



Waste Agricultural and Film Plastic Survey, Wisconsin, 2015

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**Survey Research Center Report 2015/10
June 2015**

Staff and students working for the Survey Research Center (SRC) at UW-River Falls were instrumental in the completion of this study. We would like to thank Denise Parks, Shelly Hadley, Christine Leiby, Katrina Barrett, David Jacobsen, and Emily Johnson. We gratefully acknowledge their hard work and dedication.

The SRC would also like to thank the following for their valuable guidance and assistance:

- Chris Lilek, Business Development Sector Specialist, Department of Natural Resources
- Joe Van Rossum, Recycling Specialist & Director, UW-Extension Solid and Hazardous Waste Education Center
- Nicole Spinelli, On-Farm Sustainability Program Manager, Organic Valley Cooperative
- Victoria Harris, Wisconsin Clean Marina Program Coordinator, Wisconsin Marine Association
- Gabrielle Daniels, Midwest Organic Services Association
- Anna Maenner, Executive Director, Wisconsin Berry Growers Association

The study was financed by Organic Valley Cooperative, University of Wisconsin-Extension Solid and Hazardous Waste Education Center, and Crave Brothers Farmstead Cheese Company.

Finally, we would like to thank those individuals who took time to complete their questionnaires.

Table of Contents

Executive Summary	4
Survey Purpose	6
Survey Methods	6
Profile of Respondents.....	8
Generation of Waste Plastic.....	10
Annual Amount of Waste Plastic.....	11
Plastic Waste Generation Frequency	13
Disposal Methods	14
Length of Storage.....	15
Future Waste Plastic Film Generation	16
Annual Cost for Waste Plastic Disposal	17
Fees and Transport.....	18
Demographic Comparisons.....	20
Written Comments - Waste Plastic and Recycling.....	21
Conclusions.....	22
Appendix A – Non-response Bias Tests.....	23
Appendix B – Open-Ended Comments and “Other” Written Responses:.....	24
Appendix C – Quantitative Summary of Responses by Question	52
Appendix C1– Quantitative Summary of Responses by Question – Non-Organic Dairies .	56
Appendix C2– Quantitative Summary of Responses by Question – Organic Dairies.....	59

Executive Summary

The primary purpose of this study was to gain a greater understanding of the volume, frequency, and current disposal methods of agricultural and boat wrap plastic in the State of Wisconsin in order to attract and retain plastic recycling facilities. The study was organized by the Wisconsin Department of Natural Resources (WDNR), the Solid and Hazardous Waste Education Center (SHWEC) of the University of Wisconsin–Extension, and Organic Valley Cooperative. Financial support was provided by SHWEC, Organic Valley Cooperative, and Crave Brothers Farmstead Cheese Company.

In March, 2015, the Survey Research Center at the University of Wisconsin–River Falls mailed surveys to a random sample of 2,298 non-organic dairy producers, the entire population of 321 certified organic dairies, the entire population of 1,365 licensed nurseries/greenhouses, and the entire population of 370 marinas. The survey was distributed to 200 berry growers attending the Wisconsin Fresh Fruit and Vegetable Growers Conference, January 25, 2015.

The SRC received 1,540 useable responses from the mailings, which represents an overall response rate of 35% percent. Only nine completed surveys were returned from the 200 berry growers (4.5% response rate). The results from these nine surveys were added to the responses from the mailed surveys.

A large majority of respondents were men. The age profile of respondents is older than the overall adult population of Wisconsin and had slightly higher educational attainment levels than the state average. A majority of respondents have been in business for at least 25 years (Table 1).

Three-fourths of respondents said they generated waste agricultural plastic or boat wrap in 2014 (Chart 1).

Among respondents who generate waste plastics, the largest percentage reported they generate 500 pounds or less per year (Table 2).

The frequency of generation varies by plastic type (Table 3). Bale twine, bunker silo cover, bale wrap, bale netting, and silage bags are generated more frequently than greenhouse plastics, boat wrap, and pesticide containers.

Overall, landfilling is the most frequent disposal method for most plastics (Table 4) except pesticide containers, farm plastic containers, and other chemical containers, which have higher recycling rates. Burning ranked second for five plastics: silage bags, bale wrap, bunker silo cover, bale twine, and bale netting.

Six in ten respondents store their waste plastic no more than a month before disposal (Chart 2).

Seven in ten respondents believe the amount of waste plastic will remain the same in the future (Chart 3).

A third of respondents currently have no disposal costs for their waste plastic (Chart 4). An additional 23% said they pay less than \$100 per year. A quarter of respondents pay at least \$500 per year.

A large majority (85%) of respondents are willing to transport their waste plastic to a collection location for free disposal (Chart 5). The largest percentage (32%) would be willing to go less than 10 miles for free disposal, followed by 27% who would go less than 25 miles.

Forty-five percent of respondents said they are willing to have their waste plastic baled and transported off their property monthly for a fee (Chart 6). The largest portion of those willing to pay for this service said they would pay under \$50.

Survey Purpose

The primary purpose of this study was to gain a greater understanding of the volume, frequency, and current disposal methods of agricultural plastic and boat wrap in the State of Wisconsin in order to attract and retain plastic recycling facilities. The study was organized by the Wisconsin Department of Natural Resources (WDNR), the Solid and Hazardous Waste Education Center (SHWEC) of the University of Wisconsin – Extension, and Organic Valley Cooperative. Sponsors chose to work with the Survey Research Center (SRC) at the University of Wisconsin-River Falls to gather this information.

Survey Methods

The population for this survey included the following groups in Wisconsin: licensed dairy operators, licensed nurseries/greenhouses, berry growers, and marinas. The SRC purchased a mailing list of dairy producers licensed by the Department of Agriculture, Trade and Consumer Protection (DATCP). The survey sponsors requested that the survey identify the responses from organic dairy operators. The Midwest Organic Services Association (MOSA) provided a separate list of certified organic dairies for this study. The Wisconsin Marine Association provided a mailing list of member businesses.

In March, 2015, the SRC mailed surveys to a random sample of 2,298 licensed non-organic dairy producers, the entire population of 321 certified organic dairies, the entire population of 1,365 licensed nurseries/greenhouses, and the entire population of 370 marinas. The initial mailing was followed by a second mailing to non-respondents.

The original intent was to create two sub-populations within the non-organic dairy group, large producers and medium/small producers. Due to limitations with the mailing list provided, the SRC was not able to distinguish between the large dairies and the medium/small dairies on the non-organic producer list.

The SRC received 1,540 useable responses from the mailings, which represents an overall response rate of 35% percent. Among the 1,540 responses, 51% were from non-organic dairy producers, 11% from organic dairy producers, 30% from nurseries/greenhouses, and 8% from marinas.

The response rates from the groups were as follows: non-organic dairy farms–34%; organic dairy farms–53%; nurseries/greenhouses–34%; marinas–33%. The SRC performed statistical tests to see if there were significant differences in the responses among these four population groups. Noteworthy differences among the groups for each question are described in the report.

Based on the total population of the four groups, the overall confidence interval (“margin of error”) of these data is plus/minus 2.4%. The individual confidence intervals for each group are as follows: non-organic dairies–plus/minus 3.4%; organic dairies–plus/minus 5.1%; nurseries/greenhouses–plus/minus 3.7%, and marinas–plus/minus 7.3%.

The survey was distributed to berry growers at the Wisconsin Fresh Fruit and Vegetable Growers Conference, January 25, 2015. Berry grower registrants were asked to return their completed surveys at the conference. Only nine completed surveys were returned from the 200 berry growers (4.5% response rate). The results from these nine surveys were added to the responses from the mailed surveys received from the other four groups and are included in the overall

tabulation of survey results. This small sample is not sufficiently large to be statistically reliable and has been excluded from comparisons to other groups in the survey.

Any survey has to be concerned with “non-response bias.” Non-response bias refers to a situation in which people who do not return a questionnaire have opinions that are systematically different from the opinions of those who return their surveys. Based upon a standard statistical analysis that is described in **Appendix A**, the Survey Research Center concludes that non-response bias is not a significant concern for this survey.

In addition to numeric data, respondents provided additional written answers and comments. **Appendix B** contains the written responses.

Appendix C contains a copy of the survey questionnaire with a complete quantitative summary of responses by question.

Profile of Respondents

Table 1 summarizes the demographic profile of the survey respondents. Where comparable data were available from the 2013 US Census Bureau ACS 1-Year estimates, the profiles of the survey respondents were compared to the ACS profile of Wisconsin adults.

The percentage of men in the sample (85%) was much greater than the proportion of men in the overall adult population of Wisconsin (49%). Men comprised 90% of the respondents from dairy operations and about three-fourths of the respondents from nurseries/greenhouses and marinas.

The age profile of respondents is older than the State of Wisconsin. Seventy-nine percent of respondents were age 45 and older compared to 55% of the Wisconsin adult population. Compared to the overall average among Wisconsin adults, slightly higher proportions of respondents have completed some college or have graduated from a technical college.

Respondents tended to have a long tenure in their businesses, with 62% reporting that they have been in business for at least 25 years.

Table 1. Profile of Respondents							
Gender (18+)	Count	Male	Female				
Sample	1,162	85%	15%				
State of WI - ACS	4.4M	49%	51%				
Age (18+)	Count	18-24	25-34	35-44	45-54	55-64	65+
Sample	1,171	0%	8%	12%	28%	37%	14%
State of WI - ACS	4.4M	13%	17%	16%	19%	17%	19%
Highest Level of Education (Age 25+)	Count	Less than High Sch.	High Sch. Diploma	Some College/ Tech	Tech/ College Grad.	Bachelor Degree	Graduate/ Profess. Degree
Sample	1,126	8%	24%	25%	17%	20%	5%
Census Bureau ACS	3.9M	9%	32%	21%	10%	18%	9%
Years in Business	Count	Less than 5 yrs.	5 to 9 yrs.	10 to 14 yrs.	15 to 19 yrs.	20 to 24 yrs.	25 or more yrs.
Sample	1,177	4%	7%	9%	8%	10%	62%

The SRC performed statistical tests to see if there were significant differences in the responses of the survey questions based on demographic characteristics. In statistics, a result is called **statistically significant** if it is unlikely to have occurred by chance. Statistical significance is expressed as a probability that the difference is *not* true. A commonly used probability standard is .05 (5%). Statistical significance at the .05 level indicates a 5 in 100 probability that the observed difference across demographic groups for a given variable is not real. It does *not* mean the difference is necessarily large, important, or significant in the common meaning of the word. Given a sufficiently large sample, even small differences of opinion across demographic groups will be statistically significant.

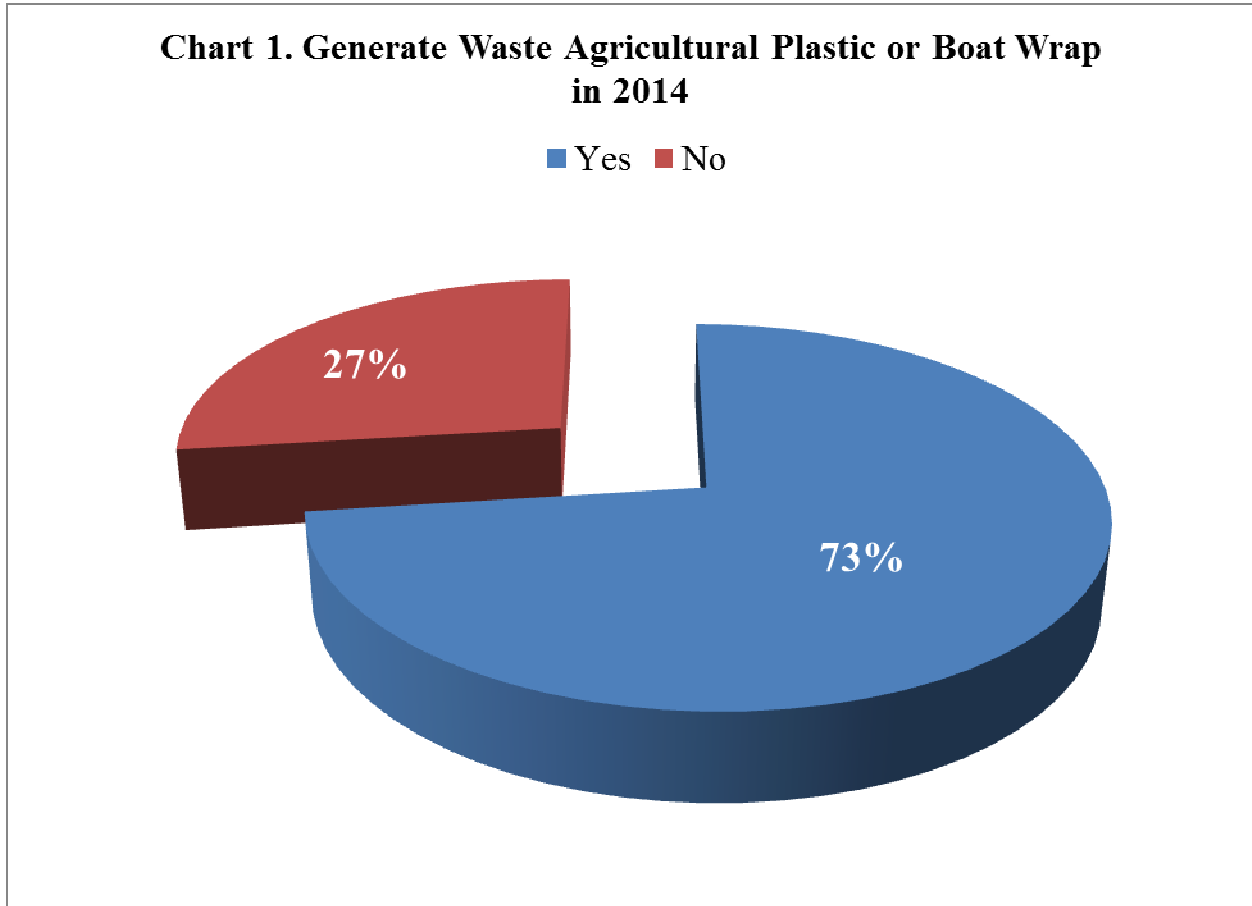
Thus, not all differences among the demographic groups that are “statistically significant” are meaningful. For example, 65% of men said they generate bale twine weekly (Q6) compared to 56% of women respondents. While this difference is statistically significant, it is not meaningful because the magnitude of the difference is not sufficiently large to have impacted the interpretation of the results. The Demographic Comparisons section of the report will identify those instances where there were differences in the response pattern within a particular demographic group that would have affected the interpretation of the results.

Generation of Waste Plastic

The initial question asked respondents whether they had generated any waste agricultural or boat wrap plastic in 2014. Those who answered “No” were directed to stop and to return the survey in the envelope provided.

As shown in Chart 1, three fourths of respondents said they generated waste plastic in 2014.

NOTE: The data from the remaining questions in the survey includes only those respondents who said they generated waste plastic or boat wrap in 2014.



Group comparisons

Both groups of dairy producers were much more likely to report that they generated waste plastic than nursery/greenhouse respondents and marina operators. Among non-organic dairy operators, 84% said they generated waste plastic, and 92% of organic dairy operators said they generated waste plastic. In comparison, about half of the nursery/greenhouse respondents (53%) and marina respondents (57%) indicated they generated waste plastic in 2014.

Annual Amount of Waste Plastic

Respondents were presented a list of 12 plastic types plus an “other” category and asked to indicate the number of pounds of each they generate each year. Choices included none, 500 pounds or less, 501 to 1000 pounds, 1,001 to 2,000 pounds, 2001 to 5,000 pounds, and over 5,000 pounds. The survey also provided estimates of how many pounds various types of plastic waste weigh – for example, they were told that silo bags generally weigh 200-400 lbs. The results are shown in Table 2.

Among respondents who generated waste plastic, the largest proportion of respondents reported that they generate 500 pounds or less per year. Generation of silage bags and bunker silo cover plastic were more evenly distributed among the weight categories than the other waste plastic types.

Table 2. Pounds of Plastic Waste Generated Per Year by Type							
	Count	None	500 or less	501-1,000	1,001-2,000	2,001-5,000	Over 5,000
Farm plastic containers	1134	43%	53%	3%	1%	0%	0%
Bale twine	1134	50%	43%	5%	0%	1%	0%
Silage bags	1134	57%	17%	10%	8%	6%	3%
Bale netting	1134	61%	32%	5%	1%	0%	0%
Pesticide containers	1134	62%	37%	1%	0%	0%	0%
Bale wrap	1134	63%	21%	8%	4%	2%	1%
Other chemical containers	1134	72%	27%	1%	0%	0%	0%
Bunker silo cover	1134	79%	6%	4%	4%	5%	3%
Greenhouse flexible plastic covers	1134	87%	10%	2%	1%	0%	0%
Other, specify	1134	91%	7%	1%	1%	0%	0%
Boat wrap	1134	93%	4%	1%	1%	0%	0%
Mulch film (produce, small fruit)	1133	94%	5%	1%	0%	0%	0%
Greenhouse rigid plastic panels	1134	97%	2%	0%	0%	0%	0%

Group comparisons

The generation of specific types of waste plastic in Table 2 is, predictably, strongly associated with the type of the operation.

Both organic and non-organic dairy producers are much more likely to generate silage bags, bale wrap, bunker silo covers, bale twine, bale netting and other plastic chemical containers than respondents from marinas and nurseries/greenhouses.

- 60% of non-organic dairies and 50% of organic dairies generated silage bags compared to 3% of nurseries/greenhouses and 1% of marinas.
- 70% of organic dairies and 45% of non-organic dairies generated bale wrap compared to 6% of nurseries/greenhouses and 1% of marinas.
- 34% of non-organic dairies and 10% of organic dairies generated bunker silo cover waste compared to 1% of nurseries/greenhouses and 1% of marinas.
- 65% of non-organic dairies and 60% of organic dairies generated bale twine compared to 18% of nurseries/greenhouses and 4% of marinas.

