

# Nutrient Balance Sheet

## Prepared For

Gary L. Brown  
934 Pine Hill Road, Lititz, PA 17543  
717-626-6032  
Lancaster County

## Prepared By

Jesse A. Landis  
462-NMC  
273 Centerville Road, Lancaster, PA 17603  
717-299-5691

*Jesse A. Landis*

---

**Nutrient Management Specialist or Broker 2 Signature**

---

July 30, 2024

**Date of Development**

This nutrient balanced sheet has been developed for manure exported for agricultural land application under the following Act 38 export option:

Exported to a known operation (included in Exporter NMP)

Exported through a broker (include Broker information below if not prepared by broker)

## Broker Information

Broker Name

Broker Certification Number

Broker Address

Broker Phone Number(s)

## Exporter Information

Dennis Siegrist  
23 Orchard Road  
Lititz, PA 17543  
Lancaster County

## Nutrient Balance Sheet Summary

ID	Crop Group	CMU/Field ID	Manure Group	Application Season	Application Management	Planned Manure Rate	Starter/Other Fertilizer (lb/A)			Nutrient Balance @ Planned Rate (lb/A) <sup>1</sup>			Notes (check)
							N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
1	Pasture	1	Siegrist Fall	Early Fall	No Incorporation	6250	0	0	0	75	(160)	(117)	✓
2	Corn After Corn	2-8	Siegrist Spring	Spring	No Incorporation	6250	15	30	30	59	(97)	(94)	✓
3	Corn After Soybeans	2-8	Siegrist Spring	Spring	No Incorporation	6250	15	30	30	19	(157)	(139)	✓
4	Barley (Winter)	2-8	Siegrist Fall	Early Fall	No Incorporation	3200	0	0	0	19	(71)	(52)	✓
5	Soybeans (Summer)	2-8	Siegrist Spring	Summer	No Incorporation	6250	0	0	0	59	(198)	(161)	✓
6	Grass Hay (1 <sup>st</sup> )	9	Siegrist Spring	Spring	No Incorporation	6250	0	0	0				✓
7	Grass Hay (2 <sup>nd</sup> )	9	Siegrist Spring	Summer	No Incorporation	3200	0	0	0	12	(192)	(165)	✓
8	Corn After Alfalfa	10	Siegrist Spring	Spring	No Incorporation	3200	0	0	0	90	(65)	(56)	✓
9	Corn After Alfalfa	11	Siegrist Spring	Spring	No Incorporation	3200	0	0	0	0	5	(4)	✓
10													
11													
12													
13													
14													
15													

<sup>1</sup> Positive numbers = nutrient deficit; negative numbers = nutrient excess

## Nutrient Balance Sheet Summary Notes

Fall manure applications require at least 25% cover unless the crop management unit is planted to a cover crop in time to allow for appropriate growth to control runoff until the next growing season, or the manure is injected or mechanically incorporated within 5 days using minimal soil disturbance techniques consistent with no-till farming practices.

	<b>Crop Group</b>	<b>CMU/Field ID</b>	<b>Manure Group</b>	<b>Notes <sup>1</sup></b>
<b>1</b>	Corn After Corn	2-8	Siegrist Spring	Fields 4 – 8 have a 150’ manure application setback from the stream.
<b>2</b>	Corn After Soybeans	2-8	Siegrist Spring	Fields 4 – 8 have a 150’ manure application setback from the stream.
<b>3</b>	Barley (Winter)	2-8	Siegrist Fall	Fields 4 – 8 have a 150’ manure application setback from the stream.
<b>4</b>	Soybeans (Summer)	2-8	Siegrist Spring	Fields 4 – 8 have a 150’ manure application setback from the stream.
<b>5</b>	Grass Hay (1 <sup>st</sup> )	9	Siegrist Spring	This application is applied in the spring at green-up. Field 9 has a 100’ manure application setback from a well and 150’ manure application setback along the stream.
<b>6</b>	Grass Hay (2 <sup>nd</sup> )	9	Siegrist Spring	This application is applied after first cutting. Field 9 has a 100’ manure application setback from a well and 150’ manure application setback along the stream.
<b>7</b>	Corn After Alfalfa	11	Siegrist Spring	Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O are based on crop removal and should not be used to determine additional fertilizer needs. Field 11 has a 100’ manure application setback from a sinkhole.
<b>8</b>	Pasture	1	Sheep Uncollected	25 ewes and 2 rams on pasture from March through November for 18 hours per day.
<b>9</b>				
<b>10</b>				
<b>11</b>				
<b>12</b>				
<b>13</b>				

<sup>1</sup> If crop removal values were used in Row A for P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O, planners should use the following standard note: Nutrient balances for P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O are based on crop removal and should not be used to determine additional fertilizer needs.

## Nutrient Balance Worksheet

Crop Group		Yield	CMU/Field Identification <small>(Each field must be clearly identified on a map)</small>		Acres	
<b>Pasture</b>		<b>3 ton/ac</b>	<b>1</b>		<b>9</b>	
<b>Manure Plan Basis</b> <small>(check planning option)</small>	<b>OPTION 1 P Removal</b>	<b>OPTION 2 N Requirement</b>		<b>X</b>	<b>OPTION 3 P Index</b>	
	<ul style="list-style-type: none"> <li>P removal rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>No winter application</li> <li>Use the P<sub>2</sub>O<sub>5</sub> column to determine acceptable rate</li> <li>Completion of N column required for all options; P<sub>2</sub>O<sub>5</sub> column is optional for N based rates; K<sub>2</sub>O is optional for all rates.</li> </ul>	<ul style="list-style-type: none"> <li>N requirement rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>Soil test &lt; 200 ppm Mehlich 3 P</li> <li>No winter application</li> <li>Use the N column to determine acceptable rate</li> </ul>		<ul style="list-style-type: none"> <li>P Index evaluation of fields</li> <li>P Index and Winter Matrix required for winter application</li> <li>Use appropriate column based on the P Index to determine acceptable rate</li> </ul>		
	<b>Soil Test Mehlich 3 P (ppm)</b>			<b>81</b>		
<b>Manure Group</b>		<b>Manure Type <small>(Poultry, Swine, Other, Compost)</small></b>		<b>Application Season</b>	<b>Application Management</b>	
<b>Siegrist Fall</b>		<b>Swine</b>		<b>Early fall</b>	<b>No incorporation</b>	
<b>Manure Analysis</b>						
<b>Units (Circle)</b>		<b>NH<sub>4</sub>-N</b>	<b>Organic N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>	<b>Manure % Solids</b>
lb/ton or <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">lb/1000 gal</span>		<b>18.3</b>	<b>12.1</b>	<b>22.1</b>	<b>16.1</b>	<b>4.1</b>
<b>Notes</b>						

