

Food for AD

Food Scraps Law Impact on Farms and Processors

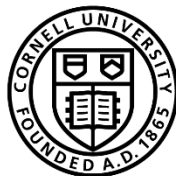
Food waste makes up 18 percent of NYS solid waste stream. The vast majority of this food is disposed of in landfills where it anaerobically decomposes producing and releasing methane (CH₄), a potent greenhouse gas (GHG) with a global warming potential of about 34X that of carbon dioxide (CO₂). When food is landfilled or otherwise wasted, all the energy, water, nutrients, and labor it took to produce that food is wasted. If global food waste were a country, it would be the third largest emitter of GHG after the United States and China.

The Food Donation and Food Scrap Recycling Law, passed by New York State, will require large food scraps generators (defined as generating 2 tons per week or more) to first separate and donate edible food, and then recycle all remaining food scraps if they are located within 25 miles of an organics recycler. Generators may include restaurants, grocery stores, hotels and motels, colleges and universities, malls, event centers, food processors, etc.

The New York State Department of Environmental Conservation has estimated that this law could keep more than 250,000 tons of food out of landfills annually. The Law codifies the food waste hierarchy as part of state law. Any wholesome, edible food should be rescued for those in need. Any remaining food scraps should then be separated and beneficially used, or recycled, as appropriate. Examples include animal feed, recovery of the energy and nutrients in anaerobic digestion, and nutrient and organic matter recovery through composting. These options keep the organics out of landfills and provide as much benefit to society as possible.

Existing dairy farms with anaerobic digestion (AD) capacity, and candidate farms for future AD system implementation, that have ability to also recycle nutrients for growing field crops on their farms or willing to adopt technology to condense crop important nutrients post-digestion and export from the farm, would be considered ideal choices for organic recycling. The steady supply of dairy manure with its buffering capacity stabilizes the AD process, making manure based digesters fed substantial amounts of food waste a reliable way to maximize food waste benefits after human and animal food needs are met. Renewable energy can be recovered, and mining of finite phosphorous and development of nitrogen fertilizers will be reduced as the nutrients are recycled.

The additional volume of the organics needs to be considered by the farm as well as the resulting reduction in the hydraulic retention time, the potential for contaminants and the added nutrients that may compromise a comprehensive nutrient management plan. In addition, those farms participating in renewable natural gas for transportation may have their price of that gas compromised by the addition of food waste into their AD.



Brewers and/or distillers grain is a growing food processing waste source in NYS. There is the potential that this material can be recycled as part of the dairy cow diet. Both food processors and farmers need to understand the opportunities and challenges that the Food Scraps Law presents as well as any specific environmental regulations that may also apply.

The PRO-DAIRY Dairy Environmental Systems Team (DEST) will work to educate dairy farms with AD, those farms with the potential for AD, and those farms considering brewers residuals as cattle feed on the advantages and disadvantages of participation in food recycling for dairy cow nutrition, energy and crop nutrient recovery. The DES team has a long-term and continuing relationship with most dairy farms with AD (and those who are candidate farms) and extensive knowledge of their operations. Workshops and webinars will be held to provide guidance in the potential for participation. A list of those farms with an AD willing to participate will be provided. Additional information will be prepared to inform those farms that now have the potential for AD.

Working with existing sources the DEST will compile food waste processing streams and develop methods that can be used to determine if the sources produce the volumes that apply to the Law. Information will be developed and delivered describing the options both farms and food processors have in complying with the Law. DEST will also develop and deliver information describing any additional regulations that may apply as food waste options are implemented on farms. This information will help both farms and the food processors comply and be delivered through direct communication, PRO-DAIRY e-alerts, fact sheets, and case studies on the PRO-DAIRY website, conferences/workshops, and on-farm tours and demonstrations.