- 66% of organic dairies and 48% non-organic dairies generated bale netting compared to 9% of nurseries/greenhouses and 1% of marinas.
- 71% of non-organic dairies and 62% of organic dairies generated farm plastic containers compared to 34% of nurseries/greenhouses and 0% of marinas.

With respect to pesticide containers, organic dairies (2%) and marinas (1%) are much less likely to have generated waste pesticide containers compared to non-organic dairies (44%) and nurseries/greenhouses (54%).

A much higher percentage of nurseries/greenhouses (55%) generated flexible plastic covers compared to non-organic dairies (1%), organic dairies (4%), and marinas (0%). Eleven percent of greenhouses/nurseries generated rigid plastic panels, compared to none of the organic dairies, non-organic dairies, and marinas.

Over nine in ten marinas generated waste boat wrap. Only a handful of dairies and nurseries/greenhouses (1% each) said they generated boat wrap waste.

Mulch film waste generation was low to very low among all four groups. The highest generation rate was highest among nurseries/greenhouses (16%). Generation of mulch film waste was very small among non-organic dairy producers (3%), organic dairies (5%), and marinas (0%).

Nursery/greenhouse respondents were much more likely to write an answer in the space provided for “other, specify” responses. Most frequently mentioned were pots, trays, and flats. Appendix B contains the complete listing of responses.

Plastic Waste Generation Frequency

Based on the list of plastics in Table 2, respondents who produce waste plastic were asked to indicate the frequency of their plastic waste generation. As shown in Table 3, majorities of respondents said the following types of plastics were more likely to be generated weekly: bale twine, bunker silo cover, bale wrap, bale netting, and silage bags.

A third of respondents said farm plastic container waste was most likely to be generated monthly, followed by 21% who said weekly.

Greenhouse flexible plastic covers (75%), greenhouse rigid containers (60%), mulch film (48%), boat wrap (40%), and pesticide containers (33%) were most likely to be generated once a year or longer.

Generation of other plastic chemical container waste was more evenly distributed over time, ranging from 27% who said monthly to 10% who said weekly.

Table 3. Frequency of Plastic Waste Generation							
	Count	Weekly	Monthly	Each 2-3 Months	Each 4-6 Months	Each 7-12 Months	1 Year +
Bale twine	543	64%	19%	6%	3%	3%	6%
Bunker silo cover	254	61%	19%	2%	6%	3%	10%
Bale wrap	431	57%	17%	6%	8%	3%	7%
Bale netting	424	56%	20%	7%	6%	5%	6%
Silage bags	504	53%	17%	7%	8%	6%	9%
Farm plastic containers	588	21%	34%	17%	10%	8%	10%
Boat wrap	85	12%	7%	12%	9%	20%	40%
Mulch film (produce, small fruit)	82	10%	6%	6%	10%	21%	48%
Other chemical containers	299	10%	27%	16%	11%	16%	20%
Greenhouse rigid plastic panels	43	9%	5%	7%	2%	16%	60%
Pesticide containers	406	3%	9%	12%	18%	24%	33%
Greenhouse flexible plastic covers	162	2%	2%	2%	3%	15%	75%
Other, specify	100	26%	15%	8%	8%	13%	30%

Group comparisons

The frequency of waste plastic generation by each of the four groups parallels the strong associations between particular user groups and the types of waste plastic described following Table 2. To reiterate, dairies have much higher generation rates for silage bags, bale wrap, bunker silo covers, bale twine, bale netting, and other plastic chemical containers than the other groups; marinas generate boat wrap almost exclusively; non-organic dairies and marinas generate pesticide container waste at much higher rates; and nurseries/greenhouses generate far more rigid plastic panels, flexible plastic covers, and mulch film. Thus, the user groups are built into the data for the individual types of plastic (rows in Table 3).

Disposal Methods

Using the same list of plastic types in Table 2, respondents were asked to indicate the disposal method used for each. Disposal choices included landfill, repurpose, recycle, bury, burn, and store for the future. The results are shown in Table 4. Percentages are based on the number of respondents who said they generate each waste plastic type, and the total for each plastic type exceeds 100% because multiple choices were allowed.

Overall, landfilling is the most frequent disposal method for most of the types of waste plastic included in the survey. Majorities of respondents said they landfill nine waste plastic types. The range was from 51% to 72%. The notable exceptions were three plastic types for which the recycling percentage matched or exceeded landfilling: pesticide containers, farm plastic containers, and other chemical containers. Burning as a disposal method ranked second (ranging from 25% to 39%) for five plastics: silage bags, bale wrap, bunker silo cover, bale twine, and bale netting. One in five respondents said they repurpose farm plastic containers, and 23% said they repurpose greenhouse flexible plastic covers. Very few respondents said they bury their waste plastic.

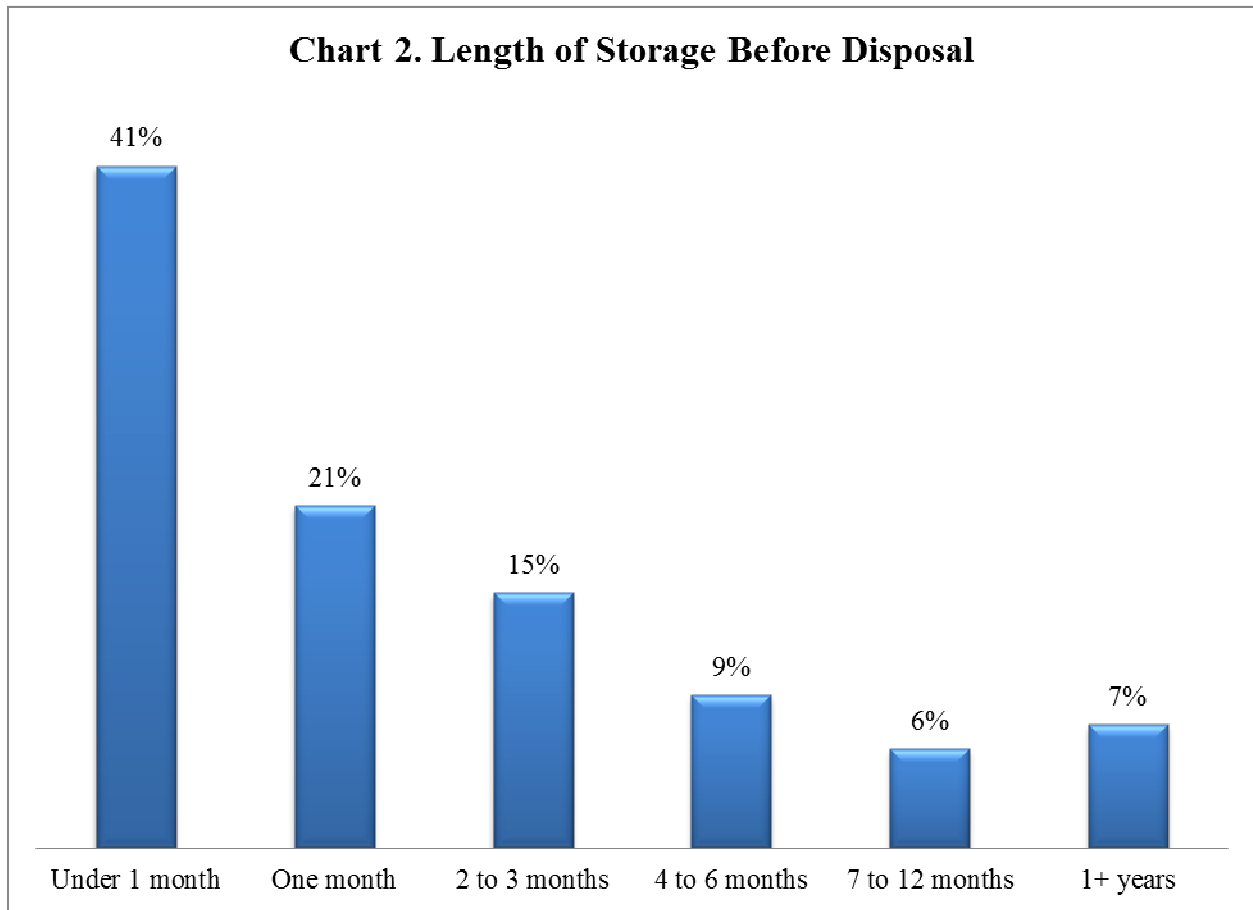
	Count	Landfill	Repurpose	Recycle	Bury	Burn	Store for Future
Silage bags	544	64%	4%	10%	3%	31%	3%
Bale wrap	484	65%	2%	10%	1%	28%	2%
Bunker silo cover	274	66%	4%	9%	3%	25%	6%
Mulch film (produce, small fruit)	113	72%	5%	14%	3%	11%	2%
Greenhouse flexible plastic covers	198	60%	23%	21%	1%	6%	13%
Boat wrap	121	60%	12%	28%	0%	8%	5%
Bale twine	592	51%	11%	7%	1%	39%	3%
Bale netting	454	58%	1%	7%	1%	37%	1%
Pesticide containers	472	43%	4%	40%	0%	15%	2%
Farm plastic containers	634	33%	21%	42%	0%	13%	7%
Other chemical containers	331	38%	11%	43%	0%	14%	3%
Greenhouse rigid plastic panels	74	69%	9%	9%	0%	9%	7%
Other, specify	123	70%	20%	24%	0%	7%	15%

Group comparisons

The pattern of disposal methods by plastic types parallels the associations between the groups and the types of waste plastic generated. This pattern was described following Table 2. As described in the paragraph preceding Table 4, the fundamental message in this table is that landfilling is the dominant disposal method for all but three of the plastics listed. Once again, the user groups are built into the data for the individual types of plastic (rows in Table 4).

Length of Storage

Chart 2 indicates that the majority of respondents store their waste plastic for relatively short periods of time. Four in ten respondents store their plastic for less than a month, and an additional 21% of respondents store their plastic for a month.

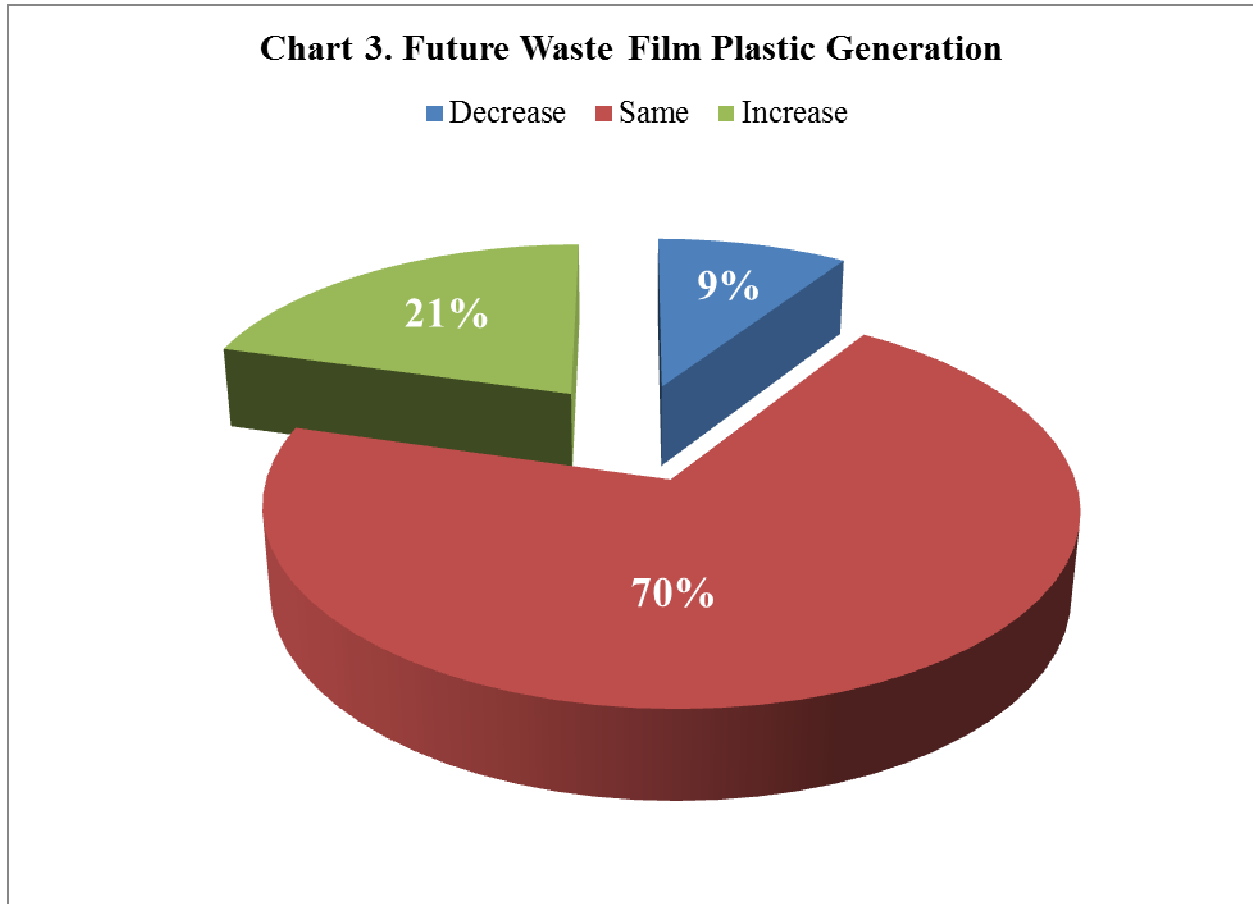


Group comparisons

Nurseries/greenhouses store their waste plastic longer. One in five nursery/greenhouse respondents said they store their waste plastic for at least a year compared to no more than five percent of the other three groups.

Future Waste Plastic Film Generation

As shown in Chart 3, 70% of respondents believe that the amount of waste plastic they generate will remain the same in the future. One in five said the amount will increase, while only 9% said it will decrease. Thus, it seems likely that the supply of waste plastic in the future will be as great or greater than current supplies.

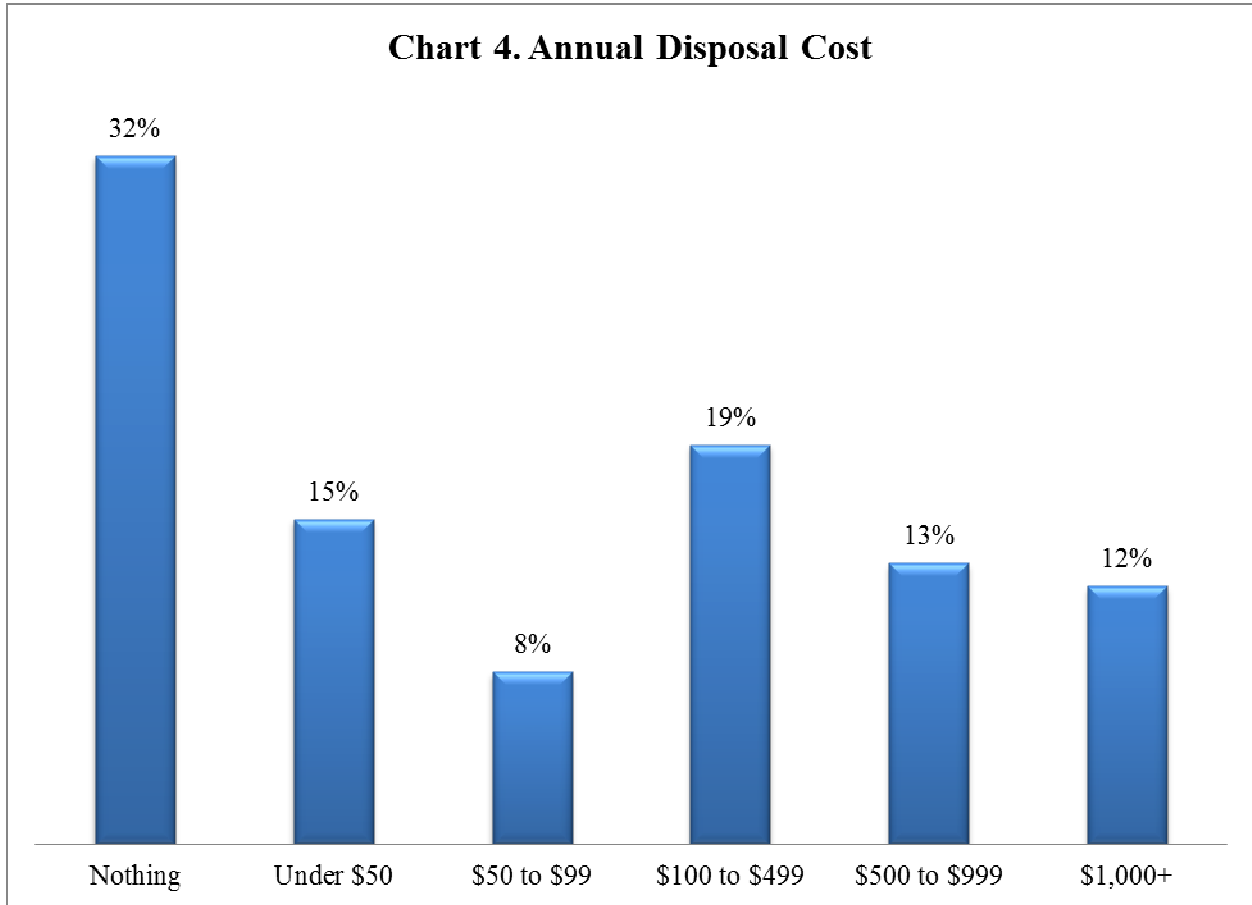


Group comparisons

There were no statistically significant differences among the four producer groups in terms of expected future plastic waste generation.

Annual Cost for Waste Plastic Disposal

As shown in Chart 4, the largest portion (32%) of respondents reported they had no explicit cost for their waste plastic disposal in 2014. However, given that roughly two-thirds of many types of waste plastics are placed in landfills, disposal costs are likely to be included in their waste hauling fee or in a tipping fee paid by someone. The next largest cost was between \$100 and \$499 (19%), followed by 15% who paid under \$50, 13% who paid \$500 to \$999, 12% who paid over \$1,000 and 8% whose disposal cost was between \$50 and \$99.