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Recommendation Basis	
<b>A) Recommendation or Removal (lb/A)</b> <small>N – Soil Test or Tables 1 &amp; 2 (AG Table 1.2-3;1.2-5) P<sub>2</sub>O<sub>5</sub> &amp; K<sub>2</sub>O – Soil Test or Table 3 (AG Table 1.2-6)</small>	<b>150</b>	<b>0</b>	<b>40</b>	<b>X</b>	Soil Tests
<b>B) Fertilizer Applied (lb/A)</b> <small>(Regardless of Manure e.g. Starter)</small>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Application Record &amp; Notes</b> Record when the planned manure and fertilizer rates were applied or note changes.	
<b>C) Other Organic Sources Applied (lb/A)</b> <small>(e.g. Biosolids, Other Manure)</small>	<b>13</b>	<b>22</b>	<b>56</b>		
<b>D) Residual Manure N (lb/A)</b> <small>Table 4 (AG Table 1.2-11B)</small>	<b>35</b>			Other Organic Source - Uncollected Sheep Manure	
<b>E) Previous Legume N (lb/A)</b> <small>Table 5 (AG Table 1.2-4) or Soil Test Report</small>	<b>0</b>				
<b>F) Net Nutrient Requirement (lb/A)</b> <small>(A – B – C – D – E)</small>	<b>102</b>	<b>(22)</b>	<b>(16)</b>		
<b>G) Manure Analysis</b> <small>(lb/ton or lb/1000gal)</small>	NH <sub>4</sub> -N <b>18.3</b>	Org N <b>12.1</b>	<b>22.1</b>		
<b>H) Nitrogen Availability Factors</b> <small>Table 6 (AG Table 1.2-11A)</small>	NH <sub>4</sub> -N <b>0.1</b>	Org N <b>0.2</b>			
<b>I) Available Nitrogen Fractions</b> <small>(lb/ton or lb/1000gal) (G x H)</small>	NH <sub>4</sub> -N <b>1.83</b>	Org N <b>2.42</b>			
<b>J) Total Available Nitrogen</b> <small>(sum of Available N Fractions from row I)</small>	NH <sub>4</sub> -N + Org N <b>4.25</b>				
<b>K) Balanced Manure Rate</b> (tons/A or gallons/A) <small>Complete 1 column For N: (F ÷ J) For P: (F ÷ G)</small>	<b>24,000</b>	----			
<b>L) Planned Manure Rate</b> (tons/A or gallons/A) <small>Must be less than or equal to Row K Balanced Rate and based on the plan basis being used</small>	<b>6,250</b>				
<b>M) Nutrients Applied at Planned Rate</b> <small>(lb/A) For N: (K x I) For P &amp; K: (K x G)</small>	<b>27</b>	<b>138</b>	<b>101</b>	<b>Note:</b> Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.	
<b>N) Nutrient Balance at Planned Rate</b> <small>(lb/A) (F - L) (Indicate short or excess)</small>	<b>75</b>	<b>(160)</b>	<b>(117)</b>		

## Nutrient Balance Worksheet

Crop Group		Yield	CMU/Field Identification <small>(Each field must be clearly identified on a map)</small>		Acres	
<b>Corn after Corn</b>		<b>150 bu/ac</b>	<b>2-8</b>		<b>90</b>	
<b>Manure Plan Basis</b> <small>(check planning option)</small>	<b>OPTION 1 P Removal</b>	<b>OPTION 2 N Requirement</b>		<b>X</b>	<b>OPTION 3 P Index</b>	
	<ul style="list-style-type: none"> <li>P removal rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>No winter application</li> <li>Use the P<sub>2</sub>O<sub>5</sub> column to determine acceptable rate</li> <li>Completion of N column required for all options; P<sub>2</sub>O<sub>5</sub> column is optional for N based rates; K<sub>2</sub>O is optional for all rates.</li> </ul>	<ul style="list-style-type: none"> <li>N requirement rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>Soil test &lt; 200 ppm Mehlich 3 P</li> <li>No winter application</li> <li>Use the N column to determine acceptable rate</li> </ul>		<ul style="list-style-type: none"> <li>P Index evaluation of fields</li> <li>P Index and Winter Matrix required for winter application</li> <li>Use appropriate column based on the P Index to determine acceptable rate</li> </ul>		
	<b>Soil Test Mehlich 3 P (ppm)</b>			<b>154</b>		
<b>Manure Group</b>		<b>Manure Type (Poultry, Swine, Other, Compost)</b>		<b>Application Season</b>	<b>Application Management</b>	
<b>Siegrist Spring</b>		<b>Swine</b>		<b>Spring</b>	<b>No Incorporation</b>	
<b>Manure Analysis</b>						
<b>Units (Circle)</b>		<b>NH<sub>4</sub>-N</b>	<b>Organic N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>	<b>Manure % Solids</b>
lb/ton or <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">lb/1000 gal</span>		<b>19.6</b>	<b>13.1</b>	<b>20.3</b>	<b>17.4</b>	<b>4.2</b>
<b>Notes</b>						

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Recommendation Basis		
<b>A) Recommendation or Removal (lb/A)</b> <small>N – Soil Test or Tables 1 &amp; 2 (AG Table 1.2-3;1.2-5) P<sub>2</sub>O<sub>5</sub> &amp; K<sub>2</sub>O – Soil Test or Table 3 (AG Table 1.2-6)</small>	<b>150</b>	<b>60</b>	<b>45</b>	<b>X</b>	Soil Tests	
<b>B) Fertilizer Applied (lb/A)</b> <small>(Regardless of Manure e.g. Starter)</small>	<b>15</b>	<b>30</b>	<b>30</b>	<b>Application Record &amp; Notes</b> <small>Record when the planned manure and fertilizer rates were applied or note changes.</small>		
<b>C) Other Organic Sources Applied (lb/A)</b> <small>(e.g. Biosolids, Other Manure)</small>	<b>0</b>	<b>0</b>	<b>0</b>			
<b>D) Residual Manure N (lb/A)</b> <small>Table 4 (AG Table 1.2-11B)</small>	<b>35</b>					
<b>E) Previous Legume N (lb/A)</b> <small>Table 5 (AG Table 1.2-4) or Soil Test Report</small>	<b>0</b>					
<b>F) Net Nutrient Requirement (lb/A)</b> <small>(A – B – C – D – E)</small>	<b>100</b>	<b>30</b>	<b>15</b>			
<b>G) Manure Analysis</b> <small>(lb/ton or lb/1000gal)</small>	NH <sub>4</sub> -N <b>19.6</b>	Org N <b>13.1</b>	<b>20.3</b>			NH <sub>4</sub> -N <b>19.6</b>
<b>H) Nitrogen Availability Factors</b> <small>Table 6 (AG Table 1.2-11A)</small>	NH <sub>4</sub> -N <b>0.1</b>	Org N <b>0.35</b>				
<b>I) Available Nitrogen Fractions</b> <small>(lb/ton or lb/1000gal) (G x H)</small>	NH <sub>4</sub> -N <b>1.96</b>	Org N <b>4.59</b>				
<b>J) Total Available Nitrogen</b> <small>(sum of Available N Fractions from row I)</small>	NH <sub>4</sub> -N + Org N <b>6.55</b>					
<b>K) Balanced Manure Rate</b> (tons/A or gallons/A) <small>Complete 1 column For N: (F ÷ J) For P: (F ÷ G)</small>	<b>15,267</b>	----				
<b>L) Planned Manure Rate</b> (tons/A or gallons/A) <small>Must be less than or equal to Row K Balanced Rate and based on the plan basis being used</small>	<b>6,250</b>					
<b>M) Nutrients Applied at Planned Rate</b> <small>(lb/A) For N: (K x I) For P &amp; K: (K x G)</small>	<b>41</b>	<b>127</b>	<b>109</b>	<b>Note:</b> Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.		
<b>N) Nutrient Balance at Planned Rate</b> <small>(lb/A) (F - L) (Indicate short or excess)</small>	<b>59</b>	<b>(97)</b>	<b>(94)</b>			

