Compost Facility Survey – 2012

The Solid & Hazardous Waste Education Center (SHWEC) recently conducted a survey of the compost facilities licensed by the Wisconsin Department of Natural Resources (DNR). The composting industry continues to grow in Wisconsin. The number of facilities has grown from 168 in 2007, when SHWEC last conducted this survey to 239 facilities today. These operations transform yard materials, food scraps, landscape debris and other compostable materials into a valuable compost product used across the state.

Survey Details

The survey was conducted using an online format, which asked facility managers to respond to a total of 28 questions. Contact information, including email address, for the compost facility license holders was obtained from the DNR and it was this list that was used to solicit survey respondents. Facility managers were sent an initial email explaining the purpose of the survey and how the resulting information was to be shared. Three reminder emails were sent at one-week intervals following the initial request. A total of 97 responses were received for a 41% response rate. Publically owned facilities were more likely to respond than privately owned sites. Based upon DNR list 23% of sites are privately licensed while private sites only comprised 15% of the survey respondents. There were also a number of licensed sites that reported that they were not doing any composting, but rather serving as a collection point and transferring collected materials to other compost facilities.

Facility size and volume handled

Facilities were asked to describe the size of their site as well as the volume of material accepted on an annual basis. Responses to site size ranged from very small 0.25 acres to quite large at 80 acres. The average size was 5.4 acres. There was an equally wide variation in the volume of materials accepted. The volume of material accepted ranged from less then 50 cubic yards per year to 60,000 yards of materials with an average of 6,300 cubic yards per site.

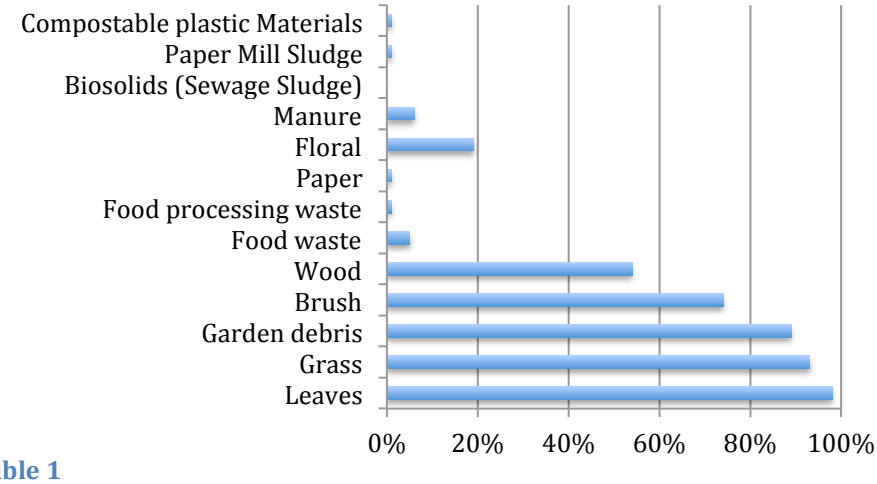


Table 1

The types of feedstocks accepted at compost sites were also reported. Respondents were given the choice of 13 different materials as well as the option to write in additional items. The results are presented in Table 1.

Compost Operations

We were also interested in various management strategies in practice at compost sites. Fifty-two percent of sites reported using turned windrows as their primary method of composting. The next most common practice was to compost in static piles, which is being used at 26% of compost sites. Of note there is still one site that is utilizing the "Ag-Bag" aerated pile compost system. Table 2 presents the results.

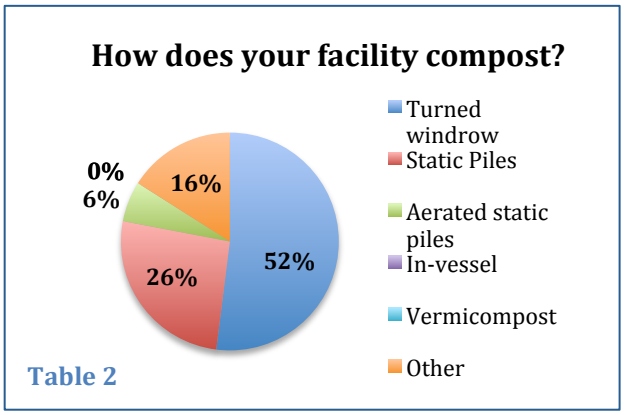


Table 2

Temperature is one of the basic process control measurements commonly made by compost facilities. In order to better understand how facilities are managing their sites we asked how often compost pile temperature is monitored. Table 3 shows the results.

