

# MANURE PROVIDES EFFICIENT SOURCE OF NUTRIENTS

## SITUATION

Fair weather along with an early harvest provides conditions conducive for growers to fall-apply manure to their fields. Before applying manure, review your nutrient management plan to determine the appropriate amounts of nutrients needed to improve success in selected fields.

## FACTORS TO CONSIDER

- [Soil test results](#)
- [Nutrient analysis of manure](#)
- Calibration of manure application equipment
- Runoff potential of field — consider field slope as well as surface residue
- Air temperature
- Nitrogen stabilizers

## ACTION PLAN

- 1. Talk with your crop adviser.** Review your nutrient management plan for updates, changes in crop rotations or unexpected circumstances. Discuss how potential changes may affect nutrient management uses and manure applications.
- 2. Sample the manure.** Thoroughly agitate and mix existing supplies of liquid manures before taking a sample for nutrient analysis. Knowing the nutrient content of manure allows you to appropriately apply the manure and stay in compliance with your nutrient management plan.
- 3. Calibrate application equipment.** Equipment that is properly calibrated allows accurate application rates of the manure resource. Fall-applied manure that is immediately incorporated (sweep injectors, s-tine field cultivator, etc.) allows for more nitrogen (N) to be available to corn next season than surface-applied methods.
- 4. Apply manure properly.** Wait until soil temperatures are below 50 degrees Fahrenheit to apply manure. Uniform application also is important to nutrient utilization. Always follow setback requirements for manure applications.
- 5. Use a nitrification inhibitor.** The key to effective N management is to keep applied N in the ammonium (NH<sub>4</sub><sup>+</sup>) form. The ammonium form of nitrogen is easier for corn plants to use and is less susceptible to loss due to denitrification and leaching. Consider using [Instinct™ nitrogen stabilizer](#) with your liquid manure applications, whether incorporated or surface-applied. Instinct works to stabilize N by slowing the conversion of ammonium to nitrates, helping to keep more N available in the corn root zone. For surface-applied manure, the encapsulated formulation of Instinct allows it to remain on the soil surface for up to 10 days, providing flexibility in incorporation. Incorporation can be achieved with a minimum of ½ inch of rain or irrigation within 10 days of application. If rainfall doesn't occur, then light tillage is required.

## SUMMARY

Fall manure applications can be a valuable time-saver next spring. Ensure that manure is applied in an efficient and environmentally responsible manner by following the steps outlined. For more information, contact your local Mycogen Seeds customer agronomist or trusted agronomic adviser.

**Table 1. The Average Nutrient Content of Manure (per 1,000 gallons of liquid manure)**

Type of manure	Nitrogen (lbs.)	Phosphorus (lbs.)	Potassium (lbs.)
Hog	15	12	11
Farrow grow/finish	33	26	25
Dairy Cattle	31	15	19
Beef Cattle	20	16	24

Source: Purdue University Extension Bulletin ID-101

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