

2009-10 PROGRAM WORK TEAM ANNUAL REPORT

Managing Wastes: Composting and Land Application

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Activities, Accomplishments, Outcomes and Impacts:

The Managing Wastes PWT continues to have formal and informal interface to engage diverse stakeholders. Goals are identified and stakeholder interaction occurs through research projects and outreach. Livestock farmers; compost producers; government agencies, other universities and colleges, NGOs, private consultants, waste management companies, as well as Cornell Cooperative Extension educators and Cornell faculty and departments are represented on the PWT and work with CWMI to continue to address waste related issues. We also participate in other related PWT's to see if there are other collaborations and waste related needs with which we can assist.

Over the last several years NYSDEC has been working with CWMI and many others to develop the next ten years Solid Waste Management Plan (SWMP) for NYS. The SWMP has not yet been accepted but is in the process of raising awareness of what needs to be tackled next. CWMI has been moving forward with implementation of programs that will help meet these goals. Building additional infrastructure to manage more organics is a priority. We work with farms and municipalities to consider expanding the feedstock they accept and the CWMI Compost Facility Map helps facilitate the movement of organic feedstock to compost facilities; over 10 new facilities are managing more organics.

CWMI worked with DEC and EPA on a food scrap webinar series to address collection, transportation, composting, feeding and digestion options for diversion of another 20% of the waste stream. We worked with CCE and solid waste managers to hold workshops on home to medium-scale composting to encourage organic waste management at the point of generation (i.e. homes, institutions, businesses). In 2009, college presidents were asked to sign sustainability contracts resulting in increased information requests. Cornell's organics management case study on Farm Services composting infrastructure was expanded and posted on our website to lead by example.

Marketing and exchange of value-added products was identified as a need in past years. In collaboration with Northeast SARE and Northeast Recycling Coalition, CWMI coordinated and participated in two Organics marketing workshops in NYS and two in NJ. The workshops reached over 200 people and in NY we had waiting lists. CWMI will offer the 6-hour program with multiple instructors at least one more time in New York to meet the current demand. The stumbling economy may make people look more closely at the value of "resources" they generate and their potential income.

Effectively managing and reducing waste can turn unwanted waste products into resources while avoiding disposal costs. Interest continues in the use of organic residuals for atypical agriculture uses, complying with CAFO rules and concerns about nutrient management, decline in rendering services, and increase in organic production; there is demand for research and information on organic residual management. Adding value to these residuals is a good option for manure, meat residuals, mortality, food and yard waste and industrial residuals, with the potential to realize the value of amendments for use in agriculture/horticulture production, energy production, erosion control, as nutrient and carbon sources. For example, 500 pounds of Milkbone dust is diverted to a compost facility weekly instead of a landfill.

Our continued interactions with community stakeholders (e.g., through gardening events and discussion forums in NYC and Ithaca, urban farming workshops in Buffalo, responding to information requests by email and phone) have clearly indicated a need for comprehensive educational programs addressing diverse topics, including: 1) Training on site assessment and soil sampling and testing protocols; 2) Information about and access to reliable, affordable, certified soil testing labs; 3) Simple guidelines for interpretation of soil test results that allow for site-specific considerations; 4) Assessment of

contaminants in municipal compost and available soil/fill, and access to these materials; and 5) Possible liability issues or closure or avoidance of gardens if soil tests reveal contamination. Additional fact sheets, workshops, etc. to address these topics are currently under development to augment existing resources available at <http://cwmi.css.cornell.edu/soilquality.htm>. A new program at CWMI is helping gardeners to understand how to interpret metal contamination in soils. Two fact sheets have been developed to help gardeners interpret contamination levels in garden soils, with suggestions for measures to protect human health. Two hundred city garden soils were analyzed and results are being interpreted.

Managing mortalities through composting continues to be a focal point for research and outreach. Because state budgets were cut, a DEC CAFO training seminar was canceled twice, CWMI offered to get the mortality information out to regulators in a closed webinar. Thanks to Cornell's IT infrastructure it cost all of \$45 to reach and dialog with 40 NYS regulators. Composting as a management tool has its place in CAFO plans, emergency response, disease outbreak and disasters and routine mortality. CWMI works with 20 universities to improve management of routine and mass mortality. Although webinars do not replace some of the hands-on and person-to-person contact, CWMI has planned and been involved in six mortality/ butcher waste/ mass casualty webinars. We are working with the national eXtension web site on webinars and to link appropriate resources. CWMI collaborated with 8 states in the development of two new mortality resources addressing mortality management in the southeast and in arid western states. A resource called the Space It Takes is posted on the CWMI website to help butchers in their compost planning. Drug degradation research is helping answer questions about how barbiturates and non-steroidal anti-inflammatory drugs used in livestock production act in the environment and affect biosecurity. Through collaborative work with Embrapa (USDA equivalent in Brasil), CWMI traveled to Brasil to teach and help implement mortality composting.

CWMI collaborates with other Cornell departments to play a major role, particularly regarding generation and use of wastes in agriculture and communities. CWMI delivers research-based knowledge around the world. Our continuously updated web site (cwmi.css.cornell.edu) received over 4,319,292 visits. We share key information via a 2,550-person e-mail list. CWMI replies to over 240 requests for information per month via e-mail and phone. Fifty videos and documents are archived on eCommons where 4,495 people visited. CWMI extended their reach by working with Extension educators from more than 40 counties in 2010.