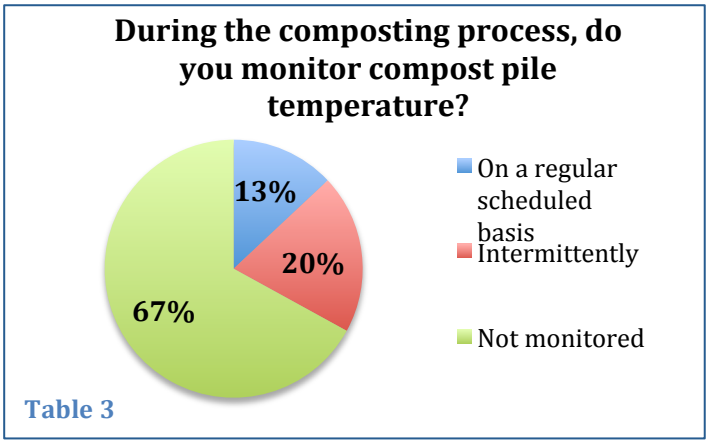


Table 3

Based upon this information one can infer the majority of sites are minimally managed. This is expected to change, as the newly revised state regulations will require compost sites to monitor and record compost pile temperatures.

There were also 13% of sites indicating performing testing on their finished compost. Those indicating they test were asked a follow up question regarding the parameters they are testing for. The results are presented in Table 4.

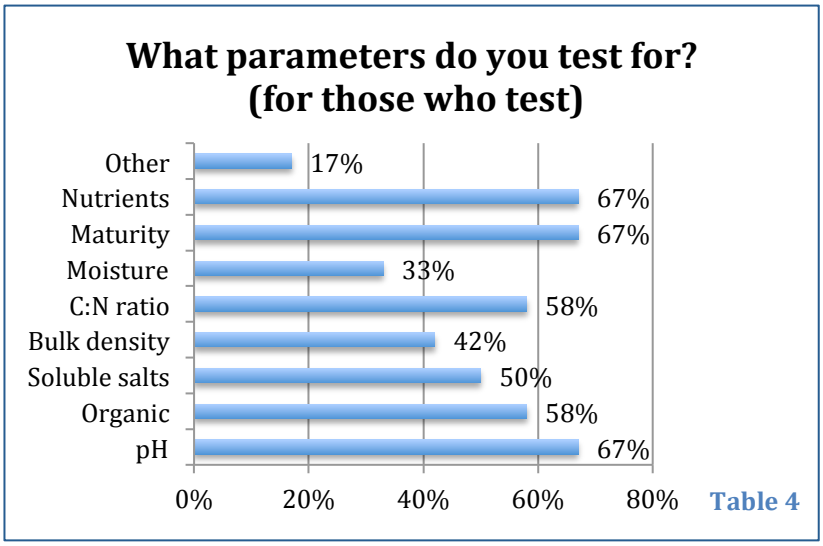


Table 4

Revenue -Compost sales and tip fees

Compost facilities can generate revenue not only from the sale of compost products, but also from tip-fees paid by facility users. In the case of tip-fees, 13% of site reported charging fees on a per ton or per truckload basis. Those charging by the ton ranged from $3/ton to $30/ton. For those charging by the truckload fees were between $2 and $40.

There are still more compost facilities that are giving away or not selling the compost they make. Only 23% of the facilities reported selling their product in either bulk or bagged form. On the other hand 65% of facilities reported using the compost they make for their own use. This includes municipal projects (42%) and creating soil blends (22%).

For those selling in bulk form prices ranged from $1 per cubic yard up to $38 per cubing yard. The average price was $13.09 per cubic yard. Those selling compost in bagged form (5% of respondents) reported an average selling price of $7.19 per bag with prices ranging between $3 and $14. All facilities selling in bags also reported bagged compost is <25% of the total volume of compost they are selling. Bulk sales still make up the major portion of compost sales in Wisconsin.