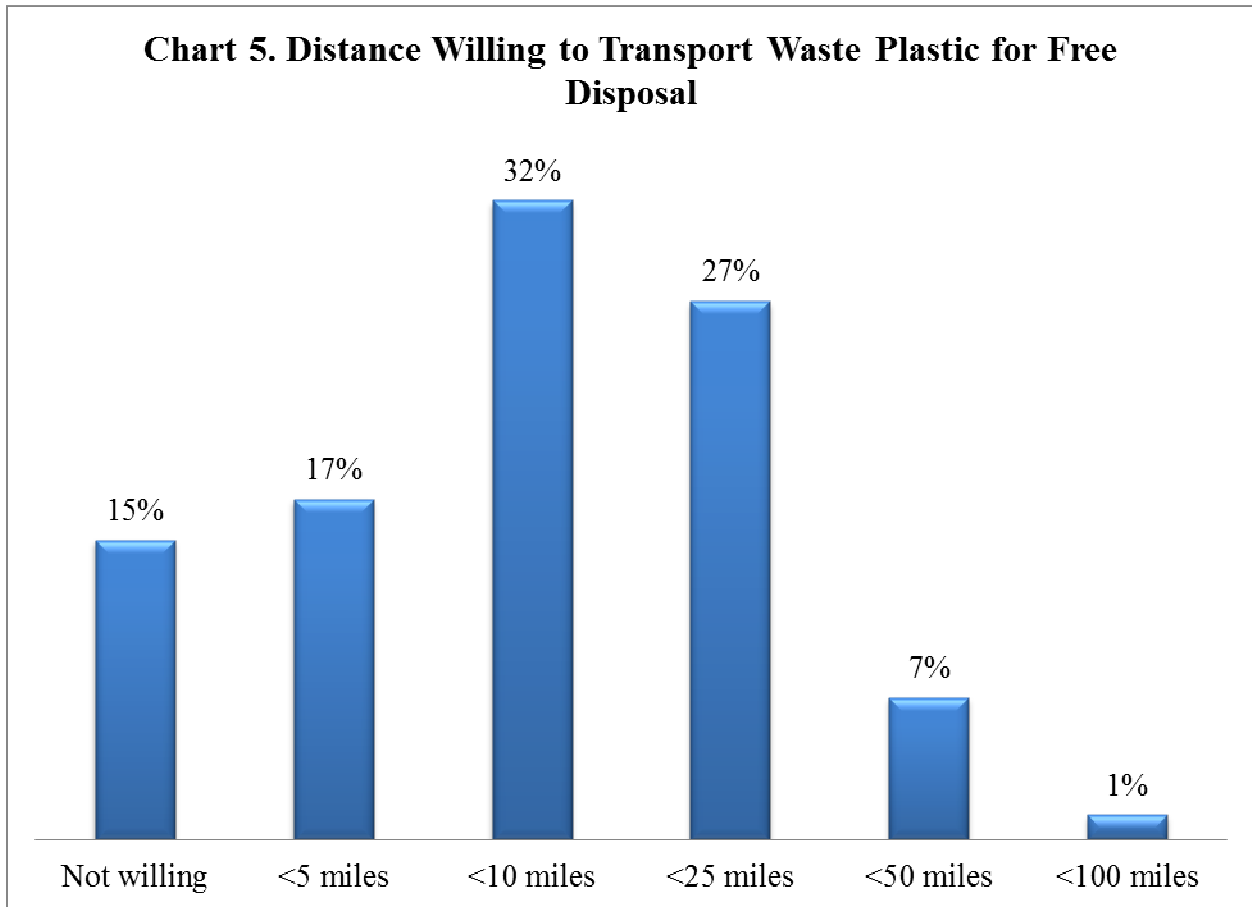


Group comparisons

There were no statistically differences in disposal costs among the four producer groups.

Fees and Transport

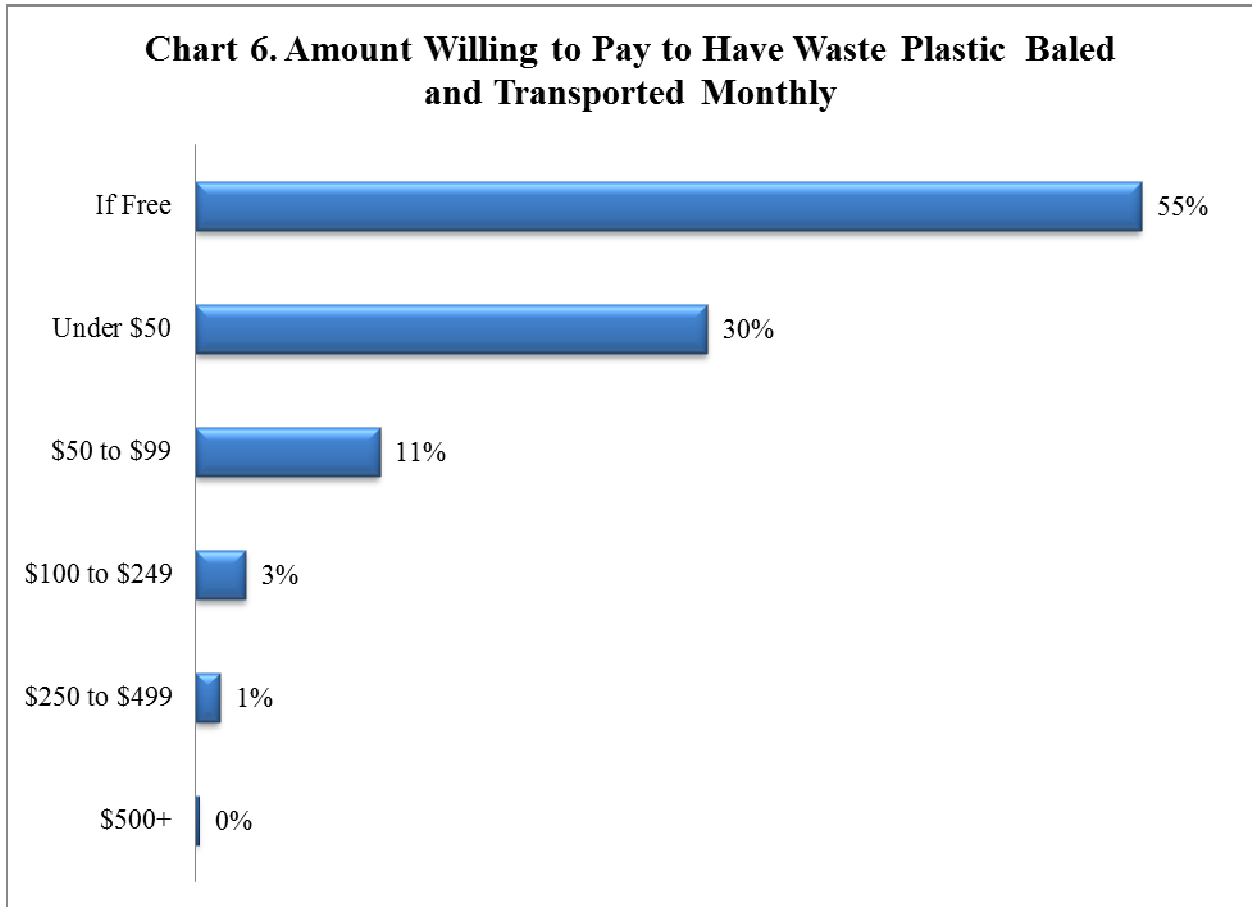
Respondents were asked how far they would be willing to transport their waste plastic to a collection location for free disposal. The results are shown in Chart 5 and indicate that most (85%) waste plastic generators are willing to transport their plastic for free disposal and that only 15% said they were not at all willing to do so. A third said they would be willing to go less than 10 miles, and 27% said they would be willing to go less than 25 miles. Relatively few respondents are willing to transport their waste plastic less than 50 miles (7%) or less than 100 miles (1%).



Group comparisons

A higher proportion of non-organic dairy operators (20%) and marinas (19%) said they are not willing to transport their waste plastic for free disposal compared to nurseries/greenhouses (7%) and organic dairies (6%).

As shown in Chart 6, 55% of respondents said they are willing to have someone bale and transport waste plastic off their property monthly only if done for free. About a third of respondents said they would be interested if the price was under \$50. Substantially fewer (11%) would be willing to pay \$50 to \$99. Only four percent would be willing to pay \$100 or more.



Group comparisons

A higher percentage of respondents from nurseries/greenhouses said they would be willing to have somebody bale and transport their waste film plastic only if free (68%) compared to 52% of non-organic dairies, 47% of organic dairies, and 56% of marinas.

Demographic Comparisons

Overall, there were few statistically significant differences in the responses, and in all but three instances, the differences were small in magnitude, indicating a high degree of similarity across demographic groups.

Gender. The SRC found statistically significant differences between the responses of men and women on 24 of the 123 variables; however, with one exception, the statistically significant differences did not change the overall pattern of the responses. Women generate bunker silo covers less frequently than male respondents. Among respondents who generated bunker silo covers, 23% women respondents reported generating this type of waste no more frequently than once a year compared to 8% of men.

Age. There were 17 statistically significant differences among the 123 variables on the survey. With two exceptions, the statistically significant differences did not change the overall pattern of the responses. Respondents age 45 and older generated waste plastic pesticide containers and farm plastic containers less frequently than younger respondents. Thirty-seven percent of older respondents generated plastic pesticide containers no more than once a year compared to 20% of younger respondents. Two-thirds of younger respondents generated farm plastic containers monthly or every 2 to 3 months compared to only half of older respondents.

Years in business. The SRC found only six statistically significant differences based on length of time in business (less than 25 years or 25 plus years). In all cases the differences were small and did not alter the overall response pattern.

Educational attainment. There were 13 of 123 variables with statistically significant differences based on educational attainment. Again, none of the differences were large enough to impact the overall interpretation of results.

Written Comments - Waste Plastic and Recycling

Respondents were given the opportunity to say anything else they felt with respect to waste plastic and the option of recycling this material in the future in an open-ended question. A total of 717 people provided a response to this open-ended question. Some comments included multiple ideas and these were copied into multiple categories of responses, resulting in a total of 759 comments. The SRC sorted the comments into the 8 categories shown in Table 5.

Table 5. Comments About Waste Plastic and Recycling		
Topic	Count	%
Good idea/Support recycling - General	322	42%
Collection – Systems, Methods, Sites	152	20%
Cost/Price	101	13%
Container plastic	47	6%
Wrap/Film/Sheet plastic	39	5%
Bags	31	4%
Contamination/Cleaning concerns - General	17	2%
Burning	12	2%
Other	38	5%
Total	759	100%

The largest portion of comments (42%) were grouped in a category saying that recycling of waste plastics is a good idea and stating support for efforts to develop recycling systems for waste agricultural and boat wrap plastics. Typical comments in this group include:

“Good idea, no great idea!”

“A recycling option would be very welcome.”

“Hate to be throwing in landfill. Wish it could be recycled.”

“I support the recycling effort and will try to cooperate to help recycle.”

The second most frequent group of comments (20%) centered on various aspects of collection, including particular systems and methods for doing so. These statements also included comments about specific sites. Typical comments in this group include:

“Convenience is another factor. If it is too far or too hard to get to no one will use it. Have a county-run place to drop off plastic so it can be recycled.”

“I have tried. However, the trash companies in my area do not offer any sort of farm recycling option or price break.”

“I'm all for recycling plastic but how am I going to store it until it's picked up or taken to a recycling site?”

“We were part of a collection project in Clark County a couple years ago and were disappointed when it ceased.”

Conclusions

Results of this survey provide the sponsors with basic information about the generation of waste agricultural and boat wrap plastic, current disposal practices, and opinions about recycling.

- Large majorities of dairy respondents produce waste plastic, and about half of nurseries/greenhouse respondents and marina respondents produce waste plastic.
- The largest proportion of respondents produces 500 pound or less per year, so the generation of waste plastic in agriculture and marinas is unlikely to be highly concentrated. Rather, it appears that a relatively large number of businesses each generate a modest amount of waste plastic, adding to the collection costs associated with recycling these materials.
- Most types of waste plastic currently is landfilled or burned. Increased recycling of these materials could, therefore, both reduce pressure on landfills and improve air quality in the state.
- There is a steady flow of waste plastic that could be recycled. Most respondents generate waste plastic weekly or monthly and store it one month or less. Nine in ten respondents believe their future generation of waste plastic will remain the same (70%) or increase (21%).
- Large majorities of respondents said they are willing to transport waste plastic to a site for free disposal, though they don't appear willing to transport it very far.
- About 45% of respondents are willing to pay a monthly fee to have someone come to their property to bale and transport their waste plastic off the property if the price is right (largest proportion willing to pay up to \$50/month).

Overall, these results are encouraging. The results indicate that there is a steady supply of waste agricultural and boat wrap plastic in Wisconsin and an interest among generators to recycle their waste plastic. Based on these data, the next step may be additional research on the feasibility of developing systems and facilities to recycle waste agricultural and boat wrap plastic in Wisconsin.

Appendix A – Non-response Bias Tests

Any survey has to be concerned with “non-response bias.” Non-response bias refers to a situation in which people who do not return a questionnaire have opinions that are systematically different from the opinions of those who return their surveys. For example, suppose most non-respondents said they think their generation of waste plastic will increase in the future, whereas most of those who responded said they think they will continue to generate the same amount of waste plastic. In this case, non-response bias would exist, and the raw results would underestimate the potential change in future generation of waste plastic.

A standard way to test for non-response bias is to compare the responses of those who respond to the first mailing to those who respond to the second mailing. Those who respond to the second mailing are, in effect, a sample of non-respondents (to the first mailing), and we assume that they are representative of that group.

There were 1,182 responses to the first survey mailing and 367 responses to the second mailing. The SRC found only 14 of 123 variables with statistically significant differences. As shown in Table A1, these differences were small. The only exception was in Question 6, where respondents to the second mailing said they generated mulch film more frequently than respondents to the first mailing (33% of second mailing respondents generate mulch film monthly or weekly compared to 13% of first mailing respondents).

Table A1 – Statistically Significant Differences Between Responses of First and Second Mailings			
Variable	Statistical Significance	Mean First mailing	Mean Second Mailing
1. Generated waste agric. plastic or boat wrap	.000	1.24	1.34
2. Mulch film	.009	1.11	1.03
2. Pesticide containers	.002	1.43	1.31
3. Mulch film -landfill	.010	.081	.033
3. Greenhouse flexible plastic covers - landfill	.031	.115	.067
3. Pesticide containers – landfill	.006	.193	.111
3. Bale twine – repurpose	.006	.067	.021
3. Farm plastic – repurpose	.016	.127	.071
3. Silage bags – store	.025	.010	.029
3. Bale netting- store	.033	.002	.013
5.Future change in amount of waste plastic film	.045	1.53	1.41
6. Mulch film	.038	4.84	3.76
7. Distance willing to transport for free disposal	.044	3.02	2.84

The SRC concludes that there is little evidence that non-response bias is a concern for this sample.

Appendix B – Open-Ended Comments and “Other” Written Responses:

Q2. For each material listed below, please indicate the pounds of waste generated per year at your facility. Other (100 Responses)

Pots (20 Responses)

- Nursery pots (4x) (500 pounds or less 2x, 501 -1,000 1x, 1,001-2,000 pounds 1x)
- Plastic pots (4x) (500 pounds or less 3x, 5001 – 1,000 pounds 1x)
- Pots (4x) (501-1,000 pounds 4x)
- Black plastic pots (500 pounds or less)
- Collection of used pots that retail customers bring back to recycle (501-1,000 pounds)
- Greenhouse pots (500 pounds or less)
- Plant pots (501- 1,000 pounds)
- Nursery pots/plastic (500 pounds or less)
- Plastic pot flats (501-1,000 pounds)
- Plastic tree pots (over 5,000 pounds)
- Plastic pots for plants (500 pounds or less)

Wraps/Films (14 Responses)

- Shrink wrap (4x) (500 pounds or less 2x, 501-1,000 pounds 1x, 2,001 -5,000 pounds 1x)
- Pallet wrap (3x) (500 pounds or less 3x)
- Bale stretch wrap (500 pounds or less)
- Black plastic for ground cover ((500 pounds or less)
- Clear plastic film (500 pounds or less)
- Green House Film (500 pounds or less)
- Pallet shrink wraps (500 pounds or less)
- Seed pallet wraps (500 pounds or less)
- Tree delivery wrap (500 pounds or less)

Containers (13 Responses)

- Plant containers (3x) (500 pounds or less 3x)
- Plastic plant containers (2x) (1,001 – 2000 pounds 2x)
- Plastic pots and containers (2x) (501 -1,000 pounds 1x, over 5,000 pound 1x)
- Black plastic plant containers (500 pounds or less)
- Containers (500 pounds or less)
- Nursery containers (500 pounds or less)
- Oil containers (500 pounds or less)
- Plastic containers (500 pounds or less)
- Unusable plastic nursery containers (500 pounds or less)

Bags (11 Responses)

- Potting soil bags (2x) (500 pounds or less 2x)
- Silo bags (2x) (500 pounds or less 1x, 501-1,000 1x)
- Fertilizer bags (500 pounds or less)
- Fertilizer bags and softener salt bags (500 pounds or less)
- Mulch bags (501-1,000 pounds)
- Plastic box bags (500 pounds or less)
- Plastic salt bags (500 pounds or less)
- Plastic soil bags (500 pounds or less)
- Shaving bags (1,001 – 2,000 pounds)

Trays (5 Responses)

- Plastic trays (2x) (500 pounds or less 2x)
- Greenhouse trays (1,001 -2,000 pounds)
- Plant trays (500 pounds or less)
- Plastic grower trays (500 pounds or less)

Multiple types (21 responses)