## Nutrient Balance Worksheet

Crop Group		Yield	CMU/Field Identification <small>(Each field must be clearly identified on a map)</small>		Acres	
<b>Corn after Soybeans</b>		<b>150 bu/ac</b>	<b>2-8</b>		<b>90</b>	
<b>Manure Plan Basis</b> <small>(check planning option)</small>	<b>OPTION 1 P Removal</b>	<b>OPTION 2 N Requirement</b>		<b>X</b>	<b>OPTION 3 P Index</b>	
	<ul style="list-style-type: none"> <li>P removal rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>No winter application</li> <li>Use the P<sub>2</sub>O<sub>5</sub> column to determine acceptable rate</li> <li>Completion of N column required for all options; P<sub>2</sub>O<sub>5</sub> column is optional for N based rates; K<sub>2</sub>O is optional for all rates.</li> </ul>	<ul style="list-style-type: none"> <li>N requirement rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>Soil test &lt; 200 ppm Mehlich 3 P</li> <li>No winter application</li> <li>Use the N column to determine acceptable rate</li> </ul>		<ul style="list-style-type: none"> <li>P Index evaluation of fields</li> <li>P Index and Winter Matrix required for winter application</li> <li>Use appropriate column based on the P Index to determine acceptable rate</li> </ul>		
	<b>Soil Test Mehlich 3 P (ppm)</b>			<b>154</b>		
<b>Manure Group</b>		<b>Manure Type (Poultry, Swine, Other, Compost)</b>		<b>Application Season</b>	<b>Application Management</b>	
<b>Siegrist Spring</b>		<b>Swine</b>		<b>Spring</b>	<b>No Incorporation</b>	
<b>Manure Analysis</b>						
<b>Units (Circle)</b>		<b>NH<sub>4</sub>-N</b>	<b>Organic N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>	<b>Manure % Solids</b>
lb/ton or <b>lb/1000 ga</b>		<b>19.6</b>	<b>13.1</b>	<b>20.3</b>	<b>17.4</b>	<b>4.2</b>
<b>Notes</b>						

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Recommendation Basis		
<b>A) Recommendation or Removal (lb/A)</b> <small>N – Soil Test or Tables 1 &amp; 2 (AG Table 1.2-3;1.2-5) P<sub>2</sub>O<sub>5</sub> &amp; K<sub>2</sub>O – Soil Test or Table 3 (AG Table 1.2-6)</small>	<b>160</b>	<b>0</b>	<b>0</b>	<b>X</b>	Soil Tests	
<b>B) Fertilizer Applied (lb/A)</b> <small>(Regardless of Manure e.g. Starter)</small>	<b>15</b>	<b>30</b>	<b>30</b>	<b>Application Record &amp; Notes</b> Record when the planned manure and fertilizer rates were applied or note changes.		
<b>C) Other Organic Sources Applied (lb/A)</b> <small>(e.g. Biosolids, Other Manure)</small>	<b>0</b>	<b>0</b>	<b>0</b>			
<b>D) Residual Manure N (lb/A)</b> <small>Table 4 (AG Table 1.2-11B)</small>	<b>35</b>					
<b>E) Previous Legume N (lb/A)</b> <small>Table 5 (AG Table 1.2-4) or Soil Test Report</small>	<b>50</b>					
<b>F) Net Nutrient Requirement (lb/A)</b> <small>(A – B – C – D – E)</small>	<b>60</b>	<b>(30)</b>	<b>(30)</b>			
<b>G) Manure Analysis</b> <small>(lb/ton or lb/1000gal)</small>	NH <sub>4</sub> -N <b>19.6</b>	Org N <b>13.1</b>	<b>20.3</b>			NH <sub>4</sub> -N <b>19.6</b>
<b>H) Nitrogen Availability Factors</b> <small>Table 6 (AG Table 1.2-11A)</small>	NH <sub>4</sub> -N <b>0.1</b>	Org N <b>0.35</b>				
<b>I) Available Nitrogen Fractions</b> <small>(lb/ton or lb/1000gal) (G x H)</small>	NH <sub>4</sub> -N <b>1.96</b>	Org N <b>4.59</b>				
<b>J) Total Available Nitrogen</b> <small>(sum of Available N Fractions from row I)</small>	NH <sub>4</sub> -N + Org N <b>6.55</b>					
<b>K) Balanced Manure Rate</b> (tons/A or gallons/A) <small>Complete 1 column For N: (F ÷ J) For P: (F ÷ G)</small>	<b>9,160</b>	----				
<b>L) Planned Manure Rate</b> (tons/A or gallons/A) <small>Must be less than or equal to Row K Balanced Rate and based on the plan basis being used</small>	<b>6,250</b>					
<b>M) Nutrients Applied at Planned Rate</b> <small>(lb/A) For N: (K x I) For P &amp; K: (K x G)</small>	<b>41</b>	<b>127</b>	<b>109</b>	<b>Note:</b> Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.		
<b>N) Nutrient Balance at Planned Rate</b> <small>(lb/A) (F - L) (Indicate short or excess)</small>	<b>19</b>	<b>(157)</b>	<b>(139)</b>			

## Nutrient Balance Worksheet

Crop Group		Yield	CMU/Field Identification <small>(Each field must be clearly identified on a map)</small>		Acres	
<b>Barley (Winter)</b>		<b>60 bu/ac</b>	<b>2-8</b>		<b>90</b>	
<b>Manure Plan Basis</b> <small>(check planning option)</small>	<b>OPTION 1 P Removal</b>	<b>OPTION 2 N Requirement</b>		<b>X</b>	<b>OPTION 3 P Index</b>	
	<ul style="list-style-type: none"> <li>P removal rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>No winter application</li> <li>Use the P<sub>2</sub>O<sub>5</sub> column to determine acceptable rate</li> <li>Completion of N column required for all options; P<sub>2</sub>O<sub>5</sub> column is optional for N based rates; K<sub>2</sub>O is optional for all rates.</li> </ul>	<ul style="list-style-type: none"> <li>N requirement rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>Soil test &lt; 200 ppm Mehlich 3 P</li> <li>No winter application</li> <li>Use the N column to determine acceptable rate</li> </ul>		<ul style="list-style-type: none"> <li>P Index evaluation of fields</li> <li>P Index and Winter Matrix required for winter application</li> <li>Use appropriate column based on the P Index to determine acceptable rate</li> </ul>		
			<b>Soil Test Mehlich 3 P (ppm)</b>	<b>154</b>		
<b>Manure Group</b>		<b>Manure Type <small>(Poultry, Swine, Other, Compost)</small></b>		<b>Application Season</b>	<b>Application Management</b>	
<b>Siegrist Fall</b>		<b>Swine</b>		<b>Early fall</b>	<b>No incorporation</b>	
<b>Manure Analysis</b>						
<b>Units (Circle)</b>		<b>NH<sub>4</sub>-N</b>	<b>Organic N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>	<b>Manure % Solids</b>
lb/ton or <b>lb/1000 gal</b>		<b>18.3</b>	<b>12.1</b>	<b>22.1</b>	<b>16.1</b>	<b>4.1</b>
<b>Notes</b>						

