

Waste Injection

Conservation Activity Job Sheet

(NJAir02)

Liquid and/or slurry wastes can be injected into the soil using injection equipment. Injection of wastes protects surface water supplies, reduces odors, and provides more nutrients to the root zone of the crop.

Waste injection is generally one of several components of a resource management system used to manage manure and polluted water from livestock and poultry operations. Where the wastes are used to supply the fertility needs of crop and pasture, waste injection is done as part of an overall resource management plan for the enterprise.

Participant _____ Crop Year _____

I certify that I have completed/will complete the following actions for the crop year:
<input type="checkbox"/> Maintained records for all waste applications. Records are for each field where waste was applied, and include crop grown, application dates and application amounts.
<input type="checkbox"/> Calibrated application equipment to apply wastes in accordance with the recommended amount and timing specified in my nutrient budget for the crop being grown.
<input type="checkbox"/> Monitored annually the chemical analysis of soils, plant tissue and waste. Adjusted amounts of waste applied accordingly.
<input type="checkbox"/> To reduce odor problems, applied waste in mid morning when temperatures were warming and air was rising rather than in the afternoon or evening when air was cooling and settling. Avoided applications during periods of fog.
<input type="checkbox"/> Did not apply waste directly into an open watercourse or where waste is likely to enter an open watercourse. Observed all waste application setbacks identified in the resource management system plan.
<input type="checkbox"/> Did not apply waste to fields where there was no growing crop. If applications were needed during fall and winter periods due to unforeseen circumstances, such as the storage facilities being full, used the following guidelines for waste applications: <ul style="list-style-type: none"> a) Only spread waste on fields that are growing a crop, preferably grass. b) Increased all waste application setbacks identified in the resource management system plan by 50 feet. c) Did not apply waste during any rainfall event that will cause runoff. d) Used soil tests, such as the Pre-sidedress Soil Nitrate test, to determine if additional applications of waste were needed on those fields receiving emergency winter applications.
<input type="checkbox"/> Did not apply waste to fields with frozen or snow covered soil conditions unless provisions were made to control runoff.
<input type="checkbox"/> Did not spread waste on fields where soils were saturated, ponded, flooded and/or during times when waste was likely to runoff into open watercourses.
<input type="checkbox"/> Was aware of the location of sensitive areas, concerns of neighbors or concerns of the public which required special application procedures
<input type="checkbox"/> Handled all waste material with caution. Wore appropriate protective clothing.
<input type="checkbox"/> Cleaned up residual materials from equipment and disposed of properly.

Signature _____

Date _____

WASTE INJECTION WORKSHEET

Tank Equipment Calibration

(Using a Full Tank Load)

Name: _____ Date: _____

Operator: _____ Spreader ID: _____

- Perform the following operations to calibrate the tank equipment:
- ✓ Determine the maximum capacity of the tank equipment from the manufacturer's maintenance manual or the owners manual for the equipment.
 - ✓ Fill the tank and reduce the volume of the tank by the appropriate amount if the tank is not filled to its maximum capacity. Normally a tank spreader is only filled to about 80 percent of its maximum capacity and therefore the maximum rated capacity of the tank should be multiplied by 0.8 to reflect the volume of the loaded tank during the calibration exercise.
 - ✓ Spread the loaded tank on the field using consistent speed and settings to cover the field uniformly. Try to spread in a rectangular pattern so the area calculation will be simple. Record engine rpm and gear settings used.

Data and Calculations:

Steps	ID of Calibration Test					
	A	B	C	D	E	F
1. Date of calibration test-						
2. Engine RPM during spreading-						
3. Gear selected during spreading-						
4. Maximum rated capacity of tank (gallons) =						
5. Volume of filled tank (gallons)- Line 4 x ____ % of tank filled ÷ 100% =						
6. Length of spreading area (ft) =						
7. Width of spreading area (ft) =						
8. Area spread (sq ft)- line 6 x line 7 =						
9. Waste applied (gal/sq ft)- line 5 ÷ line 8 =						
10. Convert to gallons per acre - Line 9 x 43,560 =						
10. Average Application Rate (gallons per acre) – Sum of values in cells A10 through F10 divided by the total number of calibrations completed =						

Additional Notes:

