

LIQUIDS WORKSHEET 3 - APPLICATION RATES AND LAND REQUIREMENTS ¹

Tract No.										
Field No.	Acres	Soil Test Phosphorus (STP)	Crop Rotation / Sequence	Planned Application Date or Timing	Planned Application Rate ² (1,000 gal/ac)	Liquid or Commercial Fertilizer (L or C)	Actual Application Date	Actual Application Rate ² (1,000 gal/ac)	Weather at Time of Application ³ (Cloudy, Raining, Sunny)	
									24 Hours Before	24 Hours After
									H	18
A	20	553	Corn Silage (Ton)	Spring 2020	25					
0	0	0	0		0					
0	0	0	0		0					
0	0	0	0		0					
0	0	0	0		0					
0	0	0	0		0					
0	0	0	0		0					
0	0	0	0		0					
0	0	0	0		0					
0	0	0	0		0					

1. Where land application is occurring under long term lease or agreement with adjacent landowner, fields must be included in the above table.
 2. Fields that have a "High" soil test phosphorus (>400) should implement Best Management Practices (BMPs) to reduce the risk of nutrient movement to sensitive waterbodies. BMPs may include, but not be limited to: installing conservation buffers, reducing P2O5 application rate, incorporating manure, adding chemical treatments to litter that tie up soluble P and keep it from moving over the landscape, and/or adjusting application timing.
 3. It is illegal to make land applications when the ground is frozen. It is recommended that land applications are not made within 48 hours of forecasted precipitation.

LIQUIDS WORKSHEET 2 - NUTRIENT BALANCE

Tract	Field No.	Acres
	H	18

Soil Test P Value (Mehlich 3)

1. Crop or Crop Sequence/Rotation	<input type="text" value="Corn Silage (Ton)"/>		
2. Realistic Yield (Average from 5-10 Years on a per acre basis)	<input type="text" value="20.0"/>		
3. Plant Nutrients Needed or Allowed (lbs/ac)	N	P₂O₅	K₂O
	194	72	160
4. Adjusted P ₂ O ₅ Application Rate According to Threshold	<input type="text" value="72"/>		
5. Fertilizer Credits (lbs/ac)			
6. Plant Nutrients Needed Minus Credits (lbs/ac)	194	72	160
7. Nutrients in Manure (lbs/1,000 gallons) Enter lab results in box on right to override Worksheet 1 values	1.0	1.0	4.0
8. Percent Nutrients Retained in System <input type="text" value="Table 1"/> Enter Table 1 values or Enter zero if lab results are used in Step 7	35%	50%	65%
9. Net Retained Nutrients in Manure (lbs/1,000 gallons)	1.0	1.0	4.0
10. Percent of Available Nutrients <input type="text" value="Table 2"/> Enter Table 2 value for N	75%	80%	100%
11. Net Available Nutrients (lbs/1,000 gallons)	0.8	0.8	4.0
12. Application Rate (1,000 gallons/ac) Application limitations may apply. Enter Chosen Application Rate in box on right	25	25	25
13. Net Application Amount for All Nutrients (lbs/ac)	19	20	100
14. Nutrient Needs (-) or Surpluses (+) (lbs/ac)	-175	-52	-60

Gallons Available 939,562 - Gallons Applied in Field 450,000 = Balance 489,562

- 401-600 STP - Phosphorus applications at rates not to exceed the estimated removal of phosphorus in the harvested plant biomass.
- 601-800 STP - Phosphorus applications at rates not to exceed 1/2 of the estimated removal of phosphorus in the harvested plant biomass.
- > 800 STP - Phosphorus applications are no longer allowed (manure may not be land applied in accordance with this guidance).

Enter Lab Results Here to Override Calculations From Worksheet 1 on Step 7		
N	P205	K20
1	1	4

Chosen Application Rate MUST ENTER
25

One time application rate should not exceed 13,500 gallons per acre (or 1/2 inch per acre)

LIQUIDS WORKSHEET 2 - NUTRIENT BALANCE

Tract	Field No.	Acres
	A	20

Soil Test P Value (Mehlich 3)

