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Abstract for SCARP Research

In collaboration with Graybill Processing, a feed mill and food waste recycling plant in Elizabethtown, PA, the potential use of black soldier flies as a means of processing various waste streams is being investigated. Primary research is focused on developing a system for the breeding, containment, and utilization of a black soldier fly colony for bioprocessing. While black soldier flies are commonly used on a small scale for personal waste processing, only one other group in the United States is known to be developing a system for use on a commercial scale. Current efforts are concentrated on developing a stable pilot colony that can be used as a model for the analysis of the feasibility of a large scale system. The goal is to use the qualitative information gathered from the development of the colony to produce a plan detailing how a larger colony might be grown and utilized. Additionally, quantitative measurements such as the amount of waste processed by the colony, the value of the byproducts of the processed waste (which include castings and mature grubs, which can be used as a livestock feed), and the cost of maintaining a colony will be used to determine whether Graybill Processing will pursue future development of this technology.