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Recommendation Basis	
<b>A) Recommendation or Removal (lb/A)</b> <small>N – Soil Test or Tables 1 &amp; 2 (AG Table 1.2-3;1.2-5) P<sub>2</sub>O<sub>5</sub> &amp; K<sub>2</sub>O – Soil Test or Table 3 (AG Table 1.2-6)</small>	<b>55</b>	<b>0</b>	<b>0</b>	<b>X</b>	Soil Tests
<b>B) Fertilizer Applied (lb/A)</b> <small>(Regardless of Manure e.g. Starter)</small>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Application Record &amp; Notes</b> Record when the planned manure and fertilizer rates were applied or note changes.  Residual manure is for winter crop in double crop.  Per Table 6 footnote, when manure solids <5% the NH <sub>4</sub> -N availability factor is increased by 0.2.  <b>Calculate Carryover Organic N available to next year's soybeans (summer crop in this double crop scenario):</b> $\frac{12.1 \text{ lb N}}{1000 \text{ gal}} \times \frac{3,200 \text{ gal}}{\text{acre}} = \frac{38.72 \text{ lb N}}{\text{acre}}$ $\frac{38.72 \text{ lb N}}{\text{Acre}} \times 0.25 \text{ Org N avail. Factor} = 9.68 = 10 \text{ carried to soybean worksheet}$	
<b>C) Other Organic Sources Applied (lb/A)</b> <small>(e.g. Biosolids, Other Manure)</small>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>D) Residual Manure N (lb/A)</b> <small>Table 4 (AG Table 1.2-11B)</small>	<b>7</b>				
<b>E) Previous Legume N (lb/A)</b> <small>Table 5 (AG Table 1.2-4) or Soil Test Report</small>	<b>0</b>				
<b>F) Net Nutrient Requirement (lb/A)</b> <small>(A – B – C – D – E)</small>	<b>48</b>	<b>0</b>	<b>0</b>		
<b>G) Manure Analysis</b> <small>(lb/ton or lb/1000gal)</small>	NH <sub>4</sub> -N <b>18.3</b>	Org N <b>12.1</b>	<b>22.1</b>	<b>16.1</b>	
<b>H) Nitrogen Availability Factors</b> <small>Table 6 (AG Table 1.2-11A)</small>	NH <sub>4</sub> -N <b>0.3</b>	Org N <b>0.3</b>			
<b>I) Available Nitrogen Fractions</b> <small>(lb/ton or lb/1000gal) (G x H)</small>	NH <sub>4</sub> -N <b>5.49</b>	Org N <b>3.63</b>			
<b>J) Total Available Nitrogen</b> <small>(sum of Available N Fractions from row I)</small>	NH <sub>4</sub> -N + Org N <b>9.12</b>				
<b>K) Balanced Manure Rate</b> (tons/A or gallons/A) <small>Complete 1 column For N: (F ÷ J) For P: (F ÷ G)</small>	<b>5,263</b>		----		
<b>L) Planned Manure Rate</b> (tons/A or gallons/A) <small>Must be less than or equal to Row K Balanced Rate and based on the plan basis being used</small>	<b>3,200</b>				
<b>M) Nutrients Applied at Planned Rate</b> <small>(lb/A) For N: (K x I) For P &amp; K: (K x G)</small>	<b>29</b>	<b>71</b>	<b>52</b>	<b>Note:</b> Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.	
<b>N) Nutrient Balance at Planned Rate</b> <small>(lb/A) (F - L) (Indicate short or excess)</small>	<b>19</b>	<b>(71)</b>	<b>(52)</b>		

## Nutrient Balance Worksheet

Crop Group		Yield	CMU/Field Identification <small>(Each field must be clearly identified on a map)</small>		Acres	
<b>Soybean (Summer)</b>		<b>50 bu/ac</b>	<b>2-8</b>		<b>90</b>	
<b>Manure Plan Basis</b> <small>(check planning option)</small>	<b>OPTION 1 P Removal</b>	<b>OPTION 2 N Requirement</b>		<b>X</b>	<b>OPTION 3 P Index</b>	
	<ul style="list-style-type: none"> <li>P removal rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>No winter application</li> <li>Use the P<sub>2</sub>O<sub>5</sub> column to determine acceptable rate</li> <li>Completion of N column required for all options; P<sub>2</sub>O<sub>5</sub> column is optional for N based rates; K<sub>2</sub>O is optional for all rates.</li> </ul>	<ul style="list-style-type: none"> <li>N requirement rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>Soil test &lt; 200 ppm Mehlich 3 P</li> <li>No winter application</li> <li>Use the N column to determine acceptable rate</li> </ul>		<ul style="list-style-type: none"> <li>P Index evaluation of fields</li> <li>P Index and Winter Matrix required for winter application</li> <li>Use appropriate column based on the P Index to determine acceptable rate</li> </ul>		
		<b>Soil Test Mehlich 3 P (ppm)</b>		<b>154</b>		
<b>Manure Group</b>		<b>Manure Type (Poultry, Swine, Other, Compost)</b>		<b>Application Season</b>	<b>Application Management</b>	
<b>Siegrist Spring</b>		<b>Swine</b>		<b>Spring</b>	<b>No Incorporation</b>	
<b>Manure Analysis</b>						
<b>Units (Circle)</b>		<b>NH<sub>4</sub>-N</b>	<b>Organic N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>	<b>Manure % Solids</b>
lb/ton or <b>lb/1000 gal</b>		<b>19.6</b>	<b>13.1</b>	<b>20.3</b>	<b>17.4</b>	<b>4.2</b>
<b>Notes</b>						

