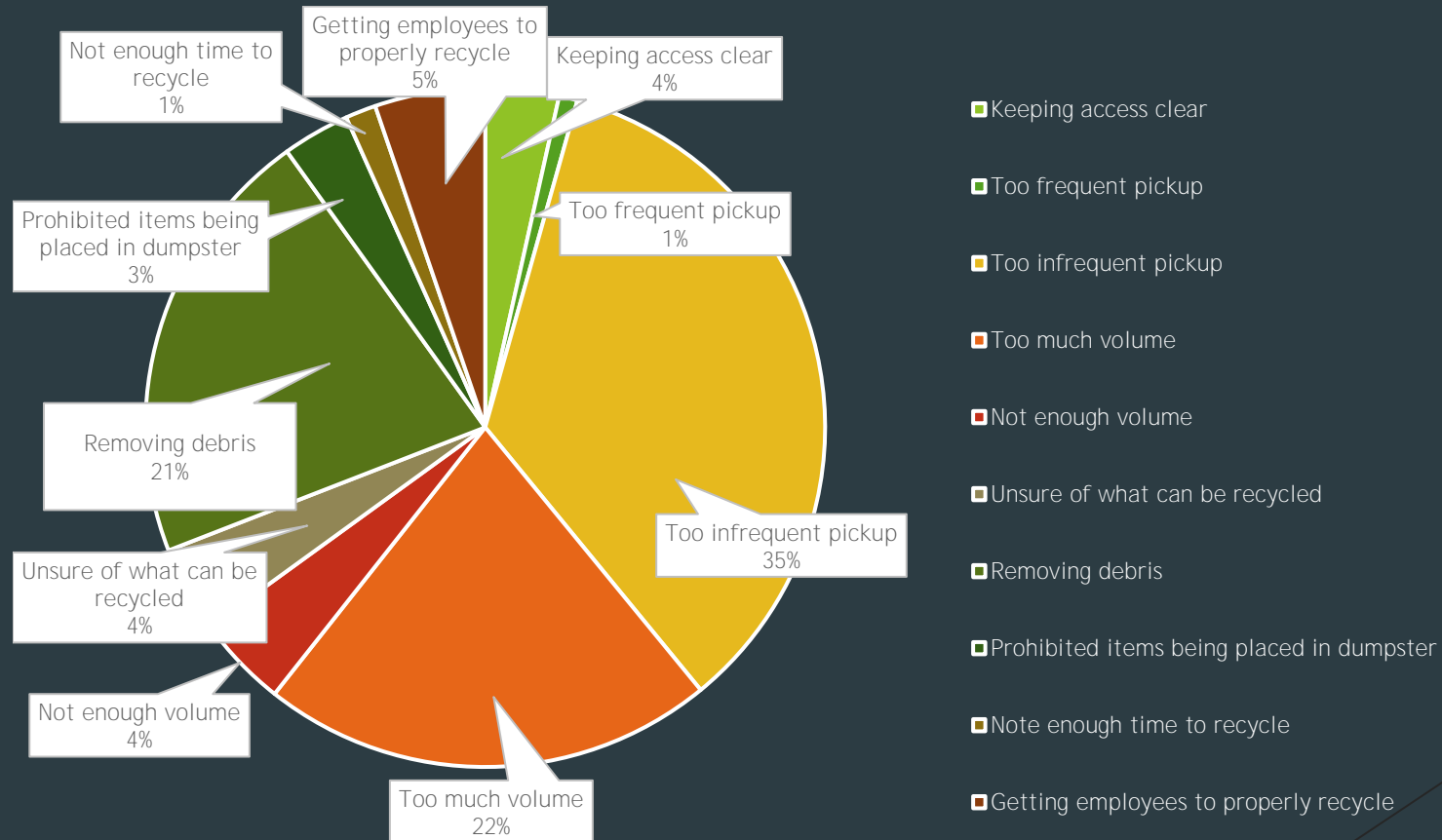


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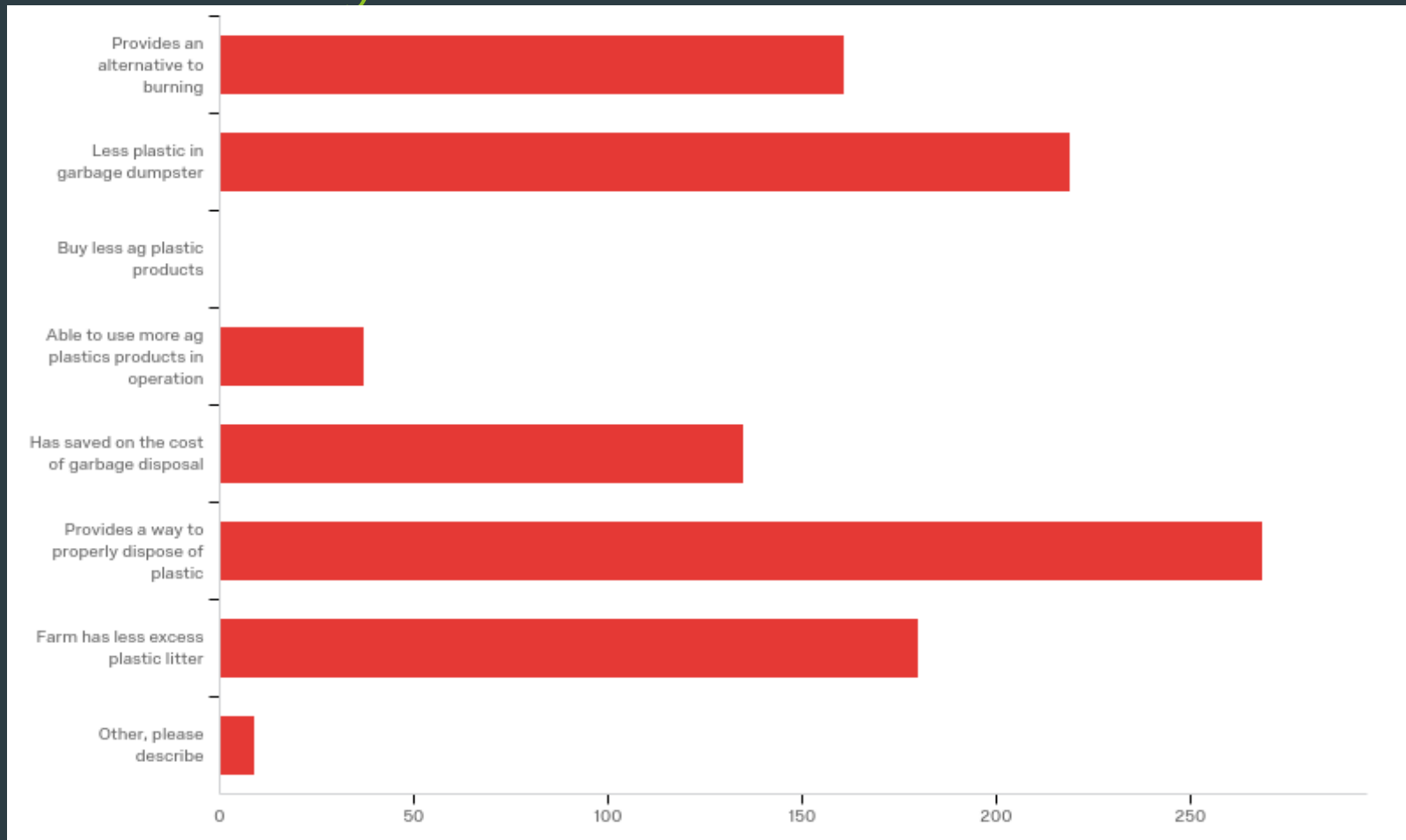
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- ▶ Through University of Wisconsin-Extension, people of Wisconsin and