Training needs and new compost regulations in Wisconsin

The final two questions on the survey focused upon the educational needs of compost facility operators. 72% of respondents indicated they were interested in training opportunities, including, additional information on the newly revised state regulations for compost sites, the basics of composting, as well as the marketing of compost products.

So what does an "average" compost facility look like in Wisconsin?

An average facility would have two employees and be about five and one-half acres in size. The site would receive about 6,300 cubic yards of leaves, grass clippings and garden debris each year. The material would predominantly be coming from residential sources with no tipping fee being charged to the users. The materials would be placed into windrows in most cases, but some would be left in static piles to decompose over the course of 16 months. The resulting compost would then be used by the facility for municipal projects or given away to residents. Occasionally some of the compost product would be screened and tested before it was sold in bulk form at $13 per cubic yard.

Changes since 2007 Survey

There have been some changes during the past 5 years. The percentage of facilities monitoring compost piles for temperature has risen from 20% in 2007 to 33% in 2012. There has been change on the revenue side of operations as well. The number of facilities charging a tip-fee has risen from 6% in 2007 to 13% in 2012. Also, a few more composters are getting paid for the compost they make. In 2007 only 19% reported selling the compost they make compared to 23% in this survey. The average price received for compost products has also changed from an average of $9.22 per cubic yard in 2007 to $13.09 per yard today. Table 5 represents some of the changes that have occurred.

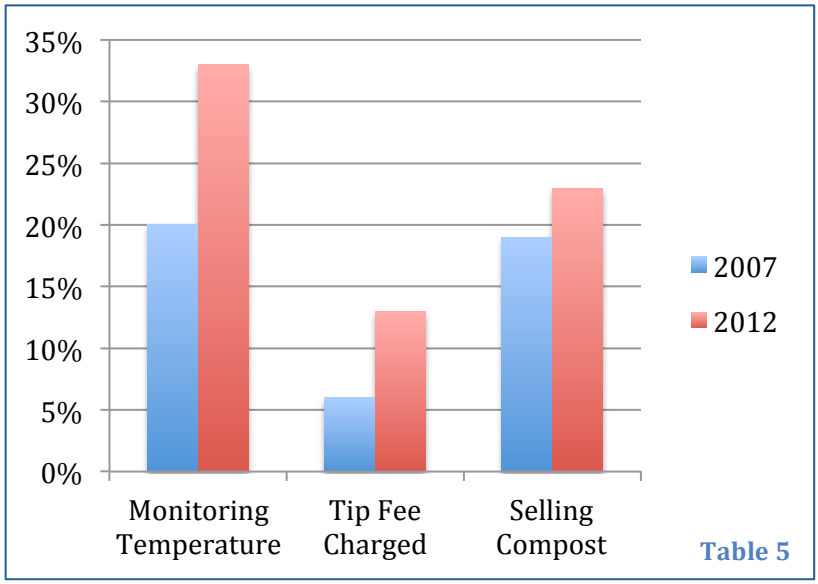


Table 5

Additional Questions and Responses from Survey

Who do you receive materials from?

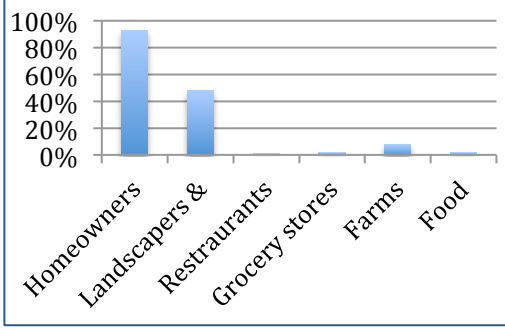


Table 6

Do you sell your compost?

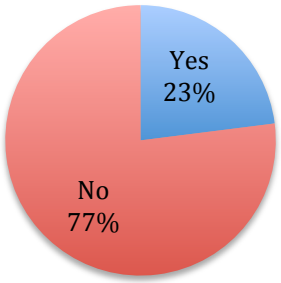


Table 7

Does your facility accept compostable plastic bags?