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Recommendation Basis	
<b>A) Recommendation or Removal (lb/A)</b> <small>N – Soil Test or Tables 1 &amp; 2 (AG Table 1.2-3;1.2-5) P<sub>2</sub>O<sub>5</sub> &amp; K<sub>2</sub>O – Soil Test or Table 3 (AG Table 1.2-6)</small>	<b>160</b>	<b>0</b>	<b>0</b>	<b>X</b>	Soil Tests
<b>B) Fertilizer Applied (lb/A)</b> <small>(Regardless of Manure e.g. Starter)</small>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Application Record &amp; Notes</b> Record when the planned manure and fertilizer rates were applied or note changes.	
<b>C) Other Organic Sources Applied (lb/A)</b> <small>(e.g. Biosolids, Other Manure)</small>	<b>10</b>	<b>(71)</b>	<b>(52)</b>		
<b>D) Residual Manure N (lb/A)</b> <small>Table 4 (AG Table 1.2-11B)</small>	<b>13</b>			Other organic sources are transferred from winter crop. For N the value is derived through calculating carryover organic N from manure applied to barley the previous fall (calculation provided on barley worksheet). For P & K, nutrient balances are transferred from the barley Nutrient Balance Worksheet.  Residual manure is for summer crop in double crop.  Per Table 6 footnote, when manure solids <5% the NH <sub>4</sub> -N availability factor is increased by 0.2.	
<b>E) Previous Legume N (lb/A)</b> <small>Table 5 (AG Table 1.2-4) or Soil Test Report</small>	<b>0</b>				
<b>F) Net Nutrient Requirement (lb/A)</b> <small>(A – B – C – D – E)</small>	<b>137</b>	<b>(71)</b>	<b>(52)</b>		
<b>G) Manure Analysis</b> <small>(lb/ton or lb/1000gal)</small>	NH <sub>4</sub> -N <b>19.6</b>	Org N <b>13.1</b>	<b>20.3</b>		
<b>H) Nitrogen Availability Factors</b> <small>Table 6 (AG Table 1.2-11A)</small>	NH <sub>4</sub> -N <b>0.3</b>	Org N <b>0.5</b>			
<b>I) Available Nitrogen Fractions</b> <small>(lb/ton or lb/1000gal) (G x H)</small>	NH <sub>4</sub> -N <b>5.88</b>	Org N <b>6.55</b>			
<b>J) Total Available Nitrogen</b> <small>(sum of Available N Fractions from row I)</small>	NH <sub>4</sub> -N + Org N <b>12.43</b>				
<b>K) Balanced Manure Rate</b> (tons/A or gallons/A) <small>Complete 1 column For N: (F ÷ J) For P: (F ÷ G)</small>	<b>11,022</b>	<b>----</b>			
<b>L) Planned Manure Rate</b> (tons/A or gallons/A) <small>Must be less than or equal to Row K Balanced Rate and based on the plan basis being used</small>	<b>6,250</b>				
<b>M) Nutrients Applied at Planned Rate</b> <small>(lb/A) For N: (K x I) For P &amp; K: (K x G)</small>	<b>79</b>	<b>127</b>	<b>109</b>	<b>Note:</b> Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.	
<b>N) Nutrient Balance at Planned Rate</b> <small>(lb/A) (F - L) (Indicate short or excess)</small>	<b>59</b>	<b>(198)</b>	<b>(161)</b>		



## Nutrient Balance Worksheet

Crop Group		Yield	CMU/Field Identification <small>(Each field must be clearly identified on a map)</small>		Acres	
<b>Grass Hay (1<sup>st</sup> in Multiple)</b>		<b>3 ton/ac</b>	<b>9</b>		<b>16</b>	
<b>Manure Plan Basis</b> <small>(check planning option)</small>	<b>OPTION 1 P Removal</b>	<b>OPTION 2 N Requirement</b>		<b>X</b>	<b>OPTION 3 P Index</b>	
	<ul style="list-style-type: none"> <li>P removal rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>No winter application</li> <li>Use the P<sub>2</sub>O<sub>5</sub> column to determine acceptable rate</li> <li>Completion of N column required for all options; P<sub>2</sub>O<sub>5</sub> column is optional for N based rates; K<sub>2</sub>O is optional for all rates.</li> </ul>	<ul style="list-style-type: none"> <li>N requirement rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>Soil test &lt; 200 ppm Mehlich 3 P</li> <li>No winter application</li> <li>Use the N column to determine acceptable rate</li> </ul>		<ul style="list-style-type: none"> <li>P Index evaluation of fields</li> <li>P Index and Winter Matrix required for winter application</li> <li>Use appropriate column based on the P Index to determine acceptable rate</li> </ul>		
	Soil Test Mehlich 3 P (ppm)			<b>93</b>		
<b>Manure Group</b>		<b>Manure Type (Poultry, Swine, Other, Compost)</b>		<b>Application Season</b>	<b>Application Management</b>	
<b>Siegrist Spring</b>		<b>Swine</b>		<b>Spring</b>	<b>No Incorporation</b>	
<b>Manure Analysis</b>						
<b>Units (Circle)</b>		<b>NH<sub>4</sub>-N</b>	<b>Organic N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>	<b>Manure % Solids</b>
lb/ton or <b>lb/1000 gal</b>		<b>19.6</b>	<b>13.1</b>	<b>20.3</b>	<b>17.4</b>	<b>4.2</b>
<b>Notes</b>						

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Recommendation Basis	
<b>A) Recommendation or Removal (lb/A)</b> <small>N – Soil Test or Tables 1 &amp; 2 (AG Table 1.2-3;1.2-5) P<sub>2</sub>O<sub>5</sub> &amp; K<sub>2</sub>O – Soil Test or Table 3 (AG Table 1.2-6)</small>	<b>150</b>	<b>0</b>	<b>0</b>	<b>X</b>	Soil Tests
<b>B) Fertilizer Applied (lb/A)</b> <small>(Regardless of Manure e.g. Starter)</small>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Application Record &amp; Notes</b> Record when the planned manure and fertilizer rates were applied or note changes.  Per Table 6 footnote, when manure solids <5% the NH <sub>4</sub> -N availability factor is increased by 0.2.	
<b>C) Other Organic Sources Applied (lb/A)</b> <small>(e.g. Biosolids, Other Manure)</small>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>D) Residual Manure N (lb/A)</b> <small>Table 4 (AG Table 1.2-11B)</small>	<b>20</b>				
<b>E) Previous Legume N (lb/A)</b> <small>Table 5 (AG Table 1.2-4) or Soil Test Report</small>	<b>0</b>				
<b>F) Net Nutrient Requirement (lb/A)</b> <small>(A – B – C – D – E)</small>	<b>130</b>	<b>0</b>	<b>0</b>		
<b>G) Manure Analysis</b> <small>(lb/ton or lb/1000gal)</small>	NH <sub>4</sub> -N <b>19.6</b>	Org N <b>13.1</b>	<b>20.3</b>	<b>Application Record &amp; Notes</b> Record when the planned manure and fertilizer rates were applied or note changes.  Per Table 6 footnote, when manure solids <5% the NH <sub>4</sub> -N availability factor is increased by 0.2.	
<b>H) Nitrogen Availability Factors</b> <small>Table 6 (AG Table 1.2-11A)</small>	NH <sub>4</sub> -N <b>0.3</b>	Org N <b>0.5</b>			
<b>I) Available Nitrogen Fractions</b> <small>(lb/ton or lb/1000gal) (G x H)</small>	NH <sub>4</sub> -N <b>5.88</b>	Org N <b>6.55</b>			
<b>J) Total Available Nitrogen</b> <small>(sum of Available N Fractions from row I)</small>	NH <sub>4</sub> -N + Org N <b>12.43</b>				
<b>K) Balanced Manure Rate</b> (tons/A or gallons/A) <small>Complete 1 column For N: (F ÷ J) For P: (F ÷ G)</small>	<b>10,459</b>	----			
<b>L) Planned Manure Rate</b> (tons/A or gallons/A) <small>Must be less than or equal to Row K Balanced Rate and based on the plan basis being used</small>	<b>6,250</b>			<b>Note:</b> Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.	
<b>M) Nutrients Applied at Planned Rate</b> <small>(lb/A) For N: (K x I) For P &amp; K: (K x G)</small>	<b>78</b>	<b>127</b>	<b>109</b>		
<b>N) Nutrient Balance at Planned Rate</b> <small>(lb/A) (F - L) (Indicate short or excess)</small>	<b>52</b>	<b>(127)</b>	<b>(109)</b>		

