

Landowner _____

**WHAT IS WASTE UTILIZATION?**

Waste utilization is using agricultural wastes such as manure and wastewater or other organic residues.

PURPOSES

Waste utilization should be applied as part of a conservation management system to:

- Protect water quality
- Provide fertility for crop, forage, fiber production, and forest products
- Improve or maintain soil structure
- Provide feedstock for livestock
- Provide a source of energy

HOW IT HELPS THE LAND

The use of agricultural waste on land can be a good, cheap source of plant nutrients and organic material.

WHERE THE PRACTICE APPLIES

This practice applies to land where agricultural wastes from livestock, poultry, or processing are generated and used for the above purposes.

WHERE TO GET HELP

For assistance in planning waste utilization, contact your local Natural Resources Conservation Service or your local Conservation District office.

APPLYING THE PRACTICE

All federal, state and local laws, rules and regulations governing waste management need to be strictly adhered to.

All wastes should be handled and stored in a manner to avoid leakage or spillage from the site. In order to appropriately handle and store wastes, planning should be done which considers constructing covered storage facilities, waste storage ponds, or waste storage lagoons as well as the tools and equipment needed to apply the waste in a timely manner.

The use of agricultural wastes should be based on an analysis of the material prior to land application. As a minimum, the analysis should identify the amounts of moisture content, nitrogen, phosphorus, and

potassium. Other elements or components of the waste material may be analyzed as needed.

The actual rate of application for waste material applied to the field is based on the following items:

- **Nutrient Limited Waters or other Sensitive Areas**

The Oklahoma Water Resources Board has identified waterbodies that have been impaired by nitrogen and/or phosphorus in the state.

Application of waste material is reduced in these watersheds. Other sensitive areas such as, perennial and intermittent streams, ponds, sinkholes, wells and gullies require application setbacks.

- **Field Risk Assessment**

The Oklahoma Phosphorus Assessment tool was developed to assess a field for the potential transport of phosphorus off-site. Based on that assessment, it determines the maximum rate of waste application for the field.

- **Nutrient Budget**

A nutrient budget that accounts for nutrients present in the field and those needed to produce the next crop. A proper soil sample and soil test analysis is essential for completion of the nutrient budget.

The above items may need to be developed and approved by a certified nutrient management specialist depending on federal, state, or local laws.

Owner/Client Responsibility

It is the responsibility of producers to maintain records that document the implementation of waste utilization. Producers should consider addressing the following:

- Quantity of waste material and its nutrient content
- Soil test results
- Dates, rates, location, and methods of waste application
- Quantities of wastes removed from the farm
- Crops grown and yields
- Calibration of equipment

CONSIDERATIONS

Minimize the impact of odors from land applied wastes by making applications at times when temperatures are cool and when wind direction is away from neighbors

Apply wastes to pastures or hayland soon after cutting or grazing before regrowth occurs.

Nitrogen volatilization associated with land application of some wastes can be reduced by incorporation of the material within 24 hours.

Since phosphorus can accumulate in the soil quickly when using manure on a regularly basis, limit the amount of waste application as much as possible or spread material over a greater number of acres.

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