First Year Manure Availability Worksheet

Choose the livestock facility from the stack of AFOs that most closely matches the manure you have available. Find the Manure Analysis that corresponds with your chosen facility. Review application and incorporation information on the facility record to help with this worksheet.

Step 1: Using the Manure Analysis, find the following information and fill in the table below.

As-Is Organic N	As-Is Ammonium N	As-Is P_2O_5	As-Is K_2O	As-Is Sulfur
_____	_____	_____	_____	_____

Add these numbers to the "As-Is" line of the facility record

Table 1. Fraction of organic nitrogen available this year.

Beef/Dairy Manure	
Solid or Stored liquid	0.40
Composted feedlot	0.15
Poultry Manure	
Layers with no bedding	0.45
All other poultry	0.40
Swine Manure	0.40

Table 2. Fraction of ammonium nitrogen available this year.

Sidedress Application	
Injected	0.95
Sprinkler Irrigated	0.80 (if >0.4" applied) or 0.40 (if ≤0.4" applied)
Preplant Application and Not Incorporated	
Surface – spring or fall	0.00

Preplant Application and Incorporated

	Solid	*Liquid Applied When Air Temp > 50˚F*	*Liquid Applied When Air Temp ≤50˚F*
Immediately	0.95	0.95	0.95
One day later	0.50	0.70	0.70
Two days later	0.25	0.45	0.55
Three days later	0.15	0.25	0.45
Seven or more days later	0.00	0.00	0.25

Step 2: Determine the Organic N Available the FIRST YEAR from the manure by using the below formula and Table 1 above.

Organic N Available = Availability factor x As Is Basis Organic N in sample (lbs/ton)

_____ x _____ (lbs/ton) = _____ (lbs/ton)
(From Table 1) (From As-Is Sample) **Organic N Available First Year**

Step 3: Determine the Ammonium N Available the FIRST YEAR from the manure by using the below formula and Table 2.

Ammonium N Available = Availability factor x As Is Basis Ammonium N in sample (lbs/unit)

_____ x _____ (lbs/unit) = _____ (lbs/ton)
(From Table 2) (From As-Is sample) **Ammonium N Available First Year**

Step 4: Add the Ammonium N Available and the Organic N Available to get Total N Available the FIRST YEAR.

Total N Available this year = Ammonium N Available + Organic N available

_____ (lbs/ton) + _____ (lbs/ton) = _____ (lbs/ton)
Organic N Available (from Step 2 above) Ammonium N Available (from Step 3 above) **Total N Available First Year**

-Continue to step 5 on the next page-

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Step 5: P_2O_5 is 70% available the first year. Using this and the formula below, determine the amount of P_2O_5 available the FIRST YEAR.

P_2O_5 Available this year = Availability factor x As Is Basis P_2O_5 in sample (lbs/unit)

0.70 x _____ (lbs/unit) = _____ (lbs/unit)
(from As-Is sample) **P_2O_5 Available First Year**

Step 6: K_2O is 80% available the first year. Using this and the formula below, determine the amount of K_2O available the FIRST YEAR.

K_2O Available this year = Availability factor x As Is Basis K_2O in sample (lbs/unit)

0.80 x _____ (lbs/unit) = _____ (lbs/unit)
(from As-Is sample) **K_2O Available First Year**

Step 7: Sulfur is 55% available the first year. Using this and the formula below, determine the amount of sulfur available the FIRST YEAR.

S Available this year = Availability factor x As Is Basis S in sample (lbs/unit)

0.55 x _____ (lbs/unit) = _____ (lbs/unit)
(from As-Is sample) **S Available First Year**

Add the totals on steps 2, 3, and 5 through 7 to the Facility Record in the "Crop Available This Year" line.

for Group Discussion