1. Crop or Crop Sequence/Rotation	<input type="text" value="Corn Silage (Ton)"/>		
2. Realistic Yield (Average from 5-10 Years on a per acre basis)	<input type="text" value="20.0"/>		
3. Plant Nutrients Needed or Allowed (lbs/ac)	N	P₂O₅	K₂O
	194	72	160
4. Adjusted P ₂ O ₅ Application Rate According to Threshold	<input type="text" value="72"/>		
5. Fertilizer Credits (lbs/ac)	<input type="text"/>		
6. Plant Nutrients Needed Minus Credits (lbs/ac)	194	72	160
7. Nutrients in Manure (lbs/1,000 gallons) Enter lab results in box on right to override Worksheet 1 values	1.0	1.0	4.0
8. Percent Nutrients Retained in System First Worksheet 2 values used or zero if lab results are used	0%	0%	0%
9. Net Retained Nutrients in Manure (lbs/1,000 gallons)	1.0	1.0	4.0
10. Percent of Available Nutrients Enter Table 2 value for N	75%	80%	100%
	<input type="text" value="Table 2"/>		
11. Net Available Nutrients (lbs/1,000 gallons)	0.8	0.8	4.0
12. Application Rate (1,000 gallons/ac) Application limitations may apply. Enter Chosen Application Rate in box on right	25	25	25
	Do not exceed phosphorus application rate. Implement a phosphorus drawdown plan.		
13. Net Application Amount for All Nutrients (1,000 gallons/ac)	19	20	100
14. Nutrient Needs (-) or Surpluses (+) (lbs/ac)	-175	-52	-60

- 401-600 STP - Phosphorus applications at rates not to exceed the estimated removal of phosphorus in the harvested plant biomass.
- 601-800 STP - Phosphorus applications at rates not to exceed 1/2 of the estimated removal of phosphorus in the harvested plant biomass.
- > 800 STP - Phosphorus applications are no longer allowed (manure may not be land applied in accordance with this guidance).

Enter Lab Results Here to Override Calculations From Worksheet 1 on Step 7		
N	P205	K20
1	1	4

*Chosen Application Rate
MUST ENTER*

25

One time application rate should not exceed ~13,500 gallons per acre (or 1/2 inch per acre)

Gallons Available 489,562 - Gallons Applied in Field 500,000 = Balance Applied more than Available

Fall 2020

We cannot apply to field G-lagoon because the soil test P level is above 800. We applied the maximum amount of manure but we need more land.

LIQUIDS WORKSHEET 2 - NUTRIENT BALANCE

Tract	Field No.	Acres
	K	20

Soil Test P Value (Mehlich 3)

1. Crop or Crop Sequence/Rotation	Wheat Grain (Bushel)		
2. Realistic Yield (Average from 5-10 Years on a per acre basis)	50.0		
3. Plant Nutrients Needed or Allowed (lbs/ac)	N	P ₂ O ₅	K ₂ O
	75	30	17
4. Adjusted P ₂ O ₅ Application Rate According to Threshold	15		
5. Fertilizer Credits (lbs/ac)			
6. Plant Nutrients Needed Minus Credits (lbs/ac)	75	15	17
7. Nutrients in Manure (lbs/1,000 gallons) Enter lab results in box on right to override Worksheet 1 values	1.0	1.0	4.0
8. Percent Nutrients Retained in System <input type="text" value="Table 1"/> Enter Table 1 values or Enter zero if lab results are used in Step 7	35%	50%	65%
9. Net Retained Nutrients in Manure (lbs/1,000 gallons)	1.0	1.0	4.0
10. Percent of Available Nutrients <input type="text" value="Table 2"/> Enter Table 2 value for N	50%	80%	100%
11. Net Available Nutrients (lbs/1,000 gallons)	0.5	0.8	4.0
12. Application Rate (1,000 gallons/ac) Application limitations may apply. Enter Chosen Application Rate in box on right	19	19	19
13. Net Application Amount for All Nutrients (lbs/ac)	10	15	76
14. Nutrient Needs (-) or Surpluses (+) (lbs/ac)	-66	0	59

• 401-600 STP - Phosphorus applications at rates not to exceed the estimated removal of phosphorus in the harvested plant biomass.

• 601-800 STP - Phosphorus applications at rates not to exceed 1/2 of the estimated removal of phosphorus in the harvested plant biomass.

• > 800 STP - Phosphorus applications are no longer allowed (manure may not be land applied in accordance with this guidance).

Enter Lab Results Here to Override Calculations From Worksheet 1 on Step 7

N	P205	K20
1	1	4

Chosen Application Rate MUST ENTER

19

One time application rate should not exceed 13,500 gallons per acre (or 1/2 inch per acre)

Gallons Available 939,562 - Gallons Applied in Field 380,000 = Balance 559,562