



Michigan Compost Markets

A project
to create
composting
opportunities

Agriculture/ Silviculture

Composted yard trimmings are finding favor with farmers and orchard operators as high quality compost becomes increasingly available. Many farmers are finding that they can make a profit from preparing compost on their own site with materials from both on and off the farm.

Market Sector Capacity

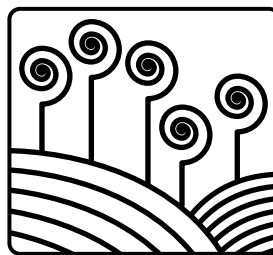
The volume of soil additives utilized by the agricultural market sector includes organic materials, conditioners, lime and inorganic fertilizers. Inorganic fertilizers purchased within Michigan during the first 6 months of 1994 totaled 578,764 tons while organic additives totaled 57,574 tons during the same period (MI Dept. of Ag.). Compost sales have increased from 986 tons in the spring of 1992 to 4720 tons in the spring of 1994. While these volumes are not nearly as large as those of inorganic fertilizers, a clear upward trend in compost use can be observed.

Advantages of Compost Use

Compost has many properties that make it useful as a soil additive on agricultural lands. It can be used to increase organic matter and water holding capacity of a soil, enhance crop growth, or limit erosion on marginal land. Addition of compost can also improve the soil structure compacted by the traffic of heavy agricultural equipment.

Challenges to overcome

The greatest barriers to acceptance of compost by Michigan farmers are concerns about nutrient availability, contamination, consistency and general quality. Many farmers, knowledgeable about the use of chemical inputs, are skeptical about using new products.



Markets

Fact Sheet Series

Compost Markets Assessment

Major markets for composted yard clippings include landscapers, nurseries, sports turf, topsoil blenders, home gardeners, agriculture, and emerging specialty uses. Users of traditional soil products are discovering the benefits of compost now that Michigan's ban on yard clippings landfilling is making quality compost more readily available. This fact sheet series explores the unique concerns, practices and potential of each market.

Market segment description:

This market sector includes traditional field crops, tree nurseries, fruit orchards and specialty crops. In 1994, land used by agriculture in Michigan included 6.8 million acres of field crops, 131,000 acres of fruit trees and 124,000 acres of vegetables. The amount of compost utilized by this market has increased tenfold from 1991 to 1994, although total volumes remain relatively low.

Christmas trees alone account for 100,000 acres of agricultural production. Sod accounts for 17,760 acres of Michigan agricultural land use.

Ways in which compost can be used in this market sector

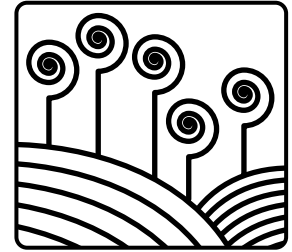
- As a soil additive before planting vegetable or field crops.
- Bank stabilization and erosion control.
- Mulch for speciality crops (i.e., strawberries, peppers, etc.).

Breaking into this market sector

Composters have been successful in developing customers in the agricultural market through education, demonstration plots, research results and providing farmers with samples of finished compost so that they can observe firsthand the effects of compost application on field crops.

Quality requirements for the Agricultural Market

Concerns about compost quality in this market sector include contamination of the compost with foreign matter such as plastic, oil or herbicides. Nutrient content is another major concern.



Markets

Application information

Agricultural research using compost has demonstrated that it has great potential for this market sector. Michigan research on application of compost to field corn is currently underway by the Cooperative Extension Service. Preliminary results indicate the positive effects of compost use.

Trials completed in Pennsylvania on field corn yielded a 20-bushel per acre increase in a plot where yard clippings compost had been used.

Compost has several distinct advantages when compared to chicken or cow manure as a soil amendment. Leaching of nutrients, particularly nitrogen, is higher with fresh manures than with composted material, even if manure was one of the compost feedstock materials. Compost is less likely to have a deleterious effect on the groundwater, streams and ponds in the area of application than raw manures. Nutrients are released more slowly from mature compost, so it won't "burn" plants like fresh chicken manure or chemical fertilizers sometimes do. Also, compost has a pleasant, earthy smell, which cannot be said of raw manure.

Erosion Control

When establishing turf on poorer soils, Lawn & Landscape Maintenance Magazine recommends a two inch layer of compost. Traverse City municipal landscape crews often applied topsoil on slopes to establish turf for erosion control. However, this system was not satisfactory because the topsoil was often low quality. After several years of attempting to find a better system, the City found that compost serves as a better seedbed than topsoil. Compost is less likely to erode from a slope when it rains, holds water better than topsoil, thus promoting faster seedling germination. They apply 3 to 4 inches of compost on a bare soil to seed a perennial rye. Germination of the rye generally occurs within 7-14 days. The increased success with compost is attributed to the increased water holding ability of compost over topsoil.

Project Partners

Resource Recycling Systems, Inc. (RRSI)

Center for Microbial Ecology, Michigan State University

Southeast Oakland County Resource Recovery Authority (SOCRRA)

*For information call:
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