beyond can access university resources and engage in learning, wherever they live and work.
- ▶ Historically agricultural-based programming and services

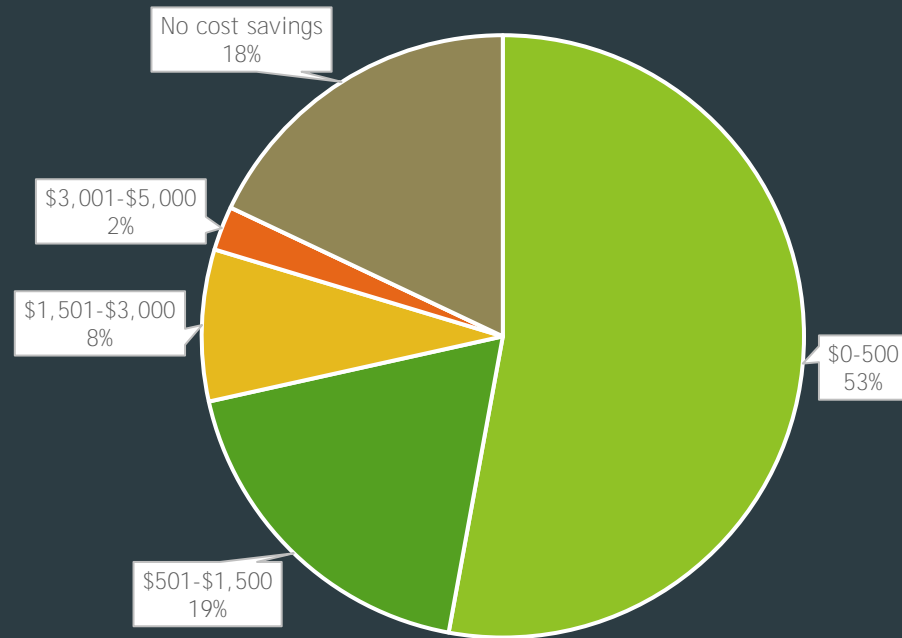
What are your greatest challenges in recycling agricultural plastics?