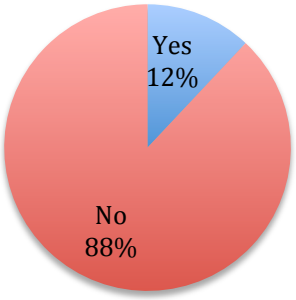


Table 8

How is the compost sold? (only those selling compost)

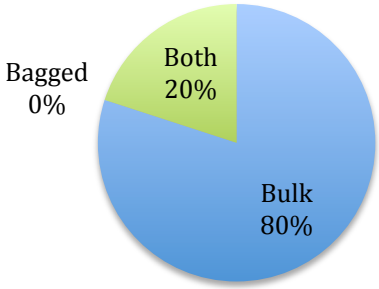


Table 9

Do you charge a tipping fee?

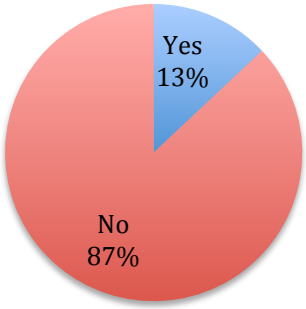


Table 10

Do you use the compost you make on your own site(s)?

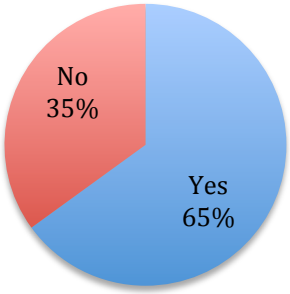
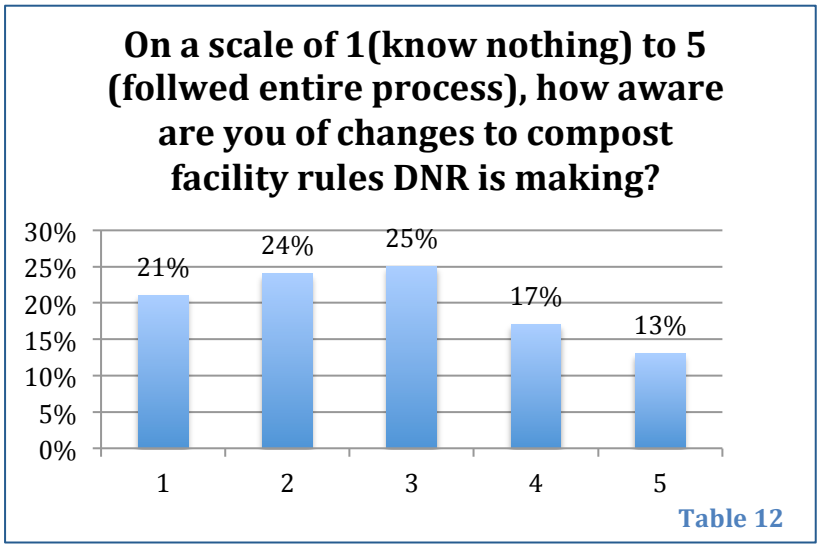
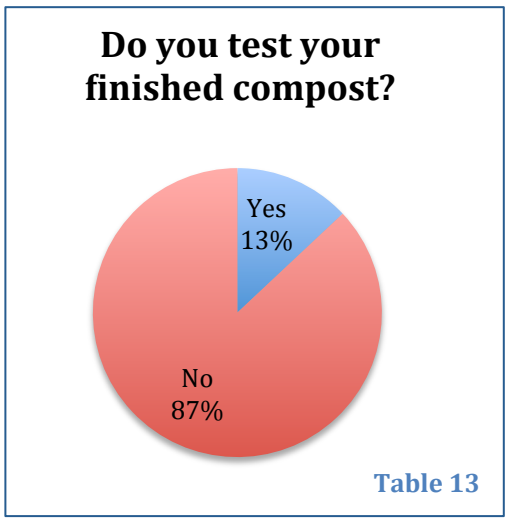


Table 11





Further information regarding this survey can be obtained by contracting SHWEC Recycling Specialist Joe Van Rossum at joseph.vanrossum@ces.uwex.edu or 608-262-0936. SHWEC also provides support and resources to assist large-scale compost facility operators. Jonathan Rivin at UW-Stevens Point (Jonathan.Rivin@uwsp.edu) along with Joe Van Rossum based in Madison lead this effort.

By Joe Van Rossum, SHWEC Recycling Specialist dated 8/2012

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