Environmental Healthcare: Reducing Cost and Waste While Helping the Environment

Have you ever thrown food away? The answer is most likely yes. And do you know what happens to it? Each year more than 90 percent of food scraps in United Stated are sent to landfills. Food production in America requires substantial costs, as well as significant human and natural resources. Fifty percent of the nation's land resources, 80 percent of U.S. freshwater consumption and 10 percent of the nation's energy budget is dedicated to the production and distribution of food. Astonishingly, up to 40 percent of all food ends up in landfills, with a value of $165 billion each year. Food waste is the single largest component of U.S. municipal waste and accounts for almost 25 percent of methane gas emissions in the United States.

Healthcare providers are faced with tighter budgets while still needing to provide high levels of care to its residents. Reevaluating the handling of food waste may be worth considering. In 2015, the Environmental Protection Agency (EPA) announced the first-ever national food loss and waste goal for the United States, calling for a 50 percent reduction by 2030. The United States Department of Agriculture (USDA) and EPA will work together with businesses across the non-profit and private sector and local and state governments to reduce food and organic waste loss, improve food security and conserve our nation's natural resources. Improvements to food waste processing and recovery methods are under exploration as well as plans to build supportive infrastructures for the development of new products and energy resources from waste.

Statistics reveal that Americans are living longer as baby boomers, those born between 1946 and 1964, retire from the workforce. New York State mirrors the national aging trend with recent studies indicating that the number of individuals aged 65 and older in the state will grow from approximately 2.6 million in 2010 to 3.6 million in 2040, a nearly 40 percent increase. During this period the 85 and older population is also expected to increase by 48 percent. There are several implications of this changing demographic especially the need for healthcare services, assisted and congregate living facilities, which has and will continue to increase for the foreseeable future.

At the cornerstone of health, wellness and longevity is food and nutrition. Food and nutrition are an essential and ongoing cost for residential and assisted living facilities, healthcare, senior housing and aging in place programs. Following medical supplies and services and water consumption, food and its associated services is a costly line item and significant percentage of a facility's budget. Similar to medical services, the quality and cost of food and nutrition is closely monitored, continuously reviewed and modified to provide optimal nutritional support for clients. As this age demographic grows, facilities will increasingly be faced with the challenge of identifying cost effective methods of managing food and nutrition as well as adopting sustainable practices to manage food and organic waste.

Healthcare facilities are an energy intense facility type across the nation. The demand and necessity to provide premium comprehensive services overall at an affordable cost is challenging. Maintaining sustainable business practices at every level i.e., design, construction, operation, maintenance, client care and services will be essential to business viability. National averages show that hospitals and long term care facilities produce nearly three pounds of food waste per patient per day. In the case of medium to large facilities the volume of food waste generated can equate to several tons each week. In order to engage in cost effective, sustainable

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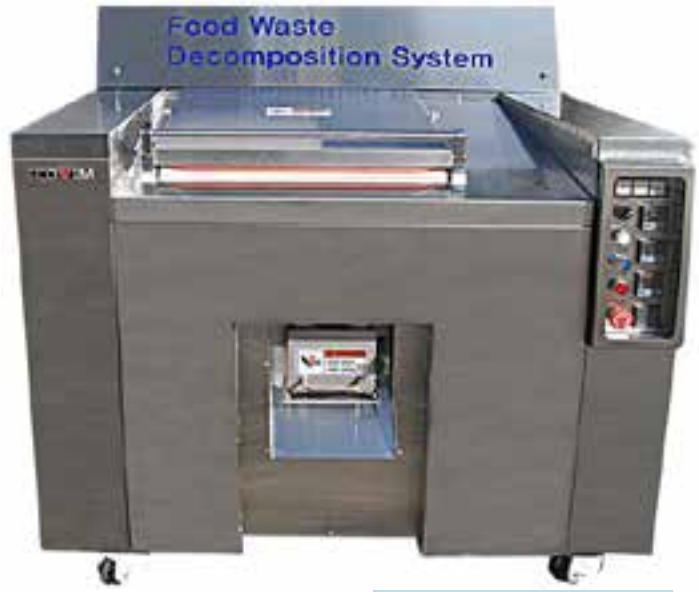

waste management practices, healthcare providers must understand their waste profile, i.e., volume of waste produced, natural resource consumption, transportation and sanitation costs, carbon footprint, energy efficiency (consumption/generation) and other related auxiliary costs.