How have your waste management practices changed as a result of having a plastics recycling dumpster or bag available on your farm



What is your estimated annual cost savings?



■ \$0-500 ■ \$501-\$1,500 ■ \$1,501-\$3,000 ■ \$3,001-\$5,000 ■ Greater than \$5,000 ■ No cost savings

Findings and other considerations

- ▶ Half of survey respondents said it provides an alternative to burning.
- ▶ 56% said there is less excess plastic litter on the farm.
- ▶ Respondents indicated they used more ag plastics products because they were able to recycle it
- ▶ Farms seemed to underestimate their annual cost savings
- ▶ Perception vs. Reality



Types of Recycling

Revolution Plastics Dumpster



- ▶ Must be within service area
- ▶ Must produce a minimum amount of plastic
- ▶ Dumpsters no longer being widely distributed
- ▶ No cost for dumpster or plastics pickup
- ▶ Request pick up thru automated phone system or app, 21-30 days
- ▶ Approved materials only

Types of Recycling

Revolution Plastics Recapture Bags



- ▶ Available from a few suppliers, can be ordered online, Case of 5 bags is about \$30
- ▶ Once 5 bags are filled, farmer calls for on-farm pick up. There is no charge for the pickup
- ▶ Must be within service area
- ▶ Accepted materials only

Many Benefits of using at a collection event:

- ▶ Plastic can be collected on the farm, over time
- ▶ Makes drop off easier, quicker
- ▶ Plastic does not blow around
- ▶ Can be moved by equipment (on the farm and at collection site)

One drawback is that only certain types of plastic are currently accepted in this program

Types of Recycling

Collection Events

Bayfield County Agricultural Plastics Clean Sweep

Tuesday, August 11th
2:00p.m.-7:00p.m.

Bayfield County Fair Grounds
7080 North Main St, Iron River



Aq Plastic Accepted: Bale Wrap, Grain Bags, Bunker Cover, Drip Tape, Greenhouse Film, Boat Wrap

Plastics can be brought to the site in a Revolution Recapture Bag that can hold ~ 200 #. Request free recapture bags to be mailed to you upon registration. The material can be baled and brought to the collection site. No strings or binders allowed. Plastic does not need to be clean, but please shake off loose debris.

Pre-register IS REQUIRED by Monday, August 3rd by filling a survey out at:

<https://forms.gle/vnkU3fWu2jcgPw1E7>

Or by calling Clark County Extension at: 715-743-5121

- ▶ Must meet minimum collection requirements
- ▶ Can be in conjunction with other events i.e. Clean Sweeps, County/Municipal Recycling
- ▶ Recapture bags are helpful

Collection Event Considerations

- ▶ Recapture Bags are helpful
- ▶ Promotion, promotion, promotion
- ▶ One day event vs longer event
- ▶ Coupled with other events/items
- ▶ Ideal for small to mid-size farmers and/or places not regularly serviced
- ▶ Equipment (skid steer, loader, baler) and staff needed
- ▶ Source for plastic/strong partners



Barriers

- ▶ Burning is illegal, but rarely (and expensive to) enforce
- ▶ Farmers openly admit to burning
- ▶ Landfilling is not restricted, and costs not accounted for
- ▶ Plastic product imported from other countries is less expensive
- ▶ Any time an extra step is added (collecting plastic, loading, driving it to event, dropping off), participation will drop off



Opportunities for increased recycling of agricultural plastics

- ▶ Currently only some plastics have a market, expand markets for commonly used plastics
- ▶ Policy changes, especially around landfilling ag plastics, burning
- ▶ Increased partnership and capacity building with plastics companies
- ▶ Create ag plastics and products recycling and disposal directory

Contact

- ▶ Please reach out to me for collaboration on projects
- ▶ **I hope we can work together to solve the “plastics issue”**
- ▶ Melissa Kono, University of Wisconsin-Extension
- ▶ Melissa.kono@wisc.edu



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