- Plant pots and trays (3x) (500 pounds or less 3x)
- Greenhouse trays and pots (2x) (500 pounds or less 2x)
- #6 plant trays, woven plastic dirt bags (500 pounds or less)
- Black plastic pots and trays (500 pounds or less)
- Flats and pallets (500 pounds or less)
- Flats/pots (500 pounds or less)
- Greenhouse pots and flats (500 pounds or less)
- Greenhouse flats and plug trays and pots (500 pounds or less)
- Greenhouse poly greenhouse-trays and pots (500 pounds or less)
- Greenhouse seed trays, pot, flats, plastic (500 pounds or less)
- Greenhouse supply trays, soil bags, poly film (500 pounds or less)
- Greenhouse trays, pots, hanging baskets, plastic bags from soil (500 pounds or less)
- Plant pots and soil bags (501 -1,000 pounds)
- Plastic flats and pots for bedding plants (500 pounds or less)
- Plastic plant pots and grow bags (500 pounds or less)
- Plastic pots, trays, baskets (500 pounds or less)
- Pots/trays (501-1,000 pounds)
- Potting soil bags, plug trays (500 pounds or less)

Miscellaneous (16 Responses)

- Upright silo cover (2x) (500 pounds or less 2x)
- 55 Gallon plastic barrels (500 pounds or less)
- ADAE/CDPE (501-1,000 pounds)
- Calf hutches (500 pounds or less)
- Christmas tree netting (500 pounds or less)
- Drip tape (500 pounds or less)
- Hoses – tubing (500 pounds or less)
- Milk house cleaner jugs (500 pounds or less)
- Odds and ends of plastic (500 pounds or less)
- Oxygen barrier plastic (1,001-2,000 pounds)
- Plant plastic sleeves (500 pounds or less)
- Plastic flags, stakes (500 pounds or less)
- Plastic medicine bottles (500 pounds or less)
- Soap jugs (500 pounds or less)
- Vinyl siding (500 pounds or less)

Q3. Describe the disposal system(s) you currently use in your operation. Other (85 Responses)

Pots (15 Responses)

- Pots (4x) (landfill 1x, no method specified 3x)
- Nursery pots (3x) (landfill 1x, no method specified 2x)
- Plastic pots (3x) (landfill 1x, no method specified 2x)
- Black plastic pots (no method specified)
- Collection of used pots that retail customers bring back to recycle (recycle)
- Greenhouse pots (no method specified)
- Plant pots (landfill)

- Plastic plant pots (no method specified)

Containers (11 Responses)

- Plant containers (2x) (no method specified 2x)
- Black plastic plant containers (no method specified)
- Containers (no method specified)
- Nursery containers (no method specified)
- Oil containers (landfill)
- Pesticide containers = hazard waste (no method specified)
- Plastic containers (landfill)
- Plastic plant containers (no method specified)
- Plastic pot containers (no method specified)
- Unusable plastic nursery containers (no method specified)

Wraps/Films (10 Responses)

- Shrink wrap (4x) (no method specified 4x)
- Pallet wrap (3x) (no method specified 3x)
- Green house film (no method specified)
- Hay plastic film (no method specified)
- Pallet shrink wrap (no method specified)

Bags (7 Responses)

- Fertilizer bags (no method specified)
- Fertilizer bags, softener salt bags (no method specified)
- Mulch bags (no method specified)
- Plastic box bags (no method specified)
- Plastic soil bags (no method specified)
- Potting soil bags (no method specified)
- Shaving bags (no method specified)

Trays (5 Responses)

- Plastic trays (2x) (no method specified 2x)
- #6 plant trays (repurpose)
- Plant tray (landfill)
- Trays (no method specified)

Multiple types (14 Responses)

- Pots and trays (2x) (landfill 1x, no method specified 1x)
- Flats/pots (no method specified)
- Greenhouse flats, plug trays, and pots (landfill)
- Greenhouse pots and trays (landfill)
- Greenhouse trays and flats (no method specified)
- Greenhouse trays, pots, hanging baskets, plastic bags from soil (no method specified)
- Plant pots and soil bags (landfill)
- Plant pots and trays (no method specified)
- Plastic flats and pots for bedding plants (no method specified)
- Plastic pots and containers (no method specified)
- Plastic pots and grow bags (landfill)
- Plastic pots and trays (landfill)
- Plastic, pots, trays, baskets (landfill)

Miscellaneous (23 Responses)

- 55 gallon plastic barrel (no method specified)

- AGE. Dispersal days (no method specified)
- Barriers plastic (no method specified)
- Calf hutches (no method specified)
- Christmas tree netting (no method specified)
- Dumpster hauled away by truck every two weeks (no method specified)
- Dumpster service (no method specified)
- Flats or other materials not reusable (no method specified)
- Garbage dumpster (no method specified)
- Garbage pickup. We have a dumpster. (no method specified)
- GH poly (no method specified)
- Greenhouse supply (no method specified)
- Hoses-tubing (landfill)
- Incinerator (no method specified)
- Light bulbs (no method specified)
- Milk house cleaner jugs (no method specified)
- Odds and ends of plastic (landfill)
- Our plastic waste goes to the Barron County Incinerator (burn)
- Plant flats (landfill)
- Silo cover (no method specified)
- Soap jugs (no method specified)
- Upright silo cover (landfill)
- Waste hauler recycles (recycle)

Q6. How often do you generate waste plastic? Other (82 Responses)

Pots (16 Responses)

- Pots (**5x**) (weekly 2x, monthly 1x, 2-3 months 1x, 4-6 months 1x)
- Plastic pots (**4x**) (weekly 1x, 2-3 months 1x, 4-6 months 1x, 1 year or more 1x)
- Nursery pots (**3x**) (weekly 1x, monthly 1x, 7-12 months 1x)
- Black plastic pots (monthly)
- Collection of used pots that retail customers bring back to recycle (weekly)
- Greenhouse pots (weekly)
- Plant pots (monthly)

Containers (12 Responses)

- Plant containers (**5x**) (weekly 1x, monthly 1x, 1 year or more 3x)
- Plastic containers (**3x**) (2-3 months 1x, 7-12 months 2x)
- Nursery containers (**2x**)
- Oil containers (1 year or more)
- Unusable plastic nursery containers (1 year or more)

Bags (9 Responses)

- Soil bags (**2x**) (weekly 1x, monthly 1x)
- Fertilizer bags (2-3 months)
- Fertilizer bags, softener salt bags (weekly)
- Mulch bags (1 year or more)
- Plastic box liner bags (1 year or more)
- Plastic soil bags (weekly)
- Shaving bags (weekly)
- Silage bags are daily

Wraps/Films (8 Responses)

- Shrink wrap (**3x**) (weekly 2x, 4-6 months 1x)

- Pallet wrap (**2x**) (monthly 1x, 7-12 months 1x)
- Green house film (1 year or more)
- Pallet shrink wrap (weekly)
- Pallet film wrap (1 year or more)

Trays (4 Responses)

- #6 plant trays (7-12 months)
- Plant trays (1 year or more)
- Plastic trays (1 year or more)
- Trays (weekly)

Multiple types (16 responses)

- Pots and trays (**3x**) (weekly 1x, 4-6 months 1x, 1 year or more 1x)
- Flats and packs (4-6 months)
- Flats, trays, pots (monthly)
- Flats/pots (weekly)
- Greenhouse trays and flats (2-3 months)
- Greenhouse pots and flats (1 year or more)
- Greenhouse pots, trays, bags from soil (weekly)
- Plant pots and grow bags (monthly)
- Plant pots and soil bags (7-12 months)
- Plant pots and trays (weekly)
- Plastic flats and pots (7-12 months)
- Plastic pots and containers (weekly)
- Plastic pots and trays (7-12 months)
- Plastic pots, trays, baskets (1 year or more)

Miscellaneous (17 Responses)

- 4-6 Months (no plastic type specified)
- 55 gallon plastic barrels (no frequency specified)
- ADRE/ARE (monthly)
- Barrier plastic (monthly)
- Cabin renter garbage/ recycling guest garbage/ recycling (no frequency specified)
- Calf hutches (1 year or more)
- Christmas tree netting (1 year or more)
- Meds (weekly)
- Odds and ends of plastic (monthly)
- Once a year (no material specified)
- Greenhouse supply (2-3 months)
- Plastic flats (1 year or more)
- Plastic sleeves (1 year or more)
- Potting soil in the spring (1 year or more)
- Seasonal with boating season (1 year or more)
- Soap jugs (monthly)
- Upright silo cover (4-6 months)

Q10. Please tell us how you feel about waste plastic and the option of recycling this material in the future. (759 Responses)

Good Idea/Support Recycling- General (323 Responses)

- Good idea (**15x**)
- It's a good idea (**5x**)
- Great idea (**4x**)

- I would like to see it recycled! (3x)
- All plastic must be recycled! (2x)
- I think it is a good idea (2x)
- I would rather recycle than put it in landfill. (2x)
- It should be recycled (2x)
- Recycle (2x)
- Recycle as much as possible (2x)
- Should be recyclable (2x)
- A good idea if it's fairly easy to do.
- A lot more could be recycled and reused.
- A necessary part of agriculture, but can be an eyesore and bad to environment if not taken care of right away
- A recycling option would be very welcome.
- A very good idea and would like the recycling option.
- Absolutely needs to be done we have scraps in the fall and then the majority gets recycled in the spring for 2-3 months.
- All plastics should be recycled now and in the future.
- All should be recycled some way instead of landfills.
- Anything would be better than filling up the landfills.
- Better choice than landfill or burning.
- Better to recycle it than fill up a landfill. It's not hard and more operations should.
- Can't happen soon enough.
- Could be problem in future, would be best to be remanufactured into new product.
- Currently some plastic goes in dumpster and the rest gets used in an outdoor furnace for heating. Most plastic use is in winter. I would feel best using wood for heat and the plastic could be recycled some way. I hope something can be done to make it feasible that our plastic can be recycled.
- Do it if it is feasible.
- Does not make sense to not do it.
- Don't prefer. Would be excellent to have an option.
- Eager for additional options to recycle plastic of all types. I would like to see less plastic being generated overall, or mandate 100% plastic recycling options offered by plastic producers and manufactures. Currently end users are responsible to "get rid" of all plastic products. This burden and expense should be shared. This would force plastic manufactures to work with their customers to provide options to end users making plastic recycling easier.
- Even though we don't generate much, I see it as a huge waste of a resource. Then I think of larger operations and can't imagine the volume they have to deal with. Lots of talk on this subject for years- small pilot projects come and go, yet nothing really done.
- Excellent Idea. We are hoping to make plastic bunker covers obsolete with our spray on technology. We generated no plastic waste this year from December -March hoping to perfect all year coming soon.
- Farm plastic should be recycled in every Township.
- Good idea if it actually works.
- Good idea to recycle and reuse.
- Good idea to recycle it.
- Good idea, no great idea!
- Good idea. I would be willing to pay for it.
- Good option.
- Great idea if not loaded with too many rules
- Great Idea! Will be willing to pay something to a recycling service
- Hate to be throwing in landfill. Wish it could be recycled.
- Hopeful- but not practical.
- I always thought it should be recycled into plastic sheets for use on barn walls and ceilings.

- I am for recycling bags and other plastic. I would like to see hard plastic 15 gallon chemical containers re-used.
- I am recycling what I can, would do more if possible.
- I am willing to recycle the plastic.
- I believe in recycling, but to educate people it is the most important thing. I have only had 3 people working for me and I have to recycle their water bottles.
- I believe in recycling.
- I believe waste plastic of any sort or kind should be recycled instead of going to a landfill or burned
- I believe waste plastic on farms is becoming a real problem it would be great if there was another use for it or a way to recycle and reuse it.
- I definitely do not like the idea of filling up landfills with plastic mulch. If organic mulch wouldn't take so much time to get in place, I wouldn't even consider using plastic mulch. So I'm definitely in favor of organizing a recycling option.
- I do think it is a good idea but it is easy to put in my dumpster that I would need even if I recycled all of my plastic.
- I don't like it. It would help if we could recycle this material.
- I don't mind burning my small amount of plastic waste, but if it could be economically recycled that would be fine.
- I don't think burning is good at all. Neither is filling a landfill with plastic. And not really to bury it. Recycling is good.
- I feel all plastics should be recycled.
- I feel awful about putting it in the landfill and hope that we will have options for recycling in the future.
- I feel good about recycling.
- I feel it is very important to recycle all the plastic possible.
- I feel it is very important to recycle.
- I feel it should be recycled or taken to a landfill. There is so much laying around on those big dairies and makes it look messy on a farm.
- I feel it would be great to recycle it if possible. I don't know what to do with empty Fly Spray plastic so I dispose of it and oil jugs too.
- I feel sick about making it and wish there were other options.
- I feel silage bags and net wrap should be recycled. I feel guilty putting in the dumpster
- I feel very bad that waste plastic have to go the garbage. I will be very glad if recycling of these products (plastic) will be possible
- I feel we should recycle as much plastic as possible to remove it from the environment because of its toxicity to wildlife.
- I hate the fact that plastic generated on my farm goes to the landfill, so a recycling program sounds exciting.
- I have been hoping for a way to recycle Ag waste plastic since I started generating the stuff. Canada has/had a system of collection and reuse for years.
- I hope and wish that someday this plastic will be recycled. I do not like using so much plastic.
- I hope for better options.
- I hope we can take it somewhere and get it recycled in the near future.
- I know it needs to be done - there just hasn't been a place to do it.
- I like the idea of recycling plastic if ag plastic can be recycled we are all for it.
- I like the idea of recycling plastic.
- I like the idea to recycle anything. Would make it a cleaner world.
- I like to recycle.
- I love the idea of recycling waste plastic. My main waste is in the form of #4 and #6, black plastic injection molded flats, etc.
- I really think this should be checked into heavily would be a lot less in landfills and etc.

- I recycle as much as possible at our local town hall recycling program. I would rather recycle it than add to a landfill.
- I see a lot of farms that now use a lot of plastic wrap not only on their bunkers, but also baled hay, etc. I believe these farmers should be required to recycle this plastic.
- I strongly feel all plastic should be recycled.
- I strongly feel this farm- bale plastic should be recycled.
- I support the recycling effort and will try to cooperate to help recycle.
- I think all plastic should be recycled.
- I think all recycling is good and should happen when possible.
- I think it has no place in a landfill.
- I think it is a good idea to recycle.
- I think it is a good idea. I could rather burn bale plastic than landfill it. Landfills it, it will stay there forever, burn it, the air will eventually clean itself but recycle would be better. In northern climates wintertime collecting and bale could be challenging however there is probably more bale wrap twine generated in non-grazing seasons.
- I think it is a good thing to recycle
- I think it is a must we need to recycle it and stop throwing it away. It ends up in our ground water. And is causing serious health problems.
- I think it is very important that we figure out a way to reduce and reuse plastics that are mass produced.
- I think it should be recycled.
- I think it would be a good idea if the plastic could be recycled and used again for something else.
- I think it would be beneficial to recycle whatever is feasible and practical. I am a landscape architect and this survey doesn't pertain to my business.
- I think it would be good to recycle all plastic.
- I think it would be great but if it's going to be clean and dry then you're wasting your time I'll throw it away then
- I think it's a good idea to recycle if you don't have a place to dispose it. We do on our farm. We use it to fill in a washout.
- I think it's a good idea, but you need a container to put it in to store. So it doesn't blow around.
- I think it's a very good idea.
- I think it's probably something that definitely needs to look into.
- I think it's a great idea to recycle.
- I think it's great to reuse it instead of landfilling it.
- I think it's ok to recycle plastic but we generally only have a bucket that's broken or a little this or that that's plastic when we burn garbage. Usually mostly paper feed bags or cardboard boxes and such.
- I think it's very important to recycle poly plastic, and hope there will be a place to recycle. greenhouse poly, and all other plastic material associated with a greenhouse business in the future
- I think recycling is the best way. I would store it longer and deliver it myself if It could be recycled.
- I think recycling would be a great idea.
- I think someone should figure out how to make a valuable product out of it and pay the farmer by the pound for it or whatever. Even if it's not much I can save on firewood if I burn my plastic with the outdoor wood burner.
- I think that if we are not able to recycle a product we shouldn't produce it. Our environment so very important to us and its why we recycle.
- I think that recycling waste plastic is a great idea, and would like my plastic to be recycled someday soon.
- I think there should be a way to recycle it all.
- I think there should be something available for recycling the plastic.
- I think waste plastic does need to be recycled. There is a lot of it. Need a good way for farmers to save it and get it picked up or a place to bring it.

- I think waste plastic should be recycled. I heard that an FFA chapter in Iowa does this. FFA chapters in each county should get together and try to get a collection point for the waste plastic.
- I think we should be doing a better job of recycling
- I wish I could recycle all of this stuff.
- I wish there was a better way to recycle gg plastic. It is such a waste there has to be a way to recycle this just as everything else to. Maybe something to drive around monthly to pick up from barns, greenhouses etc.
- I would be glad for a place to dispose of my ag plastic where it could be recycled
- I would be glad to recycle bale plastic. I stored some for a few years than quit because of no available recycle option.
- I would be very happy to have waste plastic recycled. I don't like putting all that plastic in a landfill
- I would be very interested in recycling plastic.
- I would be willing to drive on (unreadable) to have it properly disposed of. I refuse to burn on my farm. We haul 20 m to Lacrosse landfill. Seems like wasted resource.
- I would definitely recycle it if given the option. I believe it should be recycled now.
- I would give it away but am not willing to spend a lot of time dealing with it.
- I would gladly see it being recycled. I keep my bale wrap clean.
- I would like another way of getting rid of the plastic.
- I would like if there was recycling in this area
- I would like it if it could be reused if possible.
- I would like to recycle if it was an option.
- I would like to see it all recycled.
- I would like to see it recycled for something useful. I'm willing to keep it clean and store it if someone can use it.
- I would like to see my waste plastic recycled if possible.
- I would like to see some type of business recycle all the plastic that we use over the course of a year, because it amounts to a lot of materials that never gets recycled for a good use.
- I would love to have that option I would love to keep this plastic out of landfills and put it back to a good use I hate waste!
- I would love to recycle. I would be willing to work for a solution compacting and hauling.... There are grants available to help?
- I would really like the option to recycle ag plastics.
- I would strongly prefer to recycle my plastic.
- I would support recycling plastics. Our goal is to reuse traps for 10 years, not ship out each year with products.
- I would welcome a place to recycle.
- If it can be done
- If it can be recycled when volume is generated I think it is great.
- If our small tree farm generated plastic waster we would recycle it
- If there is a way to recycle waste plastic, I think that is great and would encourage others to do so.
- If there was a place I could take the plastic to for recycling that was here. I surely would because I do care for the environment.
- If there was an outlet to recycle it, it would be better than throwing it out,
- If we can recycle materials we should as much as we can.
- If you want it, you can have it,
- I'm all for recycling ag bags but they just get to filthy dirty.
- I'm good.
- I'm happy that people are at least thinking of options because the amount of plastic isn't going to be reduced. So recycling would be a great option if feasible.
- I'm not planning to raise more produce or have more waste plastic
- In favor of recycling over burning, landfill, burying
- It certainly has merit.