## Nutrient Balance Worksheet

Crop Group		Yield	CMU/Field Identification <small>(Each field must be clearly identified on a map)</small>		Acres	
<b>Grass Hay (2<sup>nd</sup> in Multiple)</b>		<b>3 ton/ac</b>	<b>9</b>		<b>16</b>	
<b>Manure Plan Basis</b> <small>(check planning option)</small>	<b>OPTION 1 P Removal</b>	<b>OPTION 2 N Requirement</b>		<b>X</b>	<b>OPTION 3 P Index</b>	
	<ul style="list-style-type: none"> <li>P removal rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>No winter application</li> <li>Use the P<sub>2</sub>O<sub>5</sub> column to determine acceptable rate</li> <li>Completion of N column required for all options; P<sub>2</sub>O<sub>5</sub> column is optional for N based rates; K<sub>2</sub>O is optional for all rates.</li> </ul>	<ul style="list-style-type: none"> <li>N requirement rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>Soil test &lt; 200 ppm Mehlich 3 P</li> <li>No winter application</li> <li>Use the N column to determine acceptable rate</li> </ul>		<ul style="list-style-type: none"> <li>P Index evaluation of fields</li> <li>P Index and Winter Matrix required for winter application</li> <li>Use appropriate column based on the P Index to determine acceptable rate</li> </ul>		
	<b>Soil Test Mehlich 3 P (ppm)</b>		<b>93</b>			
<b>Manure Group</b>		<b>Manure Type <small>(Poultry, Swine, Other, Compost)</small></b>		<b>Application Season</b>	<b>Application Management</b>	
<b>Siegrist Spring</b>		<b>Swine</b>		<b>Spring</b>	<b>No Incorporation</b>	
<b>Manure Analysis</b>						
<b>Units (Circle)</b>		<b>NH<sub>4</sub>-N</b>	<b>Organic N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>	<b>Manure % Solids</b>
lb/ton or <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">lb/1000 gal</span>		<b>19.6</b>	<b>13.1</b>	<b>20.3</b>	<b>17.4</b>	<b>4.2</b>
<b>Notes</b>						

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Recommendation Basis	
<b>A) Recommendation or Removal (lb/A)</b> <small>N – Soil Test or Tables 1 &amp; 2 (AG Table 1.2-3;1.2-5) P<sub>2</sub>O<sub>5</sub> &amp; K<sub>2</sub>O – Soil Test or Table 3 (AG Table 1.2-6)</small>				<b>X</b>	Soil Tests
<b>B) Fertilizer Applied (lb/A)</b> <small>(Regardless of Manure e.g. Starter)</small>					<b>Application Record &amp; Notes</b> Record when the planned manure and fertilizer rates were applied or note changes.  Net nutrient requirements transferred from initial manure application nutrient balance.  Per Table 6 footnote, when manure solids <5% the NH <sub>4</sub> -N availability factor is increased by 0.2.
<b>C) Other Organic Sources Applied (lb/A)</b> <small>(e.g. Biosolids, Other Manure)</small>					
<b>D) Residual Manure N (lb/A)</b> <small>Table 4 (AG Table 1.2-11B)</small>					
<b>E) Previous Legume N (lb/A)</b> <small>Table 5 (AG Table 1.2-4) or Soil Test Report</small>					
<b>F) Net Nutrient Requirement (lb/A)</b> <small>(A – B – C – D – E)</small>	<b>52</b>	<b>(127)</b>	<b>(109)</b>		
<b>G) Manure Analysis (lb/ton or lb/1000gal)</b>	NH <sub>4</sub> -N <b>19.6</b>	Org N <b>13.1</b>	<b>20.3</b>	<b>17.4</b>	
<b>H) Nitrogen Availability Factors</b> <small>Table 6 (AG Table 1.2-11A)</small>	NH <sub>4</sub> -N <b>0.3</b>	Org N <b>0.5</b>			
<b>I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H)</b>	NH <sub>4</sub> -N <b>5.88</b>	Org N <b>6.55</b>			
<b>J) Total Available Nitrogen (sum of Available N Fractions from row I)</b>	NH <sub>4</sub> -N + Org N <b>12.43</b>				
<b>K) Balanced Manure Rate (tons/A or gallons/A)</b> <small>Complete 1 column For N: (F ÷ J) For P: (F ÷ G)</small>	<b>4,183</b>	----			
<b>L) Planned Manure Rate (tons/A or gallons/A)</b> <small>Must be less than or equal to Row K Balanced Rate and based on the plan basis being used</small>	<b>3,200</b>				
<b>M) Nutrients Applied at Planned Rate (lb/A) For N: (K x I) For P &amp; K: (K x G)</b>	<b>40</b>	<b>65</b>	<b>56</b>	<b>Note:</b> Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.	
<b>N) Nutrient Balance at Planned Rate (lb/A) (F - L) (Indicate short or excess)</b>	<b>12</b>	<b>(192)</b>	<b>(165)</b>		

## Nutrient Balance Worksheet

Crop Group		Yield	CMU/Field Identification <small>(Each field must be clearly identified on a map)</small>		Acres
<b>Corn after Alfalfa</b>		<b>175 bu/ac</b>	<b>10</b>		<b>12</b>
<b>Manure Plan Basis</b> <small>(check planning option)</small>	<b>OPTION 1 P Removal</b>	<b>OPTION 2 N Requirement</b>		<b>OPTION 3 P Index</b>	<b>X</b>
	<ul style="list-style-type: none"> <li>P removal rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>No winter application</li> <li>Use the P<sub>2</sub>O<sub>5</sub> column to determine acceptable rate</li> <li>Completion of N column required for all options; P<sub>2</sub>O<sub>5</sub> column is optional for N based rates; K<sub>2</sub>O is optional for all rates.</li> </ul>	<ul style="list-style-type: none"> <li>N requirement rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>Soil test &lt; 200 ppm Mehlich 3 P</li> <li>No winter application</li> <li>Use the N column to determine acceptable rate</li> </ul>		<ul style="list-style-type: none"> <li>P Index evaluation of fields</li> <li>P Index and Winter Matrix required for winter application</li> <li>Use appropriate column based on the P Index to determine acceptable rate</li> </ul>	
		<b>Soil Test Mehlich 3 P (ppm)</b>	<b>315</b>		
<b>Manure Group</b>		<b>Manure Type (Poultry, Swine, Other, Compost)</b>		<b>Application Season</b>	<b>Application Management</b>
<b>Siegrist Spring</b>		<b>Swine</b>		<b>Spring</b>	<b>No Incorporation</b>
<b>Units (Circle)</b>		<b>Manure Analysis</b>			<b>Manure % Solids</b>
		<b>NH<sub>4</sub>-N</b>	<b>Organic N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>
lb/ton or <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">lb/1000 gal</span>		<b>19.6</b>	<b>13.1</b>	<b>20.3</b>	<b>17.4</b>
<b>Notes</b>					

