

Application Records

Introduction

Growers who use manure, commercial fertilizer, or waste materials, such as municipal biosolids or industrial residuals, as fertilizer or a source of lime must maintain records of the analytical results, application rates, and soil tests for each application site. This section will address the importance of records management as a vital part of a manure management system. Recommendations for the land application of animal waste should be based on actual lab analyses from a sample of your lagoon, storage pond, dry stack, or production house. First, you determined the amount of manure to be handled. Then, with a manure analysis, you determined how much manure you could apply to a given crop or crop system over a year's time. When combined with the calibration section, you determined how long you should operate your equipment to apply the amount of manure prescribed in your manure utilization plan and to apply it at no greater than the agronomic rates specified in your manure utilization plan or required by your state's laws.

A certain amount of recordkeeping is needed to manage the manure application system. The record-keeping forms provided here will help you document site-specific data that is currently limited on many animal operations. These forms will allow you to easily track your applications, ensuring that you do not exceed the appropriate manure application to any field.

When combined with such site-specific data as your waste analysis, plant analysis, soils analysis, crop yields, and other farm plan items, these forms will provide evidence that you are managing your manure application properly and not exceeding agronomic rates.

Keeping accurate records, along with the implementation of proper best management practices on your farm, is the main way you prove to state water quality agencies and to the general public that your manure management system is not affecting the environment. Assistance with recordkeeping can be obtained from Certified Crop Advisors and other technical specialists, the local CES, the Natural Resources Conservation Service, and the local Soil and Water Conservation District.

Records to maintain

Recordkeeping is a major component of the farm inspections that state water quality agencies or local soil and water conservation districts conduct. The following items need to be available at an individual farm:

- (1) Manure application records
- (2) Map of farm fields including waste application fields and acreage
- (3) Manure Management Plan
- (4) Waste sample analysis
- (5) Regular soil analysis for each field receiving waste applications

These records should be maintained for five years at the individual farm.

It may be beneficial for you to maintain the additional following records for verification of conditions on your farm. Contact your state water quality agency to see if you are required to maintain any of these or other items to comply with state guidelines:

- (1) Daily farm rainfall records
- (2) Weekly lagoon level (freeboard) records
- (3) Plant analysis
- (4) Animal population
- (5) Crop yields

(6) Surface water and groundwater quality records

Forms

Forms included here are as follows:

1. IRR-1: Irrigation Field Record is used to record each irrigation event. The IRR-1 or 2 forms can be used with all types of irrigation systems including solid-set sprinklers, solid-set volume guns, hard hose travelers, center pivots, and linear move irrigation systems. The irrigation field record forms are also used to record applications with a drag-hose injector.
2. IRR-2: Cumulative Irrigation Field Record is to record the total annual waste application to one field per crop cycle. It enables the operator to calculate the total N application to the field and compare it to the recommended N loading rate.
3. SLUR-1: Liquid Manure Slurry Field Record is used to record manure application from liquid tanks. These forms are used to record the broadcast or injection of any liquid manure, effluent, and sludge.
4. SLUR-2: Cumulative Liquid Manure Slurry Field Record is to record the total annual waste application to one field per crop cycle with a slurry or pump and haul system. It facilitates the calculation of the total N application to the field and comparison to the recommended N loading rate.
5. SLD-1: Solid or Semisolid Manure Field Record is used to record each application event from a manure box, flail, or side-discharge spreader. These forms would be used to record the broadcast of any solid manure, separated manure solids, bedding, litter, or compost.
6. SLD-2: Cumulative Solid or Semisolid Manure Field Record is to record the total annual waste application to one field per crop cycle. It provides for calculating the total N application to the field and comparing it to the recommended N loading rate.

The record forms IRR-2, SLUR-2, and SLD-2 require the operator to make calculations to determine the amount of N that has been applied to a given crop. The necessary formulas to complete the forms are provided in the first row of the form.

Note: For recording purposes, field size is that portion of the field that receives manure applications. This is often referred to as the “wetted” or “irrigated” area when using irrigation. Wetted area is equal to or less than field size due to irrigation system layout, area needed for required or recommended buffers, and the shape of the field. Application areas within fields may also be reduced by their inaccessibility with spreader equipment because of slope, seasonal wetness, or even soil type.