- It gives off a gas when burning it would be nice if I didn't have to burn it
- It is a good thing to recycle all kinds of plastic and reuse it.
- It is a must. Should be mandatory.
- It is a sensible idea. This area has lots of it, plastic. We are behind times here. They collect plastic for recycling in my home town. Contact Sam Esh Reedsburg, PA. He has a collection center.
- It is about time it. It is hard to find someone to take plastic to. Would be nice to bale plastic or recycle it someday!
- It is difficult to have a pile of waste plastic free from mud and water. If that is ok it does interest me.
- It is something that is needed very much! Why are we not doing more to help with this?
- It is something that should be done.
- It is very important.
- It is wise to find more and better ways to recycle waste plastic and increase options.
- It must be done.
- It needs to be done.
- It needs to be done now and in the future.
- It needs to be done. We try to avoid. We don't shrink wrap boats, we store inside, we have to deal with what our manufacturer does we hate it.
- It seems such a waste seeing all of our plastic now going back into a dumpster. We are only a small farm; I shudder to think the amount of plastic generated on the large farms. Truthfully I think it should be mandatory to recycle it.
- It seems there is more plastic used on farms every year to my knowledge there is no recycling happening. I think it would be great if there was a way to recycle it.
- It should all be recyclable.
- It should be against the law to put any kind of waste plastic in landfills
- It should be done and must be done to a greater extent.
- It should be recycled or reused if at all possible. IF there is a cost associated to do it, we could pass that cost on to the consumer.
- It should definitely be recycled.
- It sounds good to me. I usually recycle at the town of Beaver recycle center.
- It would be a good idea to recycle this material.
- It would be a great resource to recycle rather than putting in a landfill.
- It would be good to have the opportunity to recycle the plastic we use on the farm instead of sending it to the landfill.
- It would be great it bothers me filling the landfill.
- It would be great to recycle these plastics, We do recycle everything we can.
- It would be nice to be able to recycle our plant pots, rubber vinyl, edging etc.
- It would be nice to be able to recycle our plastic.
- It would be nice to have a place to recycle plastics.
- It would be nice to have a recycling option for waste agriculture plastic.
- It would be wonderful if it could be recycled
- It's a necessary evil. Recycling it would be nice, but the likelihood of this happening on a large scale is highly unlikely.
- It's a shame how much stuff gets hauled to the landfill yet we need to do it to comply with regulations. I am all for it to recycle plastic yet it needs to be feasible to do it or will never take off. So go for it! See what you can drum up
- It's a nuisance. Recycling is a must. A lot of plastic gets disposed improperly.
- Needed.
- Needs to be done.
- Of course it should be recycled. This country is a wasted material factory, as well as other countries. It is truly disgusting. We are people sitting on a branch on a tree and we are sawing that same branch off of the tree. We are in for a great fall. Where they going to spend their money

when the Earth is so polluted and dead? Stop this stupidity now and recycle everything and outlaw all the persons. Stop having so many kids -respect the earth.

- Of course we should recycle as much as practically possible.
- Plastic a substance we don't want burned. Unsightly to have lying around for a length of time. It would be nice to recycle, although often it is so dirty or otherwise not clean.
- Plastic is a onetime use and it needs to be recycled so it doesn't need to fill up our landfills.
- Plastic waste is always a problem. A better way for disposal or recycling is always welcome to investigate a new method.
- Plastic waste will only increase in the future. Some sort of recycling should really be figured out to keep as much as possible out of landfills.
- Plastics wastes that can be recycled should be done.
- Please recycle all waste, we see our landscape cluttered with plastics of all sorts...not on our farm
- Please recycle.
- Prefer recycling.
- Problem. We need better options.
- Recycle better than landfill generated every year.
- Recycle if you want.
- Recycling a very good idea if they will do it.
- Recycling is a good idea - Landfill a bad idea.
- Recycling is always a great idea.
- Recycling is good but if you could figure a way out to make non-toxic biodegradable plastic it would be much better.
- Recycling is good, but we generate very little plastic.
- Recycling is great! Just needs to be convenient for the consumer.
- Recycling is important to us.
- Recycling is the way I would like to go.
- Recycling waste plastic is a good practice. I just don't have time.
- Recycling waste plastic is a great option. I store my feed in stave type silos, thus only a silo cover is used after filling the silo. This keeps the volume of plastic lower than using feed bags or bale wrap.
- Recycling waste plastic is always the best option. I wish there was more incentive to do so.
- Recycling waste plastic is an excellent way to dispose of it. We need to educate all people in the state the importance of recycling plastic. We still have large voids or areas in the system where recycling is not practiced or commonplace. One area that stands out that needs improvement is outside farm storage of silage plastic.
- Recycling would be a welcome option.
- Recycling would be a wonderful idea.
- Recycling would be better than going to a landfill.
- Recycling would be great if it can be done.
- Reuse all plastic to make environment well for future farms.
- Should be recycled, for the health and benefit of us all.
- Should have been done years ago.
- Since plastic is a petroleum product recycling seems a very high priority. The damage cause by the oil companies with careless harvesting practices is intolerable.
- Something needs to be done besides landfill.
- Strongly agree needs to be done.
- The concept of recycling our plastic waste to another use rather than to the landfill is very appealing. Presently all our waste plastic is used to heat our house and so my cost to for disposal would be very low.
- The cost of disposal does not bother me. The thought of clogging up landfill with it does.
- The greater amount recycled the better!
- The use of plastics in ag has to be significantly reduced. All plastics used have to be recycled or repurposed. Ag. at this point is the 'brown-green industry.'

- There is a definitely a need.
- There is a huge amount of waste plastic being generated without many options of recycling. It truly is quite a waste in my opinion.
- There is a lot of it being used. Yes something should be done. I'm just a small user.
- There is a need for an alternative to placing these materials in landfills.
- There is a need of better options to recycle plastic.
- There is too much plastic going to landfills which will be there for far too many years. Recycling all this plastic would be a much better choice.
- There should be recycling, too much plastic going to the landfills.
- Think it's necessary; would like to have better options.
- Think this would be great.
- This is a big problem for the greenhouse industry. I hope you can solve this. This plastic must have value to someone.
- This is a good idea.
- Too much going in the landfill.
- Tough to store stuff very long but would be good to recycle but faster and cheaper to burn.
- Very excited. I love bailage. Hate that the only option for the plastic is a landfill.
- Very important.
- Very interested in finding a way to recycle.
- Very interested in recycling bag plastic. Always bothers use some when I have a big pile for the tough recovery every week. Would like some other options to get rid of it.
- Waste plastic is very annoying to deal with. I would be very much in favor of having the option to recycle this material in the future.
- Waste plastic must be recycled.
- We all must do! Note when using bunkers one cuts plastic weekly. The problem is to keep it from blowing around to the neighbor's property
- We all need to recycle.
- We are a small company. Don't produce much, but would always like recycling options.
- We are organic and want to recycle our plastic if possible.
- We do not need to wrap every cookie etc. In plastic. This world needs to live simply with respect for everything. I have many gardens and grow with the BVO dynamic preps and sprays. Also a small garden business selling these plants and encouraging others to respect the land. Use less- recycle more.
- We generate a very small amount due to our size and conscious efforts to minimize plastic use. Having multiple recycling options would be great.
- We have been repurposing and recycling as a business for 30 years.
- We need a recycling program for waste plastic.
- We need plastic recycling options. I would use more plastic if there was a good way to get rid of it. Bale wrap in particular.
- We need to recycle instead of fill our landfills.
- We recycle as much as we can currently. Bunker covers are probably the largest waste product recycled for our farm.
- We recycle as much as we can, but it would be nice to recycle more.
- We recycle everything we can today.
- We recycle some and some gets thrown out. I dislike plastic and the waste of it in landfills. We are a country that just throws away whatever we don't want too much packaging and waste unless it is recycled. As long as we can turn waste plastic into a cost effective product. I am ok with it.
- We recycle when we can.
- We recycle whenever possible.
- We should all recycle as much as possible.
- We would be open to different disposal methods to help any system to reuse or recycle this resource to help the environment.
- We would like to see a use for this plastic.

- We would like to see it recycled rather than go to the landfill.
- We would love to have a recycling option. In the past we have stored and haul plastic to western Minneapolis but that recycler has stopped accepting greenhouse plastic. We would go out of our way to support your efforts.
- We would love to recycle it.
- We would love to recycle this material rather than have it considered trash.
- We would love to recycle. Even ag #5 plastic is not recycled because it isn't food grade.
- We would love to see waste plastic be recycled. It's a terrible thing to throw it in a landfill.
- We would prefer to recycle.
- Wish it would be recycled.
- Would be an option are interested.
- Would be great to recycle.
- Would be great.
- Would be nice to have recycling options.
- Would be open to the option or recycling.
- Would be very interested in a recycling option.
- Would like a place to take our plastics.
- Would like to have it recycled.
- Would like to have some way of recycling plastic. Very Important.
- Would like to recycle.
- Would like to see it somewhere other than landfills.
- Would prefer to recycle.
- Would rather recycle than dispose in landfill.
- Would recycle and do if at all possible.
- Yes, I think it good ideal to recycle plastic.
- Yes, recycle.
- Yes.

Other (312 Responses)

- Appreciate learning and using waste plastic.
- Bale and haul.
- Do not send any more surveys as I have retired and no longer farm.
- Do not send any more surveys as I have sold the farm and retired.
- Do not wish to have waste plastic but currently need to use it for not having a better feed storage option. Looking for better storage methods for future.
- Don't bother with it.
- Find a way to reuse it.
- Hate having to deal with it. We reuse when possible as base for corn fodder/ bales and as wind breaks in winter
- I believe we baled 1000 bales for baillage in continuous tubes. 2000 bales with net wrap. I can only make an educated guess. The participant makes 20% of decisions on waste disposal.
- I do not feel we need regulation. The DNR is way over powered.
- I don't get paid to do surveys.
- In small bundles. It is usually a waste of our time.
- It's a pain in the butt.
- It's a problem. It blows all over.
- It is a troublesome problem.
- My farm waste plastic is very low. I worry about other farmers that use a lot of it and what they're doing with it.
- My plastic gets generated monthly from Oct-May. Recycling would be great. Incinerators to produce steam?
- NA
- Next time ask about nursery pots, poly wrap on pallets.

- No opinions as we produce very little.
- Not Interested.
- On the dairy farm we have so much work to do that we don't have time to recycle properly.
- Our greenhouse runs for 3 months only seasonal.
- Pain in butt.
- Plastic condition varies from season to season. Don't know if recycling is an option.
- There don't seem to be a good way.
- This program will not affect my business.
- [Undecipherable]
- Use more glass, wood, metal.
- We are 100% retail. So products coming to us in plastic are sold and go out of here in plastic. Our recycling consists of paper and cardboard only.
- We do not use much, so it is not very important.
- We don't have much 3 Hoop Hover- use it after house to cover/ tarp items- what we are doing is fine.
- We try to use bulk reusable system whenever possible. Feed cover silos need to be well sealed to prevent spoilage they are a lot of work and expense for which we are on constant watch for a better alternative feed pile plastic is the bulk of what we need to dispose of.
- We're organic!
- Would be for recycling problems, wind and water blows away. Fills with water. Time and cost prohibitive, storage.
- Would be great to keep out of landfills but not feasible at this point to recycle.
- What is amazing to me, as a farmer is how little I am paid for how hard I work? I am 59 years old and work 70 hours or more a week to make what Joe regular makes in 40 hours. Yes I love my work and have done well, but still... Last year we were finally paid a fair price for our milk but it didn't last. Now you want me to fill a survey that will bring more expensive rules to me. I think I will pass.
- Whatever is practical.
- We think there could be some very good products made from recycled plastic. Dumping plastic into landfills does not seem like a practice a soil conservationist would follow.
- I have less than 100# per year. We recycle what we can.

Collection – Systems, Methods, Sites (152 Responses)

- A free disposal or pickup option would be excellent.
- All American recycling used to accept our overwintering plastic. They no longer are able to accept our material I have contacted a couple of firms that have expressed an interest in recycling our material. I would be very happy to see the plastic put to good use rather than being disposed of in the landfill.
- All for recycling! On farm pickup would be the best for busy farmers. Yes, there is a need especially for silage bags and farm large milk house plastic containers.
- As a small dairy farmer, I think it is a great idea. I generate a pick-up load about every 14 months and wish there was a way to recycle it. I was happy to fill out this survey and look forward to the results and to someday be able to recycle the plastic. Thanks to all the sponsors of this survey.
- Bayfield area recycling won't take #6 plastic plant trays for recycling, nor the woven plastic bags (60 cubic feet) for our potting soil mix. They were marked for recycling but the recycling center would not take them. Very frustrating. We recycle everything else in our seasonal wholesale greenhouse generated quite a lot of cardboard.
- Be ideal for farmers to have bins we could put it in and have a truck come monthly to pick up!
- Bunker plastic 60ts to landfill, there is no recycling of this here. Bailage twine doesn't go anywhere, no one wants it. Plastic containers are just being recycled at township as of 2015.
- Clark County tried collecting bunker plastic in tote bags and delivered to collection point. I think it worked well but lost a market for it.
- Collect it at townships.
- Convenience is another factor. If it is too far or too hard to get to no one will use it.

- Could be an option if town garbage would not pick up.
- County, state, coop industrial balers for plastic (silage, net, twine/plastic, bale wrap) would be nice maybe during clean- sweep.
- Currently I take waste plastic to our township disposal site and it goes to a landfill.
- Currently organic valley is taking some of our plastic mulch in hopes of recycling.
- Disgusting piles of waste plastic are accumulated. Drop-off should be at township locations. A problem is at the township level there is a charge fee being fair because of large farm amounts and small farm amounts.
- Don't have extra time and ways to transport it.
- Drop off at recycling locations.
- For me personally I have a very small amount each week and usually fit in 1 and a half garbage bags for pick up and that only part of the year so now I've fed foliage. For larger farmers it's a very different issue because the volume and recycling would be an asset to them. I would think it would be easier for them and cause less pollution.
- Great idea. Need timely pick up.
- Have a county-run place to drop off plastic so it can be recycled.
- Have a garbage disposal company pick it up.
- Have a recycle site that I don't see changing in the future.
- Have a schedule for pickup it could work. Convenience and time is key.
- Have a weekly or two week recycling to pick up plastic waste on the farm.
- Have no problem recycle in the bins with garbage pick up.
- Hope to find a place for recycling.
- I am very interested in recycling of our ag plastics. I currently take it to Columbia county recycling and they may be recycling it but I am not sure.
- I believe we are doing the proper disposal by using a garbage recycling company.
- I currently work off the farm and my business has recycling dumpsters so I used them to recycle my plastic containers.
- I don't know what the garbage guys do with my plastic wrap, etc. I do put it out on recycle days but I do not think they recycle it.
- I don't want someone to come to my farm and bale my waste plastic but I would put it in a separate container for transport.
- I have searched for a replacement after Chuck's Recycling quit located in Hammond. He did a good job and left a huge void in the community. Recycling is very important for St. Croix County. A center point in Hammond, and it should be free to everyone to drop off materials.
- I have tried. However, the trash companies in my area do not offer any sort of farm recycling option or price break.
- I have very little waste plastic. Would recycle it if convenient.
- I live in Taylor Co. They use to do it for free. The company they use decided to charge so they quit. I think it should be recycled someplace after all they are getting it for free as I pay for it also.
- I operate a small recycling program in the town of Sheboygan and could possibly be a vendor for such a program. Currently we have a lot of other plastics (toys, chairs, tables) Going into our dumpsters and transported to landfills.
- I think it is a good program. Would like to see a drop spot in Reedsburg more often. And a larger window of time to get it there on the day off.
- I think this plastic should be put in dumpster for recycling. I take mine to local dump, but not sure if they are recycling it. I also fill dumpsters and have it hauled out.
- I use plastic twine on big bales. It is a waste you would have to make it simple for farmers to recycle.
- I would be in favor of recycling, maybe at the township recycling center
- I would be willing to host an annual film recycling event.
- I would be willing to store my plastic waste for years if there were someplace within 50 miles that I could take it to at least once in a while for recycling.