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	<b>Recommendation Basis</b>	
<b>A) Recommendation or Removal (lb/A)</b> <small>N – Soil Test or Tables 1 &amp; 2 (AG Table 1.2-3;1.2-5) P<sub>2</sub>O<sub>5</sub> &amp; K<sub>2</sub>O – Soil Test or Table 3 (AG Table 1.2-6)</small>	<b>190</b>	<b>0</b>	<b>0</b>	<b>X</b>	Soil Tests
<b>B) Fertilizer Applied (lb/A)</b> <small>(Regardless of Manure e.g. Starter)</small>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Application Record &amp; Notes</b> Record when the planned manure and fertilizer rates were applied or note changes.	
<b>C) Other Organic Sources Applied (lb/A)</b> <small>(e.g. Biosolids, Other Manure)</small>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>D) Residual Manure N (lb/A)</b> <small>Table 4 (AG Table 1.2-11B)</small>	<b>20</b>			Previous legume was alfalfa <25% stand.	
<b>E) Previous Legume N (lb/A)</b> <small>Table 5 (AG Table 1.2-4) or Soil Test Report</small>	<b>40</b>				
<b>F) Net Nutrient Requirement (lb/A)</b> <small>(A – B – C – D – E)</small>	<b>130</b>	<b>0</b>	<b>0</b>		
<b>G) Manure Analysis</b> <small>(lb/ton or lb/1000gal)</small>	NH <sub>4</sub> -N <b>19.6</b>	Org N <b>13.1</b>	<b>20.3</b>		
<b>H) Nitrogen Availability Factors</b> <small>Table 6 (AG Table 1.2-11A)</small>	NH <sub>4</sub> -N <b>0.3</b>	Org N <b>0.5</b>			
<b>I) Available Nitrogen Fractions</b> <small>(lb/ton or lb/1000gal) (G x H)</small>	NH <sub>4</sub> -N <b>5.88</b>	Org N <b>6.55</b>			
<b>J) Total Available Nitrogen</b> <small>(sum of Available N Fractions from row I)</small>	NH <sub>4</sub> -N + Org N <b>12.43</b>				
<b>K) Balanced Manure Rate</b> (tons/A or gallons/A) <small>Complete 1 column For N: (F ÷ J) For P: (F ÷ G)</small>	<b>10,459</b>	----			
<b>L) Planned Manure Rate</b> (tons/A or gallons/A) <small>Must be less than or equal to Row K Balanced Rate and based on the plan basis being used</small>	<b>3,200</b>				
<b>M) Nutrients Applied at Planned Rate</b> <small>(lb/A) For N: (K x I) For P &amp; K: (K x G)</small>	<b>40</b>	<b>65</b>	<b>56</b>	<b>Note:</b> Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.	
<b>N) Nutrient Balance at Planned Rate</b> <small>(lb/A) (F - L) (Indicate short or excess)</small>	<b>90</b>	<b>(65)</b>	<b>(56)</b>		

