

# Compost Business in Montana

Currently three licensed commercial facilities, composting yard waste and bio-solids, produce approximately 42,000 tons of compost annually in Montana. Thirty municipal facilities, composting yard wastes, produce an additional 29,000 tons of compost annually. One facility opened in West Yellowstone in June 2003. That facility composts food waste and other municipal solid waste from Yellowstone National Park and the surrounding area. Backyard composting by individual homeowners is gaining in popularity in several communities.

## Composting methods

Turned Windrows are elongated piles that are turned regularly to control moisture, temperature and oxygen. Turning can be accomplished with a front-end loader or a specialized compost turner. The inside of the piles will reach 140 degrees F, even in below freezing weather. This method will produce finished compost in 12-24 months. The costs can be competitive with landfilling. This is the most common municipal composting design.

Aerated static piles differ from windrows, in that a network of perforated pipes under the piles accomplishes aeration. The piped air eliminates the need for pile turning. Aerated static piles are commonly used for composting treated sewage sludge, food waste, and high volumes of fresh grass clippings where aeration and temperature control are crucial. A bulking agent such as wood chips, yard waste, shredded paper, or sawdust is used to increase aeration and carbon content. Aerated static piles are a more expensive option than windrows, but may be necessary for communities that wish to compost sludge, food and yard waste.

In-Vessel systems are highly mechanized systems that produce compost very quickly, often in a few weeks. They are the most expensive option. The University of Montana in 2004 initiated a compost system at the campus food facility using an In-Vessel system. Leachate and wash solutions are disposed directly into the sewer system. The totally enclosed design of the In-Vessel system also eliminates pest concerns in the food facility.

Bioconversion is a relatively new process not currently in use in Montana. Anaerobic digestion is carried out in an enclosed tank. It produces a liquid organic fertilizer, methane gas, and by-products.

Home composting is gaining popularity across Montana. A backyard composting system can cost as much as several hundred dollars or as little as a few cents. Many companies market bins, barrels, and tumblers, each with an assortment of accessories.