- I would like a local collection site. I believe we have technology to recycle and reuse most products we use.
- I would like to recycle if convenient.
- I would like to see a dumpster at our township recycling.
- I would like to see us having a dumpster for just plastic, that would get picked up once a month.
- I would love this option. Would drive up to an hour away 1-2 times yearly to do so.
- I would recycle if it was more available to me. We have a township garbage disposal facility that is only open twice a week and I have other commitments both times- so I had to bring in a dumpster that is emptied once a month. Everything goes in there because there's no way or option for separating recyclables. I do recycle aluminum.
- I would recycle more but in the past, some of what I have was not accepted by the recycle pickup.
- If a container was on the farm to put plastic in would be the best.
- If a service collected it in a large container would be the only way to recycle it.
- If it is convenient we should be able to do it.
- If it was easily available we would use it.
- If provided with container for transport would make it work.
- If recycling facilities were available locally, I would utilize it.
- If said services offered are additional containers for plastic only, may be easier for farms to utilize.
- If someone had a container to store it. Then pick it up every month recycle or something so it doesn't have to go in the landfill would be a great thing.
- If there is a way to avoid plastic use and recycling of plastic materials in a way that is not counterproductive to the operation I would do it.
- If there was somewhere to recycle the plastic we use and the few boat shrink wrapped that comes in, I would make sure it was done. The plastic is usually covered in road grime or dust from our building.
- If there were more places to take these things with more convenient time than our township offers, more things would be recycled.
- If you can supply a dumpster for the plastic.
- If you want plastic taken to a recycling center, the center needs to open 6 days a week to make easy to bring in. The county recycling center is only open 2 days in week, so you will not make a special trip just to go to center.
- I'm all for it if they come out and pick it up for free.
- I'm all for recycling plastic but how am I going to store it until it's picked up or taken to a recycling site?
- In my other job, as a freight broker here in WI, I do have a customer that will take ag plastic for recycling. Contact me if you are interested in an outlet for ag plastic, Foger's Freight LLC 710 Kinney Rd, Hudson, WI 54016 715-220-4750
- It is a good idea to recycle. It is nice if it is made easier for people currently using a dumpster, which is very expensive!
- It should be recycled, but it needs to be easy to do, right know it goes in a dumpster weekly, loaded with a pallets forks not a lot of work with it right now (pay \$120 a month no limits)
- It sounds good to me. I usually recycle at the town of Beaver recycle center.
- It would be a great thing, yet it would be nice to have a container or bin to store it in while waiting for pick-up.
- It would be difficult to transport the plastic for recycling without it blowing everywhere. A dumpster system that could be picked up monthly would be ideal. It would be good to find a way to reuse it.
- It would be great to store the plastic on the farm and have it recycled couple times a month I just worry about it attracting rodents.
- It would be nice if there was a collection site and it was all gathered together.
- It would be nice if they picked it up bi-weekly or monthly from the farms for free.
- It would be nice to have a monthly pickup at our farm once a month or once a quarter at no charge to us.

- Keep it simple.
- Local landfill accepts silo/silage bags and bales them. Good practice vs burning of waste or letting it blow away.
- Local recycling centers should be able to handle more types/volumes of these plastics to be recycled.
- Lots of us tried recycling but they rejected it. Would be great if we could recycle! collection]
- Madison is willing to recycle our plastic pots. We are very grateful for that.
- Make for less separation by type.
- Minnesota nursery and landscape Assn. used to have a great program for recycling greenhouse plastic. They provided a roll off at low cost and then it was hauled to a recycler.
- Most of our plastics are recycled shipped by pickup to Michigan by east Jordan Plastics small amounts are burned by us. All of our pesticide containers are washed out and put in local recycling.
- Needs to be as easy as putting it in a dumpster and setting picked up every week just like garbage.
- Needs to be done. Call Waukesha County and talk to Rebecca Mattano. She set us up with program. Thank you.
- Number program of monthly collection should work. It's inexpensive if it goes into a dumpster for landfilling.
- Obviously plastic waste is huge amount of our dumpster space, yet on the other hand, it is picked up weekly by sanitation company, disposed of and out of my hair. Most other farms it is either blowing around or just plain left where they throw it.
- Our county has been recycling it, and we are appreciative of that.
- Our garbage company takes some. Plastic and cardboard.
- Our local dump which is only 2 miles away already accepts our bale wrap and silage bags for recycling at no charge.
- Our plastic waste is put in the dumpster on the farm and picked up weekly. We would have to have a dumpster here even if our plastic waste did not go into it.
- Our recycle operation will not take bale netting for recycle.
- Our waste hauler has it recycled.
- Plastic in my mind should be recycled. But hard to do. It's hard to keep clean, store and get to a recycling site. It might be easier to have a compactor at each township site for farmers to take plastic to. Seems a lot of townships already have these sites for trash.
- Plastic is a good way to store feed; however it is troublesome to dispose of properly. I currently burn and know it's harmful to our environment. I did for some time send it by dumpster to our landfill but it's costly due to the fact that you can't put much plastic into a dumpster because of its density. It filled really fast. A compactor or baler would be a great idea something simple and convenient.
- Plastic is a great way to cover and protect cattle feed. I feel waste plastic is a problem. We would be willing to help recycle. When recycling we must be able to use sked loaders/end loaders to handle it and keep man hours to a minimum.
- Recycle of materials and garbage does not have good options in general. Disposal options should be in place before materials are placed in use.
- Recycling good idea if picked up weekly from the farm.
- Recycling is great; our township pays recycle trucks to pick up our waste at end of our drive every week. You just can't beat that as to us it is free.
- Recycling is important - appreciate current collection options
- Recycling plastic film would be a great idea. I currently am involved with a company East Jordan for recycling my plastic pots, trays, and cell packs.
- Recycling should be done on a county level at least, municipal level in populated areas
- Recycling would be good if picked up.
- Set recycle sites up at local co-op's and plastic suppliers would be beneficial.
- Should be recycled, depends on what you come up with. How much of a hassle.
- Sounds like a good idea. But it's going to need to be convenient.
- Storage and transportation are major hurdles.

- Sure would be nice to have a close drop off site near us.
- Taylor County had a recycling program for several years which we participated in but they discontinued last year- we are now back to burning. I thought the recycling program was an excellent option and we would like to have it back again.
- The best way to keep waste plastic from not reaching unwanted places is by having resources readily available. Do that individuals deposit the plastic in appropriate recycling bins.
- The change to recycle and reuse is a high priority. Waukesha County has offered recycling yearly with a partner in the green industry. Waukesha County recycles 262-896-8300.
- The dumpster is very convenient. No cleaning or neatly baling needed, it is fast too. The more time we spend getting ag plastic ready for recycling the less likely I would be willing to recycle.
- The method we used was ok with us. We hope to continue.
- The plastic is necessary, but very annoying. Being able to recycle it sounds like a fantastic idea. Especially if someone came and picked up.
- The super sack method works and just need to arrange more drop off/pickup sites than 3 or 4 times a year in one location.
- The town currently works with the county on recycling. That process works well and will continue for the foreseeable future.
- There has to be easy access, convenient hours. Close to location and is willing to accept all plastic.
- There should be more places to take waste-plastic like ag plastic or have someone come around once a month to big farm or that you can call have someone to pick up.
- Too much of it out there. Recycling opportunities need to be simpler.
- Vernon County did recycle it at first and now they don't. Our plastic is clean and I would like to see it recycled.
- Was using recycling program Taylor County had started until it shut down due to lack of buyers for materials. Would love to have this program back feel it was making a difference for our operations (greenhouse and dairy).
- Waste plastic is a great convenient way to store feed. I have always wanted to recycle it but I have not had the option at my recycling center.
- Waste plastics should be stored in a dry cold place so it is better to recycled.
- We already recycle all the plastic the recycler will take. It's picked up at roadside monthly would like to do more.
- We already reuse much of this plastic but need a place to take it after this is done.
- We as farmers need a method of recycling waste plastic. On the farm pick up of plastic would be the most convenient
- We currently use a dumpster service. One time/month we fill a 4 yd. dumpster. I would like our plastic to be recycled. That's why we try hard to keep it clean.
- We generate very little waste plastic as we are seasonal, only operating a spring garden plant business. All our waste goes to Waste Management for disposal as they see fit. This system works for us.
- We haul it seven miles to recycle. Have done it like this for years. At no cost.
- We have 2 dumpsters on the farm which is quite an improvement. Burn very little anymore. I really don't throw it away one has the time to have it away.
- We have recently been searching for a recycling option for our ag plastics as the landfill is not a long term solution. However we are having a hard time finding any recycling programs.
- We like to reuse these products but after that we take to another business who recycles it for others as well who are in the industry of nursery and landscaping.
- We live in Taylor County and that county last year had a recycle program that we participated in. But they discontinued it because they had a hard time getting rid of the plastic. We wholeheartedly support all recycling programs and wish ours had not been discontinued.
- We need to have plastic recycling locations about every 10 miles to be effective.
- We now have a county plastic recycling event occasionally in Sauk but I don't know if they take my type of plastic.

- We purchase 3-25'x100' rolls of 4 mil polyurethane each year. We would have space to store it if it would be picked up periodically or we would take it to a recycling facility within 15 miles.
- We recycle 200,000 lbs. a year of plastic. We have a retail recycling program with our customers (Big Box). We ask customers to return unused containers to stores and we return to greenhouse where they are sorted and recycled. We have been doing this for many years.
- We recycle everything we can possibly find a place for even through it requires labor and travel time. I definitely feel plastic should be recycled. Also looking for a place to recycle fertilizer bags, softener salt bags, bubble wrap, and plastic bags the plants are shipped in.
- We recycled plastic for 2 years in Taylor County. We transported it to Medford where they would bale it and have it recycled. The problem they had was no company would come pick it up after it was baled so the program was dropped.
- We send ours with the garbage to the Barron Co. incinerator.
- We were part of a collection project in Clark County a couple years ago and were disappointed when it ceased.
- We will have waste plastic, no way around it. A system needs to be available to recycle this waste.
- We would be willing to try it. It would need to be easy. Maybe have a large container here on the farm that someone would pick up monthly. We believe in recycling.
- We would love this option, however because we create a little every day it would have to be a workable solution that was easy to use.
- We would recycle our bunker plastic if it could be recycled without any added work (i.e. washing and cutting to a particular size). We would not mind taking it to a recycling dumpster if it was in a nearby location.
- We'd love to see someone come up with a custom baler to press the plastic into a bale that can be easily stacked and transported.
- We've invested in an on-farm dumpster with pickup. Try not to make much waste and recycle when possible.
- When it can be reused when recycled. Out county recycle collection points should have this be a green service to farmers. Then you would not have others burning it.
- Why couldn't it be stored in regular dumpster containers to be picked up by a typical dumpster truck on a monthly or bi-monthly schedule.
- Would be nice to have a place to recycle it close by.
- Would be very happy to recycle. Local recycle center does not take plastic wrap they dispose of. If offered would recycle.
- Would like to recycle all of it but my service won't take it all. Say there no set up for it.

Cost/Price (101 Responses)

- A money talk to recycling has to be accomplished as the same price and less than landfill disposal.
- Are we going to burn more energy resources trying to recycle, than what we save in recycling? If the plastic recycling does not support itself financially, who will subsidize it?
- Cost for disposal is included in property taxes. If there was program to recycle within 10-20 miles or so I would be relocated.
- Cost has to be kept down how will it be taken or pick up.
- Cost will dictate if I do it.
- Cost would be a large factor in the process. Would love to recycle.
- Could be a good idea but not willing to spend a fortune.
- Dumpster services already charge a lot on a monthly basis as it is a lot of farms utilize dumpsters to dispose of plastic, rather than burning.
- Every citizen helps to bear the costs, but it is worth it to keep our part of the world clean and to recycle.
- Farm plastic need to be collected and recycled at affordable cost.
- Farmers can't afford any more expenses. It has to be free.
- Good idea to recycle. Has to be easy, dumpster/pickup once a month or so, free of charge!

- Good idea, but we: don't need any more expenses, don't like to have trash lying around,
- Good to recycle. Sucks to have to pay.
- Have looked into recycling but not cost effective yet, would rather recycle it than put in landfill.
- I am VERY concerned that for profit company will succeed to legislate a change at the expense of farmer's time, handling costs etc. Provide a container and pick it up at our farm and we would cooperate.
- I am very willing to recycle plastics if it doesn't cost much to do it.
- I don't like burning it, but I can't afford to pay to recycling. If somebody wants it for recycling they can have it for free. They pick up.
- I don't like plastic waste or its impact but not willing to pay much for recycling.
- I don't think you can get it clean enough or compact enough to interest anyone, unless oil is above \$120/barrel.
- I feel it should be recycled/ repurposed if it is cost effective and feasible.
- I feel the use of plastic film will increase in the future. Burning and landfills are not how we like to get rid of plastic. However, to recycle, we don't have equipment to transport or haul the plastic. If we did I'm not sure where to haul it to. If there were a service we could use to get the plastic for a monthly fee (less than \$100/month) we would most likely use.
- I feel there is too much waste plastic and there should be a cost effective way to recycle it.
- I generate waste plastic daily, so by daily cleaning and storing it, it becomes another daily charge in my 20 hour work day.
- I hate wasted plastic find a reasonable price to recycle.
- I highly support recycling if it can be done in an economical way.
- I live 5 miles from the county recycling station and I'd be glad to haul my poly to them if they would take it. Presently I haul it to a landfill for 60 per ton. I'd much rather recycle.
- I recycle now. I have no cost involved. I'm happy with arrangement.
- I think being able to recycle waste plastic at an affordable price would be a good thing.
- I think if there was simple and cost effective way to recycle, it would help that problem, and plus be a benefit in other ways.
- I think if you had like a dumpster to put silage bags in on farm then picked up monthly to recycle them at low cost be excellent.
- I think it's a great idea as long as its cost effective and not labor intensive.
- I think recycling is good, but if the cost is much more than disposal, then just is not practical. And by cost, I also mean cost to tax payers by government requirements/regulations.
- I think that a recycling program must be cost-effective before it is done on a large scale.
- I think they should put dumpsters out at no charge to the rammer, and then they could pick it up monthly. No Charge.
- I think we need to reduce the amount of waste plastic that goes into landfills. I would be willing to recycle more if it was convenient and inexpensive.
- I thought Ag Bag was looking into it already. I strongly feel it should be recycled. But that is a cost that can be absorbed by the processor. I already pay a hefty price for plastic.
- I will rather completely do without than go to a lot of expense to recycle. I do not like using disposable plastic. But will try to responsibly dispose/recycle what I do use.
- I wish we could at a cheap price
- I would be willing to pay a small fee \$15 to \$25 a month.
- I would encourage it if it does not cost me too much.
- I would feel if it could be recycled at a cost effective cost, yes, it probably should be done. Actually we need to have it done.
- I would like it to be recycled especially if it was convenient and affordable.
- I would like to have an economical way to dispose of bunker/pillage bag plastic. The plastic is soiled with dirt and feed which seems to cause a problem in the past.
- I would like to see it recycled, but don't have the time or money to do much about it.
- I would like to see silo plastic collected and recycled. It must be convenient for all. It has to cost less than It costs me to dispose in a landfill or it wouldn't pay for me to recycle.
- I would like too but I can't afford much cost or spend much time it needs to be cheap and easy

- I would love if it was FREE to dispose. We pay to buy it and have to pay to get rid of it.
- I would prefer to recycle as much as possible and am willing to pay a small amount more to recycle instead of landfill or otherwise dispose of.
- If it can be recycled great but we are not going to pay someone to take it and then turn around and purchase it again.
- If it could be done easily and economically I would be willing to do it.
- If it is economically feasible I am all for recycling.
- If it were free.
- If plastic waste has value, we should be paid something to save and recycle it.
- If someone could pick up and bale plastic on the farm for a reasonable rate, I would be interested.
- If there was a cost effective way I would recycle it. Until then I am going to burn it. Plus the places that do recycle it have to have it completely clean which on a farm is impossible.
- In favor of recycling if a cost effective way can be produce.
- Invent more new products from recycled plastic. Recycling plastic needs to be profitable.
- It has to be Economical.
- It makes sense to recycle if it's possible and cost effective.
- It should be recycled or reused if at all possible. IF there is a cost associated to do it, we could pass that cost on to the consumer.
- It would a good idea if it could be recycled for no cost with a use for the receiver.
- It would be a great thing for the right price.
- It would be good to be able to recycle if economically feasible.
- It would be good to have a low cost option to recycle waste plastic
- It's a shame to dump it all in a landfill. It would be great to have the option of recycling it. Providing it doesn't break a person.
- It's fine as long as it doesn't cost me time or resources.
- Keep down the cost of recycling. I think it's a good idea.
- Maybe there could be an upfront charge that would cover recycling. Then maybe buy the plastic back by a recycler that would buy it and transport.
- Need a system, even if it cost end uses. Best place if cost is at front and manufactured. via tax
- No extra labor or cost.
- Not interested in spending money that I will not be able to be reimbursed for. If it were free I would do it.
- Not opposed to plastic recycling for free. Willing to deliver reasonable distances. But not interested in paying for recycling
- Not too far to travel I would do it.
- Of course, I would think it would be great if the plastic waste generated by our productions could get recycled, we had a recycler come by with interest in recycling our waste, but I get the hint that the technology is not there yet for them to be profitable and the extra work it would take to clean it. You are not going to be able to get any extra hand on cleaning if from the generation.
- Picking it up if it costs no more than the dumpsters good thought though
- Plastic is dirty and blows around a lot if you don't keep it cleaned up. Our recycling center tells us it's too expensive to recycle it.
- Plastic recycling is great if it can be done to sustain itself without cost to farmers
- Prefer recycle to landfill but cost and labor is a factor.
- Reasonably priced disposal options would result in a cleaner environment.
- Recycling is good. Recycler must make money by processing. I am willing to save/stock items for recycling but will not pay to have it done.
- Recycling needs to be easy and cheap or free or will more than likely not be utilized because of shortage of time and money. I would like to not be a part of the problem of plastics.
- Recycling often involved more work and expenses than it saves. We are not a large farm and do not generate a lot of plastic waste but if not dealt with, on at least a weekly basis, the mess is very unsightly.

- Recycling options must be provided, preferably funded by the manufactures of the plastic product.
- Recycling would be a great way to deal with a looming environmental hazard. It's a great idea but has to be fiscally possible.
- Recycling would be much better if reasonably priced.
- Should be recycled out township pay- dumpster costs.
- Sounds like a good idea if costs can be held down.
- The plastic is a big expense for the farmer. And you can persuade a farmer to do anything if you pay him for it.
- They should pay us for saving the plastic, if they want to clean up the environment they should pay us when they come to pick up. The cheapest is to burn it.
- Too expensive to clean plastic up for baling.
- Unless, there less to recycle instead pay extra for biodegradable plastics.
- Very wasteful and expensive to landfill it.
- We have a dumpster for all of the waste. Advanced disposal comes 2 times per month. It cost us approx. \$100 per month. It would have to be reasonably priced and a timely manner because of the good housekeeping practice we have on the farm.
- We pay way too much for paper recycling. We throw away miles of shrink wrap
- We should be paid for waste plastic, a valuable resource. Make plastic pots, boat docks, patio materials, etc.
- We would appreciate a recycling program and be willing to pay a fee if reasonable.
- Would be great if cost is reasonable.
- Would like it if it was reasonable price.
- Would sort it for a recycler if pickup was free and monthly or 2 months at most. Garbage pickup is monthly whether dumpster is full or 1/2 full so as far as paying to recycle (no way).
- Would recycle if it was for free.

