

# Composting FACTSHEET



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## COMPOSTING

### - ♦ INTRODUCTION ♦ -

Composting is the decomposition of organic material by microorganisms present in the natural environment. These minute forms of plant and animal life feed upon and digest complex organic compounds found in manures, crop residues and other organic wastes to produce a relatively stable humus-like material called **compost**.

There is currently considerable interest in the composting process due to increased pressures from society to improve the quality of the environment. In agricultural areas with high productivity, the potential pollution of our natural resources from specialization and intensification of horticultural and livestock production has become a matter of real concern.

Emphasis is being placed on the design and development of more environmentally acceptable animal manure and agricultural waste handling systems. A number of alternative methods of waste handling are being implemented for particular applications, but in order to be cost-effective and compatible with the environment, some form of reuse of nutrients or energy recycling may be required. Composting can be one component of an integrated waste handling system that can change a liability to an asset.

The major advantage of composting is the production of a stabilized product that can be stored or spread with little odour or insect breeding potential. Improved physical properties include low moisture

content (usually below 35 percent), uniform particle size, friable texture, reduced material volume and reduced weight. These improved physical properties lower hauling and spreading costs. Aerobic thermophilic composting kills most pathogens and weed seeds while retaining phosphorus, potassium and other mineral elements. Ammonia nitrogen may be volatilized (lost to the air); however, the remaining nitrogen in the finished compost should be in a stable form. These advantages result in greater market potential for compost as compared to original unstabilized organic wastes. Quality compost may be sold to generate revenue for a farm operation.

For agricultural waste, composting offers an additional advantage: application of composted manure is less likely to pollute watercourses compared to raw manure in a similar situation. This is because there are fewer soluble nutrients in compost compared to manure. Soluble nutrients can be leached out of field-spread manure during rain showers.

The methods and technology for composting are fairly well established. This series of Composting Factsheets has been written to provide the reader with a basic understanding of composting and how composting could fit into their farm operation.

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This is one of a series of Factsheets on Composting. A list of references used in producing this series is included in the Composting Factsheet "[Suggested Reading and References](#)."

#### COMPOSTING FACTSHEET SERIES PREPARED BY:

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