

Instinct NXTGEN[®]

Optinyte™ technology

NITROGEN STABILIZER

Manure Application Technical Guide



Test your manure

Collecting manure samples for nutrient analysis should be considered the foundation of your nutrient management plan to ensure that overapplication of nutrients is not occurring and at the same time you are not underapplying a given nutrient if samples are lower than anticipated. Manure sample analysis should be taken just prior to application for the most accurate analysis to give you the ability to adjust application rates accordingly to meet your nutrient plans.

Nutrient analysis

At a minimum, analyze all manure samples for total nitrogen (N), total phosphorus (P), total potassium (K) and moisture content (or dry matter). It's recommended that samples are analyzed for ammonium N, as well nitrate N. Nitrate nitrogen is the form most susceptible to loss through leaching or denitrification.

Best management practices for stabilized manure

Best management practices include a wide range of proven methods for getting the most from your livestock manure, such as:

- Setting realistic yield goals for each field
- Using soil tests to develop a balanced fertilizer program
- Selecting proper hybrids and plant populations to attain the established yield goals
- Developing an N fertilizer program to fit hybrid and yield goals
- Using Instinct NXTGEN® nitrogen stabilizer to protect N below ground

Recommended use rate per acre	
	Instinct NXTGEN®
When applied before Oct. 1 and/or soil temperature above 60 F.	48 oz./A
When applied before Nov. 1 and/or soil temperature above 50 F to 60 F.	36 oz./A
When applied after Nov. 1 and/or soil temperature below 50 F, and spring applications.	24 oz./A



Best practices for the blending of Instinct NXTGEN in pits and lagoons*

- Calculate the number of acres the manure pit/lagoon could potentially treat to ensure you are blending the correct amount of Instinct NXTGEN on a per-acre basis to incorporate into the deep pit/lagoon. Remember, the slurry remaining in the bottom needs to be included in the calculation for potential acres.

Rate calculation for liquid manure

$$\boxed{} \div \boxed{} \times \boxed{} \div 128 = \boxed{}$$

Gallons in deep pit/lagoon Gallons of manure applied per acre Use rate of Instinct NXTGEN® oz./gal. mix Gallons of Instinct NXTGEN required

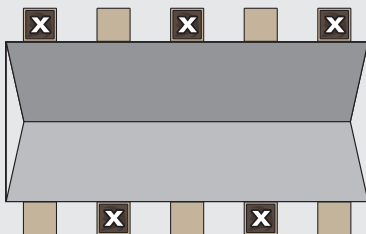
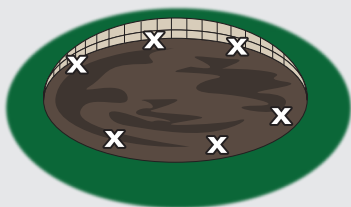
- The level of agitation for an even distribution of Instinct NXTGEN is no more than needed to get the outdoor pit/lagoon thoroughly mixed for a normal application.
- Once Instinct NXTGEN® nitrogen stabilizer has been added to the manure pit/lagoon and agitated for application, it is recommended that applications begin as soon as possible.
- If applications are delayed for more than seven days, re-agitation is recommended to ensure uniformity of Instinct NXTGEN throughout the outdoor manure pit/lagoon.

Uniformity of Instinct in pits

Corteva Agriscience™ trials show that Instinct is successfully distributed throughout the pit with relatively even distribution when agitated under common agitation procedures.

Recommended application areas

Instinct NXTGEN should **ONLY** be poured outside of the building into the pump-outs where allowed. Pour Instinct NXTGEN into multiple pump-out locations around the building or lagoon to help aid in distributing Instinct NXTGEN throughout the slurry. Instinct NXTGEN should not be poured through the slats or flooring inside the building.



Agitation tips

- Stored liquid manure should be agitated before emptying the storage to reduce the sludge left in the storage and to make nutrient applications more uniform.¹
- Agitation is the most critical operation in maintaining available storage in liquid manure systems. Failure to properly agitate will likely result in a continued buildup of settled solids that are not removed. Allowing this to occur can result in less available storage. Agitation of manure re-suspends settled solids and ensures most or all of the manure will flow to the inlet of the pump or removal device. Additionally, agitation homogenizes the manure mixture and provides a more consistent nutrient analysis as the manure is being removed.²
- It is recommended that manure be agitated for at least 30 minutes prior to pumping. Agitation should continue throughout the pumping process or until the manure in the structure is adequately mixed.
- Sufficient agitation should cause the lagoon or pit to “swirl” and carry suspended solids to the chopper pump. The effectiveness of the agitator in suspending solids can sometimes be judged by the appearance of the slurry. A dark or black slurry indicates a high degree of solids suspension, while a lighter color indicates fewer suspended solids.³

For more information about **Instinct NXTGEN**[®] nitrogen stabilizer visit **NitrogenMaximizers.com**, call 800-258-3033 or contact your local Corteva Agriscience territory manager.

¹Purdue University Cooperative Extension Service and Indiana Soil Conservation Service. 1999. <https://www.extension.purdue.edu/extmedia/id/ID-205.html>

²Fulhage, C., and J. Hoehne. 2001. https://articles.extension.org/sites/default/files/w/d/d2/L24_sec4.pdf

³Fulhage, C. D. 1994. <http://extension.missouri.edu/p/WQ324>

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Instinct and Instinct NXTGEN are not registered for sale or use in all states.

Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your state. Federal law does not require any person who applies or supervises the use of Instinct NXTGEN to be certified in accordance with EPA regulations and state, territorial and tribal laws. Some states may have additional requirements related to liquid manure and nitrogen stabilizers. Be sure to consult your state or local extension service to understand your requirements. When applying Instinct NXTGEN to deep pits, appropriate manure agitation safety steps should be followed: Instinct NXTGEN should be applied directly to the deep pit prior to pumping the pit; a thorough agitation system must be operating in order to evenly distribute Instinct NXTGEN within the deep pit; applicators and handlers of Instinct NXTGEN and Instinct NXTGEN treated manure are required to use proper protective equipment as stated on the product label; air ventilation systems must be operational inside barns. Always read and follow label directions.