Container Plastic (47 Responses)

- All greenhouses covered with rigid plastic ponds. Wash and reuse all plastic pots. Ask customer to return all plastic to us for reuse.
- Bale twine is very limited because we are a small farm. The greenhouse plastic covering is changed out every 3-5 years depending on deterioration due to weather. That plastic I used for other purposes around the farm until it is useless. Then only few go to the landfill. We are more concerned with the plastics generated by the pots we use in the greenhouse
- Eventually I will need a place to recycle/ drop off plastic pots. I take small amounts to our township transfer station.
- I generate 15 gallon chemical containers every few months that are most difficult to dispose of. A previous supplier took and refilled the containers but no longer does. Pesticide containers are less of a problem as I hire some spraying done. silage bag plastic blow on my land from neighbors and I dispose of through landfill means
- I operate a native species plant nursery. My plastic waste is from old planting containers which are 50% reused or second use.
- I triple rinse. The pest containers should be clean for recycling. Should be dropped and inspected at coop or recycle canters.
- I try eliminate plastic as much as possible but even after revising as much as I can there always remain some pots, mulch, and greenhouse cover that end up in the landfill. I would very much favor recycling. My customers bring pots to me from all over, so I know many of them would participate.
- I wish that used plastic pots from plants were able to go in for recycling instead of having to go to the land fill
- It would be fantastic to have a way to recycle my used greenhouse flats plug trays, and plastic pots. People give me plastic pots all the time, because they don't want to put them in the garbage.
- Like to see more recycled nursery containers that are #5 and small annual containers.
- Most of our plastic pots are now made with recycled plastic.

- Need more options for recycling nursery pots - landscapes occasional recycle programs require sorting by size which takes too long.
- No longer is being able to receive plastic containers/pots from customers and taking our greenhouse plastic like they did before really tragic. The biggest waste for me by volume is landfilling these products.
- Not sure why the local recycling center is unwilling to handle plastic containers larger than 1 gallon.
- Note: I assumed the plastic pots and flats we generate were considered farm plastic containers.
- Now that we have converted to biodegradable mulch, we will produce very little plastic waste. We will have greenhouse covering in the next couple years (every 5-6 years), but outside of that, will just have pesticide containers
- Only plastic waste is plastic pots/containers and tubing for our nursery stock.
- Our recycling center does not take bale wrap or silage bag cover only jugs or plastic containers.
- Plastic bags from potting mix broken old containers are put in old potting mix bags and taken to city of Janesville Dump.
- Plastic containers are always easy to reuse and recycle.
- Plastic containers are recycled picked up monthly by township a bunker covers are reused as long as possible, would be difficult to clean and haul for recycling.
- Plastic Poly would be nice to recycle for my purpose once a year. Plastic pots or containers we re-use several times throughout the year. Only when they are no good we send to land-fill. We try to return flats plastic and containers to the people who send or deliver them when possible. We have some that are stored 2-3 years or more.
- Recycling is great if economical. Our small bottles/jugs are recycled weekly. I pay for the service. Barrels are re-used by suppliers.
- Recycling would be a great option. We have stacks of used plant pots in storage waiting for recycling options.
- Reuse and recycle is very important to us. I think there needs to be a plan in place that is enforced particularly concerning greenhouse plastic and nursery pots for larger operations. Our business is very small and we see a potential for huge amounts of waste in larger scale.
- The only chemical containers we have are 409 spray bottles and we are working on going green with our cleaner
- The plastic I use are flower pots. I have customers bring them back for reuse. I also encourage non-customers to bring them to me. If I can't use a size, I pass it on to another who can. The only time I recycle them is when they break. The main remedy is to reuse when possible.
- The worst part of doing this work, having to use plastic pots, is a challenge on how to dispose
- There should be more places to recycle things. Our recycling things have to go to our town hall which only has very restricted times for dropping things off. They don't accept plastic bale twine. We repurpose many things, most chemical containers go back to the dealer we purchase from, they reuse them.
- This doesn't address our plastic usage much. We recycle most plastic pots by reusing them. Our plastic greenhouse film is donated or reused for many different purposes.
- This would save the environment. The problem is the containers must be clean to recycle. We have no time to clean containers
- Very important especially plastic pots and carries
- We are a landscape nursery and the plastic pots that the plants come in are our biggest waste. We save some and re-use as much as we can but take the rest to landfill. Can't find anyone to recycle them.
- We don't generate a lot of plastic waste... except for plastic pots. It would be nice if these were "recyclable"
- We have reverse osmosis for water so we don't have plastic bottles. We encourage people to recycle plant pots and/or repurpose. It would be great if they would find a better solution to plastic. I feel we do our part to use as little as possible.
- We have so little. 50-150 feet of [unreadable] plastic containers and take it to the country dumpster for recycling, free

- We make huge efforts to recycle pots, flats, etc. to repurpose and reuse anything we can otherwise the landfill only what is ruined in normal use over time.
- We need some place to recycle our pots and greenhouse plastic.
- We need to recycle planting pots more.
- We only buy maybe three containers of chemicals a year and we wash them out and reuse for watering trees if it gets dry. Recycle mulch and plastic at Dunn County Recycling.
- We recycle as much as possible. All flats, pots, and grocery containers are picked up after spring season is over and recycled.
- We reused every pot and tray we could and put waste in dumpster. Customers also brought back a lot of stuff we could not reuse. Recycling would be great but a lot of this has soil on it.
- We use a recycling system, where another business hosts a "pots" drop off day. We change out our plastic greenhouse covering every 7 yrs. or so. We have only replaced it once. I think as much as possible should be recycled.
- We use mostly small square bulks which use the hemp baler twine which we burn. The chemical containers we get we use over as feed buckets. I like the idea of recycling for the big guys.
- We would like to recycle the containers. We have called other greenhouses, but they are not interested in taking odd mixed sizes.
- Would like to be able to recycle old plastic pots and trays used in greenhouse.
- Would like to recycle all of the plastic generated in the greenhouse Industry. I took 12 pallets to a nursery south of Madison last year. They took all trays and Pots. (No Poly)

Wrap/Film/Sheet Plastic (38 Responses)

- As a dairy farmer and a custom farmer I have seen great increase in bale wrapping and it concerns me what is happening to all that plastic, what bothers me most is seeing farmers letting plastic lay and not properly disposing it.
- As far as greenhouse coverings we use 4 year poly and usually get 5-7 years use. People in the area seek out old poly to cover wood, boats, etc., so our recycled pool poly is usually less than 50% of what we buy.
- At my marina, we have the option thru our distributor to use a pre-paid bag for shrink wrap and ship using UPS. Unfortunately this isn't feasible because of the amount. I hate having to throw the plastic away to go to a landfill. As a small business in a very rural area the options have to be economically viable.
- Bailleage wrap and net wrap is a huge amount of plastic and think it would be good to have more disposal options like recycling.
- Because no one we know of will recycle shrink wrap boat cover unless you have enough to fill a semi-trailer full, we would be interested if there was a way to recycle small amounts. Most of our boat storage is inside heated so no covers are needed. We have four boats currently between 30' and 37' that are shrink wrapped that store with us. As soon as they uncover in spring, people stop and ask for it to cover wood piles and things they store, so someone takes it away for reuse.
- Bunker cover and feed use plastic is very dirty/wet/nasty. We dumpster it and dispose for a farm. It will be dirty. Washing or cleaning will use too much water and I heard somebody talk about extruding into pellets (with feed, dirt) and then burning to create energy (electric/steam/heat...)
- Burning is not good: can tell when the neighbors are doing it; we do some, if very dirty and heavy and cannot be picked up by garbage pickup monthly. We are going to bunkers, hoping to eliminate 10x150 plastic bags to store haulage and corn silage, less plastic and easier handling of deposition. Keeping it clean is a problem; most bags aren't on cement.
- Even though we don't farm anymore would very much like to see all those bunker silo wraps and baler wraps be recycled in some way. Getting to be so much of this plastic on farms now.
- I am hoping to build a hay she and skip the plastic entirely within the next years. I avoid buying hay that is wrapped at all costs, preferring twine or net wrap if at all possible.
- I am willing to recycle shrink wrap. However, I have a storage space issue. Currently we put our boat shrink wrap in a dumpster with other garbage. It gets picked up every other week 6 months/and every week 6 months. My biggest problem is storage space for recycling. There

would have to be very large savings for me to store it to recycle it. Plus if we had to transport during the busy season that would be very inconvenient.

- I feel terrible bringing the bale wrap and silo plastic to landfill for a fee. I would rather see it recycled or made green to reduce carbon footprint.
- I try not to use plastic as mulch but need to from time to time as a weed barrier. I try to reuse all plastic from our hothouses. Mulch and twine are disposed of because they are poor condition by the time they are torn out (twine used for trellising tomatoes) I'm all for recycling these if they could be.
- I use greenhouse film as long as possible on greenhouse structures, the use it for other projects - cover wood piles, etc. If I have extra I sometimes call concrete contractors.
- If it is simple and easy and convenient I would like to be able to recycle my bunker plastic.
- If the bunker cover/bass needs to be free of feed or dirt, this won't fly.
- If there was a better option to cover bunkers I would use it. It is a nuisance and difficult to handle.
- My business is so small that I have very little waste plastic. I recover my greenhouse every 5 or more years.
- My wrap is put by my gate and is picked up by general public where it is used for covering wood piles and equipment or whatever barrels are the same.
- Need someone to go with bale wrap.
- North West WI. Needs more agriculture recycling. I use old G House film as many times as possible. Row covers end walls, etc. then its landfill.
- Our trash pickup claims they are recycling shrink wrap. Not expensive at this time. Could Change.
- Please help us find a responsible solution to the wrap problem.
- Recycling whenever possible. Try to repurpose plastic film. I am mindful what I am generating for waste.
- The marinas on the St. Croix have someone that takes there plastic now for free or may even pay them. You should look into it (Afton Marina) (Windmill Marina).
- The only plastic of that nature that I get is what's used for wrapping up merchandise on pallets.
- The only time I have bale plastic or twine is when I have to bale hay- My dairy chemicals are delivered in 15 gallon totes that are re-used or refilled. I try to avoid buying hay that is wrapped. I believe that this wrapping is way over used. But I think is the way of the future. I feel that the plastic should be recycled.
- Waste plastic containers are easily triple rinsed for recycling, problem is that bunker used plastic is dirty and recycler people want it cleaned and that is impossible on a farm with its long length and bulkiness. We need huge containers for this. Recycling business makes money recycling or they wouldn't do it. Se we are giving it to them free as far as I am concerned and still helping the environment.
- We generate almost no plastic waste. The exception is when we recover our greenhouses every 5-7 years.
- We have someone come and pick up out boat shrink wrap for free.
- We pay a garbage company to pick up our netting and bunker plastic.
- We raise produce for Organic Valley and they provide us with free provision to take proper care of our mulch plastic. They have certain dump sites available at certain times of year.
- We recycle all we can. I try to not use bale wrapping but have to some times. I would like to do something besides send it to the landfill.
- We use greenhouse plastic, generally for 3-5 years then use small pieces for odd jobs after which it goes into the bin. We would be overjoyed to see our and all plastic wrappers/ containers recycled.
- We used to recycle greenhouse film, we took it 15 miles they no longer accept it. We need to get rid of it on a timely basis. We cannot store it for a long period because of lack of space.
- Would be nice to recycle. Waste bunker plastic is very dirty and hard to handle. Hard to justify extra expense in a narrow margin business.
- Would like to see an option for recycling shrink wrap.
- Would much prefer to recycle our used boat wrap.

- Yes I am very interested in recycling this year's hoop house plastic cover and nursery flats and pots. Thank you
- You can recycle plastic bottles and jugs but not shrink wrap. We recycle now would love to put wrap in recycle dumpster.

Bags (26 Responses)

- Dirty plastic from bags is it useable.
- Doing our part is the right thing to do. Feed and salt bags are new plastic along with wraps and films. These could be another opportunity to recycle.
- Hard to get around it with silo bags.
- I feel bad especially in years we have silo bags!
- I guess it would depend upon how clean it would be required to be to be recycled. Silo bags are sometimes very muddy- bale wrap would not be hard to keep clean. Net wrap usually has hay stuck in it, hard to remove. We have been told that our recyclables, which we are required to separate, are all dumped in the same place as our garbage. If that's the case, I don't know why we have to separate it.
- I think is a great idea. I've said that this would have been good when plastic bags or covers became available.
- I use to have a silo bag a year I think there was a place I could take it but they wanted it washed and cleaned that was too much work for nothing.
- I wish it would not need to be used on our farm. I would like to be able to just burn ag bag plastic
- I wish the silage bags and covers had value so that my neighbors wouldn't burn it. The smell is sickening and carries a long way if the breeze is right. Sometimes I get some plastic pieces from them for projects around the farm.
- I would be in favor of a recycle method in hopes our neighbors would use it rather than litter the landscape with their blown-around silage bag trash.
- It would be nice to be able to recycle the silo bags without them having to be cleaned on the farm or come up with some type of container that would have the rain naturally clean it.
- It would be nice to have a way to dispose of silage bag plastic, as it takes up too much space in the dumpster.
- It would be nice to have farmers using the silo bags clean up so they are not blowing in our fields when you don't even use them they are a nuisance.
- Our township collected and stores bunker/silo bag plastic and recycle it when they have a load.
- Plastic bags-eliminated.
- Plastic silage pile covers is very difficult because it most often gets mixed with dirt and feed.
- Please find a way to recycle bag plastic more efficiently.
- Recycle back into silo covers bunker cover and bags.
- Recycling plastic jugs and barrels is one thing but transporting waste plastic bags and wraps without bailing on site is totally impractical. Cleanliness of the waste plastic bags is a problem that recyclers don't want to deal with. There is a lot of dirt on waste plastic silo bags and wraps.
- Silage bags would be a pain in the butt to recycle too much dirt/feed with it. Very easy to pile and burn.
- Silo bag plastic is a problem on our farm a place to put the plastic weekly such as a dumpster would be helpful.
- We feel the companies that sell the plastic should provide a means to easily (free) recycle it. Our dairy chemical supplier takes the containers back each month... thankfully. Purina makes lick tubes but won't take them back. Luckily we have found people who want them for parties or yard work. The silage bags are our biggest problem.
- We produce only about a few pounds of plastics a month that currently cannot be recycled. We produce the most weight in synthetic root can grow bags, oil filters and GT. oil containers they are difficult for us to recycle efficiently.
- We use some silo bags. The big problem would be how to move it. It's bulky and heavy.
- Would be willing to recycle bag plastic which has been talked about for 20+ years but seems to never come to be. Studies in US and Canada have come to limited results. Keeping bag plastic

clean and contained so it doesn't blow away until pickup for recycle is a major factor there has to be a better way of recycling these types of plastics that would benefit everyone involved.

- A close location for drop off would be okay but transporting old silo bag plastic could be tricky and it's often very muddy and dirty.
- Find some way to recycle plastic bags with dirt in them.
- I like to recycle but silage bags get push down in the mud and feed is mixed in. They are very hard to keep plastic clean to recycle.
- Wish there was a way to recycle that was cheap and easy to do. Have heard in the past about recycling but the plastic had to be clean. Silage bags always get mulch and dirt on them.
- Would recycle my bale netting and silage plastic if it did not have to be so clean. Very hard sometimes to clean. Was part of a TSTE bag recycling project, not hard to do?
- Would be good if we could recycle silo bag plastic get a lot of mud and dirt on it at times. Maybe a problem to process.

Contamination/Cleaning – General (17 Responses)

- Good idea, but mud is a problem
- Good Idea. Our waste plastic goes in dumpster and it fills the dumpster quickly. Programs with recycling would be how much dirt could be in plastic. Moving plastic from farm to recycler could be a problem wind.
- I don't like it laying around the farm. It stinks or blows around if not shredded which we don't have room for and if you don't get rid of it is a good home for rats.
- I doubt if recycling ag plastic is feasible. You can't get it clean. Could it be baled in soiled conditions and burned in waste to energy facilities? I think that's more feasible than trying to clean ag plastic, but what do I know I'm just a farmer.
- I have been in contact with a couple of different concerns in relation to recycling over plastics. It seems that the process of getting something up and running is very challenging and not successful. One big drawback to farmers in retaining interest in such a venture is that the plastic has to be clean or washed. A big turn off! Containers are one story (no problem) but silo and bale wrap is almost impossible.
- I just don't think it's practical. At least half of our plastic gets full of mud before we can clean it up. Some stays clean but it is very hard to contain without baling it.
- I would prefer that my waste plastic could be re-used. Most of it does have enough dirt on it to make that difficult.
- It is not good but hard to get rid of, tried to recycling but they wanted plastic to be clean folded.
- My concern is the amount of dirt on the plastic and if that affects the ability to recycle it.
- Sometimes plastic could be dirty or muddy. Small pieces could blow out of bin driving down the road. Would be nice if there was a use for it. Glad it's out of landfill.
- The amount we put in the dumpster is not good. It will never decompose. Something needs to be done. How will we deal with the dirt/feed in the plastic?
- Waste plastic would be difficult, because it has a little feed residue. This can be wet and stinky.
- We do what we can with regular household garbage. Our concerns are the areas where old materials have been kept years that we are cleaning.
- We need to recycle, but it's hard to clean.
- We reuse or repurpose most if someone would recycle twine with hay chaff in it we would do that rather than burn it.
- Would like to do more recycling, just need to work out problems like how clean does it need to be, some way to bale it and handle it.
- Would like to recycle but hard to have waste plastic clean. Unfortunately, dumpster is convenient. Out of sight, out of mind.

Burning (12 Responses)

- Only can burn
- Burning best method.

