

## SCOE NMP

has been recently calibrated. The disadvantage of sampling the nutrient content of the manure products is that a targeted nutrient application rate cannot be achieved without knowing the nutrient value and adjusting the application rate accordingly.

To apply the manure products at an estimated targeted nutrient application rate, historical analysis or documented data shall be used. Once the actual analysis of the manure products is received from the testing lab, the historical analysis and/or documented data can be compared with the actual analysis. This will allow the operator to apply a specific amount of nutrient to a given field.

The effluent/wastewater being pumped from the irrigation pond to the sprayfields also needs to be sampled and tested quarterly along with records of the flow meter readings monthly.

### Collecting a Solid Sample

Manure products from the stacked beds generally have a moisture content of approximately 80%. Following are guidelines for collecting solid manure samples:

Representative sample is required. If using a narrow bladed shovel, dig down into the pile at various depths, but withdrawing the sample from at least 18-inches below the surface crust. It is also possible to use a metal pipe that has a 3-inch diameter, is 4 to 5 ft long, and sharpened on the bottom end. This pipe can be pressed or driven into the pile, using wooden dowel or broom handle to dislodge the sample from the pipe after it has been withdrawn.

- Brush away exterior crust.
- Collect 10 to 12 sub-samples from all over stack, extending as deeply as possible.
- Avoid bedding materials when collecting, if possible.
- Pour each sub-sample into a clean plastic bucket, mix well, and place about a quart into a "ziploc"-type plastic bag.
- Label bag (date, time, location) and deliver to testing lab.

The liquid wastewater samples should be collected via a spigot on the discharge pipe from the irrigation pump. The sample shall be collected after the irrigation system has been operating for a minimum of one hour. Multiple composited samples over the course of the irrigation cycle would be better, but not required.

### Preparing the Sample for Delivery to a Testing Lab

It is important to take special care of the sample once collected. All samples, whether solid or liquid should be delivered as soon as possible after collection. Please follow the laboratory's requirements for collection, storage, and preservation protocols. If immediate delivery is not possible, refrigerate solid samples and freeze liquid samples until delivery. Samples to be stored more than 14 days before delivering to the lab typically should be frozen.

- Deliver or mail samples to the lab as soon as possible.
- DO NOT USE GLASS OR METAL CONTAINERS to collect or ship the sample. Glass can break if miss-handled and metal can contaminate samples. Use only clean plastic bottles, buckets, and bags.
- Double bag all solid samples in a "ziploc"-type plastic bag.
- Liquid samples should be placed in a clean plastic bottle, allowing a one-inch air space at the top. Many labs can provide 250-ml bottles to use for liquid samples. Make sure bottle caps are tightened sufficiently to prevent leakage.
- Attach a completed sample submission form to the samples, making sure that labels on the samples match what is on the form. It is helpful to enclose sample submission forms (and payment, if applicable) in a separate "ziploc"-type plastic bag to protect it in case of condensation, etc.