

ABSTRACT

IPRO 312: The Rotten IPRO Commercial-Scale Composting at IIT

Objective:

The team's purpose was to determine the best method on how to recycle organic waste generated by the university.

Basic Organization and Tasks:

The team was divided into four sub-groups; the sub-groups developed through defining what the integral components of the project are. Overall, the project can be viewed as three phases. Phase I involves documentation of research, data, case studies, and work progress presentations. Phase II includes proposing strategies and determining which plan of action is the most effective. Phase III is comprised of delivering the end result in a presentation and brochures.

Accomplishments:

The team has created a database of research, data, and inclusive case studies on composting. The team has increased awareness of organic waste recycling on campus by collaborating with Sodexo, IIT Facilities, and members of IIT administrative body. Through extensive investigation and analysis, a proposal for IIT has been developed based on municipal regulations, projected waste stream, and available technology. A program for organic waste recycling has been integrated into the plan for IIT's commitment to sustainability.

Critical Barriers and Obstacles:

Without a waste audit, the team's analysis has been working with estimates from Sodexo and IIT Facilities. Chicago city ordinances and regulations restrict the volume of compost and type of organic material that can be composted without a special permit. Considering today's economic situation, funding for the initial cost of equipment has been a concern. The degree of motivation for the IIT community to act locally and think globally will impact the overall success of organic waste recycling.

Conclusion:

An in-vessel unit (3 cubic yards per week capacity) is determined to be appropriate to the needs of IIT and meets composting standards set forth by the city of Chicago. The initial cost of an A700 Rocket Composter is estimated at \$52,500 including delivery and installation. The in-vessel unit will pay for itself within 5 years and result in \$10,000 per year in savings.

Next Steps:

The subsequent members of IPRO 312 will focus on implementing the proposed method to recycling organic waste generated by the university. In addition, applying for special permits from the city and procuring grants for the purchase of equipment will be necessary prior to installation. The next team will maintain contacts within the IIT community to ensure a collaborative effort once an organic waste recycling program is implemented.

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