- Burning is a good option for us as far as recycling must be easy option or people will not make it a successful program.
- I have a really mushy gushy feeling when I burn it. I mean really, if I just did stuff based on how I feel I would spend all day taking train pictures.
- I have outdoor wood boilers furnaces to heat my house, shop, and milking parlor so plastic is a heating fuel for me; the only plastic I can't burn is the plastic that gets too muddy to burn.
- I have so little waste plastic; it's not worth my time to haul it anywhere except the burn barrel. We have a very small amount of waste plastic monthly.
- I have wrapped bales, which makes good quality feed. It is a big job to keep all the plastic cleaned up. I have a good ditch to burn it. I keep it 100% cleaned up.
- I think burning plastic in outdoor furnaces is a good idea if the smoke does not make a problem with neighbors. We have to add sulfur to our fields because we don't get enough in the air form smoke. Recycling is ok if it is practical. I don't think we should use tax dollars to make it work.
- I think I all should be burned.
- I use waste plastic to heat my house in my outdoor furnace.
- This works well for me. Every week or 2 we take household garbage and barn garbage, bale wraps, twine, and bagger bags/cuts to the burn dump.
- Used to burn it.

Appendix C – Quantitative Summary of Responses by Question

Wisconsin Agricultural & Boat Plastic Waste Study

1. In 2014 did you generate any waste agricultural plastic or boat wrap?

Yes 73% No 27% If “No” is selected, please STOP and return the questionnaire

2. For each material listed below, please indicate the pounds of waste generated per year at your facility.

Note: Silo bags are generally 200-400 lbs. Bunker covers can be 300-500 lbs. A boat produces about 14 lbs. of shrink wrap waste per year. 250 feet of 4mm Twin-Wall Corrugated Plastic 8' Wide HDPE for greenhouse cover is about 2 lbs.

	None	500 or less	501-1,000	1,001-2,000	2,001-5,000	Over 5,000
Silage bags	57%	17%	10%	8%	6%	3%
Bale wrap	63%	21%	8%	4%	2%	1%
Bunker silo cover	79%	6%	4%	4%	5%	3%
Mulch film (produce, small fruit)	94%	5%	1%	0%	0%	0%
Greenhouse flexible plastic covers	87%	10%	2%	1%	0%	0%
Boat wrap	93%	4%	1%	1%	0%	0%
Bale twine	50%	43%	5%	0%	1%	0%
Bale netting	61%	32%	5%	1%	0%	0%
Pesticide containers	62%	37%	1%	0%	0%	0%
Farm plastic containers	43%	53%	3%	1%	0%	0%
Other chemical containers	72%	27%	1%	0%	0%	0%
Greenhouse rigid plastic panels	97%	2%	0%	0%	0%	0%
Other, specify See Appendix B	91%	7%	1%	1%	0%	0%

3. Describe the disposal systems(s) you currently use in your operation.

(Percentages are based on the number of respondents who said they generate each type of waste plastic)

	Landfill	Repurpose	Recycle	Bury	Burn	Store for Future
Silage bags	64%	4%	10%	3%	31%	3%
Bale wrap	65%	2%	10%	1%	28%	2%
Bunker silo cover	66%	4%	9%	3%	25%	6%
Mulch film (produce, small fruit)	72%	5%	14%	3%	11%	2%
Greenhouse flexible plastic covers	60%	23%	21%	1%	6%	13%
Boat wrap	60%	12%	28%	0%	8%	5%
Bale twine	51%	11%	7%	1%	39%	3%
Bale netting	58%	1%	7%	1%	37%	1%
Pesticide containers	43%	4%	40%	0%	15%	2%
Farm plastic containers	33%	21%	42%	0%	13%	7%
Other chemical containers	38%	11%	43%	0%	14%	3%
Greenhouse rigid plastic panels	69%	9%	9%	0%	9%	7%
Other, specify See Appendix B	70%	20%	24%	0%	7%	15%

4. How much does your disposal method cost per year?

Nothing	Under \$50	\$50-99	\$100-499	\$500-999	\$1,000+
32%	15%	8%	19%	13%	12%

5. Will your amount of waste plastic film generation change in the future?

Stay the same	Decrease	Increase
70%	9%	21%

6. How often do you generate waste plastic?

(Percentages are based on the number of respondents who said they generate each type of waste plastic)

	Weekly	Monthly	Each 2-3 Months	Each 4-6 Months	Each 7-12 Months	1 Year +
Silage bags	53%	17%	7%	8%	6%	9%
Bale wrap	57%	17%	6%	8%	3%	7%
Bunker silo cover	61%	19%	2%	6%	3%	10%
Mulch film (produce, small fruit)	10%	6%	6%	10%	21%	48%
Greenhouse flexible plastic covers	2%	2%	2%	3%	15%	75%
Boat wrap	12%	7%	12%	9%	20%	40%
Bale twine	64%	19%	6%	3%	3%	6%
Bale netting	56%	20%	7%	6%	5%	6%
Pesticide containers	3%	9%	12%	18%	24%	33%
Farm plastic containers	21%	34%	17%	10%	8%	10%
Other chemical containers	10%	27%	16%	11%	16%	20%
Greenhouse rigid plastic panels	9%	5%	7%	2%	16%	60%
Other, specify See Appendix B	26%	15%	8%	8%	13%	30%

7. How far would you be willing to transport your waste plastic to a collection location for free disposal?

Not willing	< than 5 miles	< than 10 miles	< than 25 miles	< than 50 miles	<100 miles
15%	17%	32%	27%	7%	1%

8. Would you be willing to pay someone to bale and transport your waste plastic film off property for a price monthly?

If it was free	Under \$50	\$50-99	\$100-249	\$250-499	\$500+
55%	30%	11%	3%	1%	0%

9. Which of the following best describes how long, on average, you store plastic waste before disposing/recycling it?

Under 1 month	One month	2-3 months	4-6 months	7-12 months	1+ years
41%	21%	15%	9%	6%	7%

10. Please tell us how you feel about waste plastic and the option of recycling this material in the future.

See Appendix B

Demographics. (for statistical purposes only)

11. Gender:	Male	Female				
	85%	15%				
12. Age:	18-24	25-34	35-44	45-54	55-64	65 and older
	0%	8%	12%	28%	37%	14%
13. Years in business	Less than 5 yrs.	5 to 9 yrs.	10 to 14 yrs.	15 to 19 yrs.	20 to 24 yrs.	25 or more yrs.
	4%	7%	9%	8%	10%	62%
14. Education	Less than high school	High school diploma	Some college/tech	Tech college graduate	Bachelor's degree	Graduate or professional degree
	8%	24%	25%	17%	20%	5%

Appendix C1– Quantitative Summary of Responses by Question – Non-Organic Dairies

Wisconsin Agricultural & Boat Plastic Waste Study

1. In 2014 did you generate any waste agricultural plastic or boat wrap? n=774

Yes 84% No 16% If “No” is selected, please STOP and return the questionnaire

2. For each material listed below, please indicate the pounds of waste generated per year at your facility.

Note: Silo bags are generally 200-400 lbs. Bunker covers can be 300-500 lbs. A boat produces about 14 lbs. of shrink wrap waste per year. 250 feet of 4mm Twin-Wall Corrugated Plastic 8' Wide HDPE for greenhouse cover is about 2 lbs.

	None	500 or less	501-1,000	1,001-2,000	2,001-5,000	Over 5,000
Silage bags n=644	40%	21%	14%	11%	11%	4%
Bale wrap n=644	55%	28%	9%	5%	2%	1%
Bunker silo cover n=644	66%	8%	6%	2%	8%	5%
Mulch film (produce, small fruit) n=644	97%	2%	1%	0%	0%	0%
Greenhouse flexible plastic covers n=644	99%	1%	0%	0%	0%	0%
Boat wrap n=644	98%	2%	0%	0%	0%	0%
Bale twine n=644	35%	56%	7%	1%	1%	1%
Bale netting n=644	52%	40%	6%	1%	0%	0%
Pesticide containers n=644	56%	43%	1%	1%	0%	0%
Farm plastic containers n=644	29%	65%	5%	1%	0%	0%
Other chemical containers n=644	64%	34%	1%	0%	0%	0%
Greenhouse rigid plastic panels n=644	100%	0%	0%	0%	0%	0%
Other, specify See Appendix B n=644	98%	2%	0%	0%	0%	0%

3. Describe the disposal systems(s) you currently use in your operation.

(Percentages are based on the number of respondents who said they generate each type of waste plastic)

Totals exceed 100%. Multiple choices permitted

	Landfill	Repurpose	Recycle	Bury	Burn	Store for Future
Silage bags n=421	60%	4%	10%	17%	36%	3%
Bale wrap n=333	59%	2%	9%	4%	35%	2%
Bunker silo cover n=229	64%	3%	10%	2%	28%	7%
Mulch film (produce, small fruit) n=41	59%	0%	15%	3%	22%	2%
Greenhouse flexible plastic covers n=32	72%	6%	6%	5%	19%	6%
Boat wrap n=30	70%	0%	10%	0%	23%	0%
Bale twine n=432	48%	12%	6%	0%	44%	2%
Bale netting n=310	53%	0%	6%	2%	43%	1%
Pesticide containers n=306	37%	4%	41%	1%	21%	2%
Farm plastic containers n=441	30%	21%	43%	1%	16%	6%
Other chemical containers n= 231	33%	13%	43%	0%	16%	4%
Greenhouse rigid plastic panels n=25	76%	0%	8%	0%	20%	0%
Other, specify See Appendix B n=29	69%	10%	17%	0%	21%	7%

4. How much does your disposal method cost per year? n=633

Nothing	Under \$50	\$50-99	\$100-499	\$500-999	\$1,000+
33%	14%	7%	17%	14%	15%

5. Will your amount of waste plastic film generation change in the future? n=633

Stay the same	Decrease	Increase
69%	10%	21%

6. How often do you generate waste plastic?

(Percentages are based on the number of respondents who said they generate each type of waste plastic)

	Weekly	Monthly	Each 2-3 Months	Each 4-6 Months	Each 7-12 Months	1 Year +
Silage bags n=392	56%	18%	6%	6%	5%	9%
Bale wrap n=229	59%	18%	6%	7%	3%	7%
Bunker silo cover n=221	66%	20%	1%	5%	2%	7%
Mulch film (produce, small fruit) n=22	14%	5%	5%	5%	5%	68%
Greenhouse flexible plastic covers n=10	10%	10%	0%	0%	0%	80%
Boat wrap n=11	9%	18%	0%	9%	9%	55%
Bale twine m=407	68%	19%	4%	2%	2%	4%
Bale netting n=294	59%	22%	7%	4%	4%	4%
Pesticide containers n=262	3%	5%	10%	18%	26%	38%
Farm plastic containers n=415	22%	37%	17%	9%	7%	8%
Other chemical containers n=212	11%	27%	16%	9%	18%	20%
Greenhouse rigid plastic panels n=7	14%	14%	0%	14%	29%	29%
Other, specify See Appendix B n=14	29%	29%	7%	7%	7%	21%

7. How far would you be willing to transport your waste plastic to a collection location for free disposal? n=633

Not willing	< than 5 miles	< than 10 miles	< than 25 miles	< than 50 miles	<100 miles
20%	17%	33%	25%	5%	0%

8. Would you be willing to pay someone to bale and transport your waste plastic film off property for a price monthly? n=619

If it was free	Under \$50	\$50-99	\$100-249	\$250-499	\$500+
52%	30%	12%	4%	2%	0%

9. Which of the following best describes how long, on average, you store plastic waste before disposing/recycling it? n=635

Under 1 month	One month	2-3 months	4-6 months	7-12 months	1+ years
45%	22%	17%	9%	4%	4%

10. Please tell us how you feel about waste plastic and the option of recycling this material in the future.

See Appendix B

Demographics. (for statistical purposes only)

11. Gender: n=634	Male 90%	Female 10%				
12. Age: n=635	18-24 0%	25-34 10%	35-44 13%	45-54 31%	55-64 35%	65 and older 12%
13. Years in business n=639	Less than 5 yrs. 3%	5 to 9 yrs. 7%	10 to 14 yrs. 8%	15 to 19 yrs. 6%	20 to 24 yrs. 9%	25 or more yrs. 68%
14. Education n=613	Less than high school 7%	High school diploma 30%	Some college/tech 27%	Tech college graduate 19%	Bachelor's degree 14%	Graduate or professional degree 1%

Appendix C2– Quantitative Summary of Responses by Question – Organic Dairies

Wisconsin Agricultural & Boat Plastic Waste Study

1. In 2014 did you generate any waste agricultural plastic or boat wrap? n=172

Yes 92% No 8% If “No” is selected, please STOP and return the questionnaire

2. For each material listed below, please indicate the pounds of waste generated per year at your facility.

Note: Silo bags are generally 200-400 lbs. Bunker covers can be 300-500 lbs. A boat produces about 14 lbs. of shrink wrap waste per year. 250 feet of 4mm Twin-Wall Corrugated Plastic 8' Wide HDPE for greenhouse cover is about 2 lbs.

	None	500 or less	501-1,000	1,001-2,000	2,001-5,000	Over 5,000
Silage bags n=157	49%	28%	11%	9%	1%	2%
Bale wrap n=157	29%	29%	19%	12%	6%	5%
Bunker silo cover n=157	90%	8%	0%	1%	0%	0%
Mulch film (produce, small fruit) n=157	95%	4%	1%	1%	0%	0%
Greenhouse flexible plastic covers n=157	96%	4%	0%	0%	0%	0%
Boat wrap n=157	99%	1%	0%	0%	0%	0%
Bale twine n=157	40%	52%	6%	1%	1%	0%
Bale netting n=157	34%	52%	10%	4%	0%	0%
Pesticide containers n=157	98%	1%	1%	0%	0%	0%
Farm plastic containers n=157	38%	61%	1%	0%	1%	0%
Other chemical containers n=157	89%	11%	0%	0%	0%	0%
Greenhouse rigid plastic panels n=157	100%	0%	0%	0%	0%	0%
Other, specify See Appendix B	96%	5%	0%	0%	0%	0%

3. Describe the disposal systems(s) you currently use in your operation.

(Percentages are based on the number of respondents who said they generate each type of waste plastic)

Totals exceed 100%. Multiple choices permitted

	Landfill	Repurpose	Recycle	Bury	Burn	Store for Future
Silage bags n=89	78%	2%	13%	1%	13%	6%
Bale wrap n=117	81%	2%	12%	1%	13%	3%
Bunker silo cover n=21	81%	0%	10%	0%	5%	5%
Mulch film (produce, small fruit) n= 14	79%	0%	21%	0%	7%	0%
Greenhouse flexible plastic covers n=11	82%	0%	18%	0%	9%	0%
Boat wrap n=8	88%	0%	0%	0%	13%	0%
Bale twine n=96	60%	6%	10%	1%	31%	3%
Bale netting n=101	71%	1%	8%	1%	23%	1%
Pesticide containers n=14	71%	0%	7%	0%	21%	0%
Farm plastic containers n=90	41%	16%	41%	0%	7%	7%
Other chemical containers n=21	48%	19%	43%	0%	5%	0%
Greenhouse rigid plastic panels n=5	80%	0%	0%	0%	20%	0%
Other, specify See Appendix B n=7	71%	0%	0%	0%	14%	14%

4. How much does your disposal method cost per year? N=153

Nothing	Under \$50	\$50-99	\$100-499	\$500-999	\$1,000+
36%	10%	7%	22%	17%	9%

5. Will your amount of waste plastic film generation change in the future? n=157

Stay the same	Decrease	Increase
77%	3%	21%

6. How often do you generate waste plastic?

(Percentages are based on the number of respondents who said they generate each type of waste plastic)

	Weekly	Monthly	Each 2-3 Months	Each 4-6 Months	Each 7-12 Months	1 Year +
Silage bags n=88	42%	17%	8%	15%	9%	9%
Bale wrap n=111	58%	14%	7%	9%	6%	5%
Bunker silo cover n=17	24%	18%	12%	18%	6%	24%
Mulch film (produce, small fruit) n=7	14%	0%	14%	0%	43%	29%
Greenhouse flexible plastic covers m=7	14%	14%	0%	0%	0%	71%
Boat wrap n=1	100%	0%	0%	0%	0%	0%
Bale twine n=86	63%	17%	5%	5%	6%	5%
Bale netting n=98	57%	16%	4%	9%	7%	6%
Pesticide containers n=8	38%	25%	0%	0%	38%	0%
Farm plastic containers n=81	28%	42%	17%	6%	5%	1%
Other chemical containers n=18	17%	44%	17%	11%	11%	0%
Greenhouse rigid plastic panels n=1	100%	0%	0%	0%	0%	0%
Other, specify See Appendix B n=5	40%	0%	0%	0%	0%	60%

7. How far would you be willing to transport your waste plastic to a collection location for free disposal? n=155

Not willing	< than 5 miles	< than 10 miles	< than 25 miles	< than 50 miles	<100 miles
6%	21%	34%	30%	8%	2%

8. Would you be willing to pay someone to bale and transport your waste plastic film off property for a price monthly? n=151

If it was free	Under \$50	\$50-99	\$100-249	\$250-499	\$500+
47%	38%	13%	2%	1%	0%

9. Which of the following best describes how long, on average, you store plastic waste before disposing/recycling it? n=153

Under 1 month	One month	2-3 months	4-6 months	7-12 months	1+ years
35%	21%	19%	12%	9%	4%

10. Please tell us how you feel about waste plastic and the option of recycling this material in the future.

See Appendix B

Demographics. (for statistical purposes only)

11. Gender: n=155	Male 90%	Female 10%				
12. Age: n=155	18-24 2%	25-34 8%	35-44 19%	45-54 25%	55-64 37%	65 and older 10%
13. Years in business n=156	Less than 5 yrs. 4%	5 to 9 yrs. 7%	10 to 14 yrs. 10%	15 to 19 yrs. 10%	20 to 24 yrs. 15%	25 or more yrs. 55%
14. Education n=146	Less than high school 22%	High school diploma 25%	Some college/tech 16%	Tech college graduate 17%	Bachelor's degree 12%	Graduate or professional degree 7%