Lifespans are lengthening while our quality of life diminishes as we generate insurmountable volumes of waste compromising our health, environment and our future. The story of this environmental impact is being told through greenhouse gas emissions, high carbon footprints and the reduction of clean water resources and fertile land. America is producing waste faster than it can be productively integrated without harm to the environment. We have, however, reached a critical mass and the landscape of the solid waste management industry is evolving. Clean energy investments and greenhouse gas reduction technologies along with waste recovery and incentives for waste reduction are proving their worth. Creating a sustainable food supply chain is a stated goal for New York State. This includes the management of resources to thwart hunger, climate change, resource scarcity and foster economic growth, while New York City recently announced mandates for large generators of food scraps to implement recovery systems for food and organic waste.

Innovation is at the helm of transforming waste to energy. The introduction of new products and services, creating new markets and identifying revenue streams will help stimulate a more sustainable economy. The science exists to support the conversion of food and organic waste into resources for use in road construction, landscaping and soil erosion, composting, biofuel, biochar, animal feed and other green infrastructure projects toward development of a clean, green and more circular economy.

For healthcare, planned communities and assisted living facilities where food service is an integral part of the client experience and a required expense, on-site food and organic waste reduction can be an efficient, cost saving measure worthy of consideration. The Ecovim™ food and organic waste reduction technology is such an innovation. The Ecovim™ processing capacity ranges from 66-3,300 pounds. Through a proprietary process utilizing dehydration and mechanical agitation, Ecovim™ units reduce and convert food and organic waste 70-90 percent on-site, within a 24 hour processing cycle. The units do not require water, enzymes, additives or wood chips for processing and can be installed indoors or outdoors (with protective covering). The resulting environmentally friendly by-products are soil amendment and potable water.

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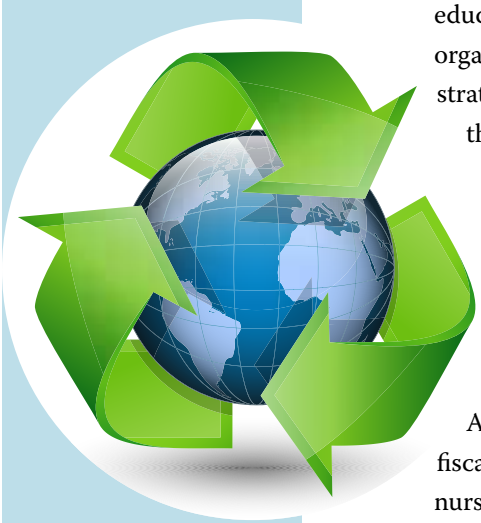
In 2014 the U.S. Army conducted an 18-month study using Ecovim™ units, following which the Ecovim™ installations became the technology choice for managing food waste on the U.S. Army base in Fort Lee, VA and then on to the U.S. Army base in Ft. Hood in Texas. The Ecovim™ technology was subsequently recognized by the U.S. Army Corps of Engineers. Ecovim™ is the only composting machine to comply with Executive Order 13514. The Ecovim™ technology is in use across the country in a number of industries including food service, hospitality, education, sports and entertainment arenas, government agencies and healthcare.



Nearly everyone can acknowledge throwing food scraps in the trash. Consumer education is effective to help raise awareness about the negative impact food and organic waste on the environment and communicate waste prevention and reduction strategies. Food producers, food service organizations and other participants along the food supply chain are shifting to observe prevention and reduction measures and environmentally safe practices. The solid waste industry is focused on green waste management as it seeks to implement sustainable waste guidelines, target and achieve zero-waste goals. Best practices for composting and organic waste recovery should be sustainable and cost effective. The safe and efficient recycling of food organic waste will lead to improved soil for future growth and climate change mitigation.

A study conducted by the Center for Governmental Research (CGR) about the fiscal sustainability of nursing facilities stated that 92 percent of county-owned nursing homes outside of NYC were losing money and that continuing to operate the homes in the future as they have been in the past is unsustainable. Seeking new sustainable practices could help to generate revenue to offset expenses in healthcare and assisted living communities. With planning and forward vision thoughtful recycling practices could feasibly provide compost to support crops for food and gardens serving their facilities.

As social responsibility and environmental stewardship are significant quality of life concerns, such considerations must be factored into planned living communities. Lifestyle choices such as living green, carbon footprint, social and environmental conservation are important to educated, conscious consumers. Sustainable food and organic waste management in healthcare industry and assisted living communities is a frontier that requires thoughtful attention and exploration.

Ecovim™ systems are provided by OWARECO, LLC (Organic Waste Reduction and Conversion) a New York based green waste management solutions company. Reducing, recycling and reusing food and organic waste is a cost effective, environmentally sustainable business practice that it can also provide a viable profit center as alternative green waste management industries are developed. For more information about the Ecovim™ technology, please visit ***www.owareco.com****.*