

Section 8 Example: Estimating Manure Nitrogen Application Rates

Calculations:

N-Based Application Rate = Net Crop Nutrient Requirement / Crop Available Manure Nitrogen (9)

Crop Available Manure N (first year) = (NH₄-N x Availability factor) + (Org-N x Availability factor) (10)

Example for surface applied solid beef manure with no incorporation:

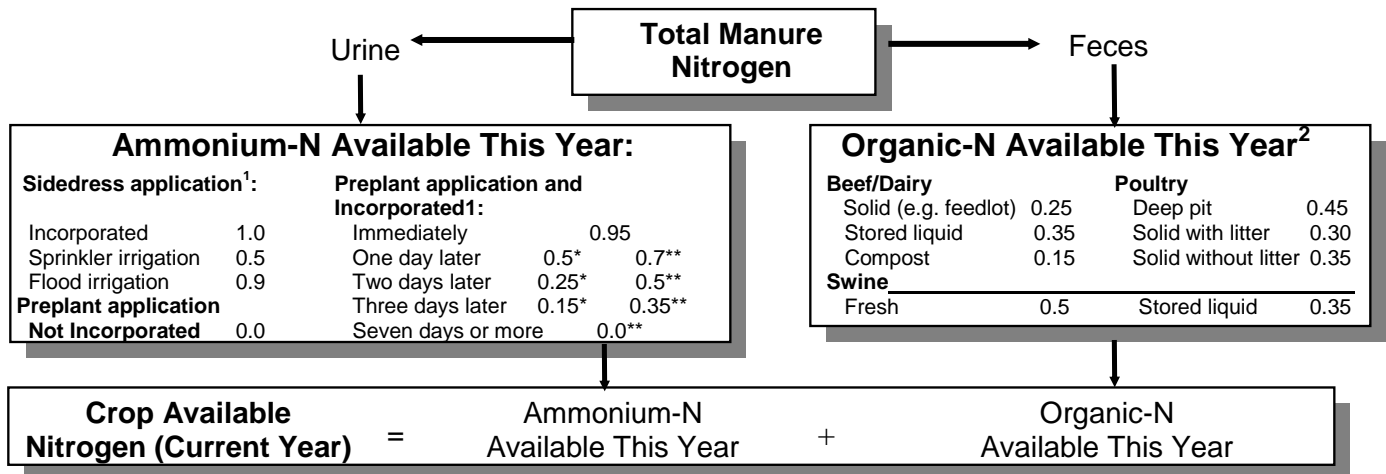
Crop Available Manure N (first year) = [4 x 0.0] + [14.5 x 0.25] = 3.6 lbs of crop available N/ton

Example for runoff holding pond liquid application through pivot:

Crop Available Manure N (first year) = [46 x 0.5] + [6 x 0.35] = 25 lbs of crop available N/acre-inch

Assumes manure sample for solids show 4 lbs NH₃-N/ton and 14.5 lbs Org.-N/ton and for holding pond water shows 46 lbs NH₃-N/ton and 6 lbs Org.-N/ton

Assumptions:



¹ Incorporation can be accomplished by tillage or by a 0.50 inch or greater rainfall.

² Organic-N availability assumes spring seeded crops such as corn and soybeans. For winter or spring manure application prior to planting small grains, multiply organic-N availability factor by 0.7. For late summer or fall manure application prior to planting small grains, use the organic N values shown in Figure 1.

*Solid Manure; **Liquid Manure