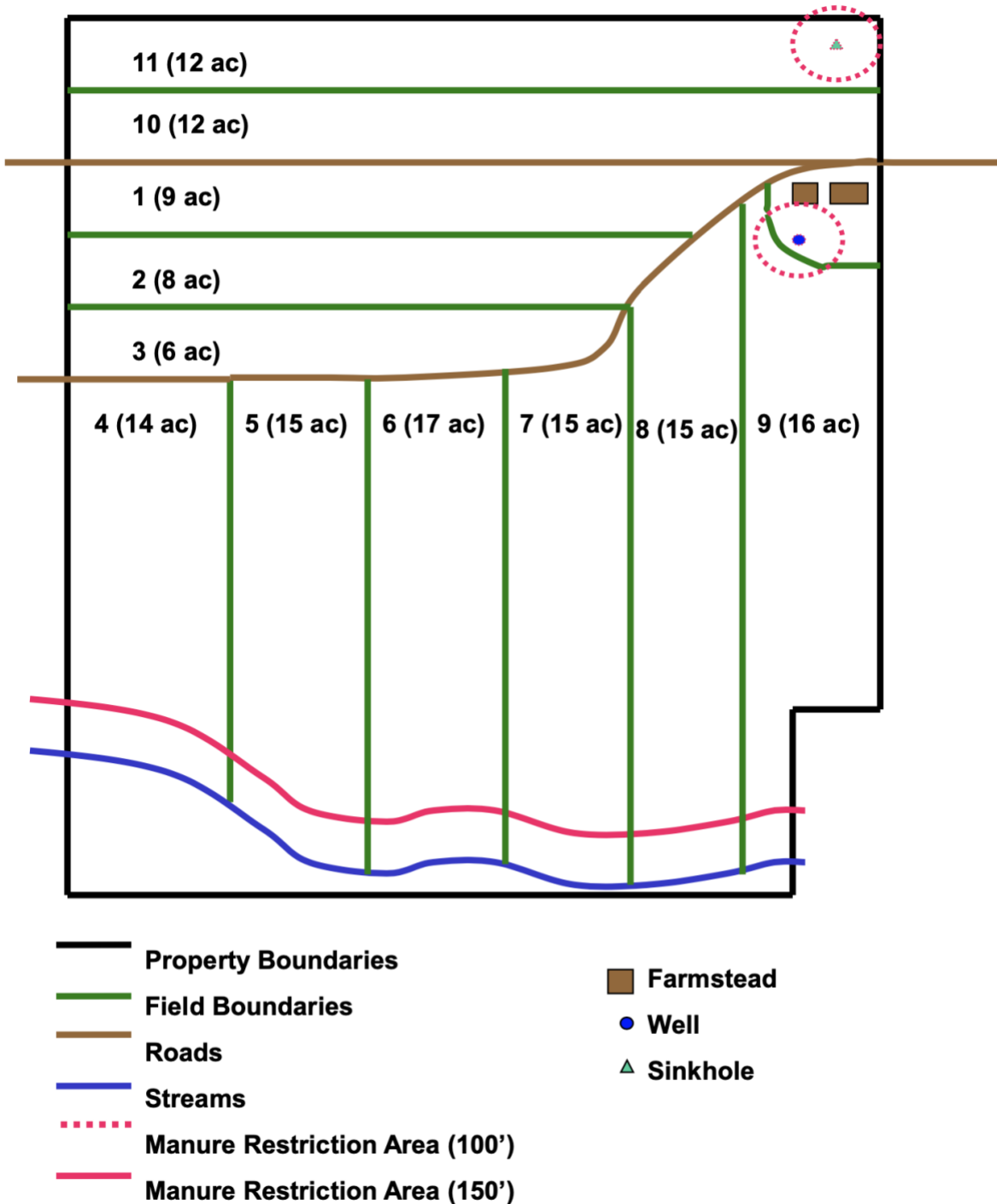
## Nutrient Balance Worksheet

Crop Group		Yield	CMU/Field Identification <small>(Each field must be clearly identified on a map)</small>		Acres	
<b>Corn after Alfalfa</b>		<b>175 bu/ac</b>	<b>11</b>		<b>12</b>	
<b>Manure Plan Basis</b> <small>(check planning option)</small>	<b>OPTION 1 P Removal</b>	<b>X</b>	<b>OPTION 2 N Requirement</b>		<b>OPTION 3 P Index</b>	
	<ul style="list-style-type: none"> <li>P removal rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>No winter application</li> <li>Use the P<sub>2</sub>O<sub>5</sub> column to determine acceptable rate</li> <li>Completion of N column required for all options; P<sub>2</sub>O<sub>5</sub> column is optional for N based rates; K<sub>2</sub>O is optional for all rates.</li> </ul>		<ul style="list-style-type: none"> <li>N requirement rates</li> <li>150' application setback from streams, lakes or ponds</li> <li>Soil test &lt; 200 ppm Mehlich 3 P</li> <li>No winter application</li> <li>Use the N column to determine acceptable rate</li> </ul>		<ul style="list-style-type: none"> <li>P Index evaluation of fields</li> <li>P Index and Winter Matrix required for winter application</li> <li>Use appropriate column based on the P Index to determine acceptable rate</li> </ul>	
	<b>Soil Test Mehlich 3 P (ppm)</b>					
<b>Manure Group</b>		<b>Manure Type <small>(Poultry, Swine, Other, Compost)</small></b>		<b>Application Season</b>	<b>Application Management</b>	
<b>Siegrist Spring</b>		<b>Swine</b>		<b>Spring</b>	<b>No Incorporation</b>	
<b>Manure Analysis</b>						
<b>Units (Circle)</b>		<b>NH<sub>4</sub>-N</b>	<b>Organic N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>	<b>Manure % Solids</b>
lb/ton or <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">lb/1000 gal</span>		<b>19.6</b>	<b>13.1</b>	<b>20.3</b>	<b>17.4</b>	<b>4.2</b>
<b>Notes</b>						

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Recommendation Basis	
<b>A) Recommendation or Removal (lb/A)</b> <small>N – Soil Test or Tables 1 &amp; 2 (AG Table 1.2-3;1.2-5) P<sub>2</sub>O<sub>5</sub> &amp; K<sub>2</sub>O – Soil Test or Table 3 (AG Table 1.2-6)</small>	<b>175</b>	<b>70</b>	<b>53</b>	X Soil Tests Crop Removal	
<b>B) Fertilizer Applied (lb/A)</b> <small>(Regardless of Manure e.g. Starter)</small>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Application Record &amp; Notes</b> <small>Record when the planned manure and fertilizer rates were applied or note changes.</small>	
<b>C) Other Organic Sources Applied (lb/A)</b> <small>(e.g. Biosolids, Other Manure)</small>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>D) Residual Manure N (lb/A)</b> <small>Table 4 (AG Table 1.2-11B)</small>	<b>20</b>				
<b>E) Previous Legume N (lb/A)</b> <small>Table 5 (AG Table 1.2-4) or Soil Test Report</small>	<b>40</b>				
<b>F) Net Nutrient Requirement (lb/A)</b> <small>(A – B – C – D – E)</small>	<b>115</b>	<b>70</b>	<b>53</b>		
<b>G) Manure Analysis</b> <small>(lb/ton or lb/1000gal)</small>	NH <sub>4</sub> -N <b>19.6</b>	Org N <b>13.1</b>	<b>20.3</b>		<b>17.4</b>
<b>H) Nitrogen Availability Factors</b> <small>Table 6 (AG Table 1.2-11A)</small>	NH <sub>4</sub> -N <b>0.3</b>	Org N <b>0.5</b>			
<b>I) Available Nitrogen Fractions</b> <small>(lb/ton or lb/1000gal) (G x H)</small>	NH <sub>4</sub> -N <b>5.88</b>	Org N <b>6.55</b>			
<b>J) Total Available Nitrogen</b> <small>(sum of Available N Fractions from row I)</small>	NH <sub>4</sub> -N + Org N <b>12.43</b>				
<b>K) Balanced Manure Rate</b> (tons/A or gallons/A) <small>Complete 1 column For N: (F ÷ J) For P: (F ÷ G)</small>	----	<b>3,448</b>			
<b>L) Planned Manure Rate</b> (tons/A or gallons/A) <small>Must be less than or equal to Row K Balanced Rate and based on the plan basis being used</small>	<b>3,200</b>				
<b>M) Nutrients Applied at Planned Rate</b> <small>(lb/A) For N: (K x I) For P &amp; K: (K x G)</small>	<b>40</b>	<b>65</b>	<b>56</b>	<b>Note:</b> Nutrient balances for P <sub>2</sub> O <sub>5</sub> and K <sub>2</sub> O based on crop removal (Row A) should not be used to determine additional fertilizer needs. Only recommendations based on soil tests should be used for this purpose.	
<b>N) Nutrient Balance at Planned Rate</b> <small>(lb/A) (F - L) (Indicate short or excess)</small>	<b>0</b>	<b>5</b>	<b>(3)</b>		

## Appendix 1 Operation Maps

Maps (or aerial photographs) required in Nutrient Balance Sheets must identify: road and road names adjacent to and within the operation; field identification, boundaries and acreage; manure application setback areas and vegetated buffers and associated landscape features (streams and other water bodies, sinkholes, and active water wells or springs); and location of in-field manure stacking areas (including each site in stacking area rotation. A soils map for Option 3 P Index fields is encouraged but not required.



## Appendix 2 Option 3 Evaluations

Include the current Pennsylvania Phosphorus Index Spreadsheet or paper worksheet for each field that required Part B of the P Index when using Manure Plan Basis Option 3. Include the Winter Matrix evaluation of fields that will receive winter manure applications.

### Phosphorus Index Populated from NBS Input P Index sheet

Pennsylvania P Index Version 2

PART A: SCREENING TOOL CMU/Field ID	PART A: SCREENING TOOL					CMU/Field ID	10 - Corn After Alfalfa P Index
Is the CMU in a Special Protection watershed?	Is the CMU in a Special Protection watershed?					If the answer is Yes to any of these questions, Part B must be used.	No
A significant farm management change as defined by Act 38?	Is there a significant farm management change as defined by Act 38?						No
Soil Test Mehlich 3 P greater than 200 ppm P?	Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)						315
Contributing Distance from CMU to receiving water <150 ft.?	Is the Contributing Distance from this CMU to receiving water less than 150 ft.?						No
Is winter manure application planned for this field?	Is winter manure application planned for this field?					No	No
Run P Index Part B voluntarily? (No to all Part A questions. )	Run P Index Part B voluntarily? (Answers are No to all Part A questions. )					No	No
<b>PART B: SOURCE FACTORS:</b> Mehlich 3 Soil Test P (ppm P)						Mehlich 3 Soil Test P (ppm P)	315
<b>Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)</b>							63
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)						Fertilizer P (lb P2O5/acre)	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE <sup>3</sup>	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil		-
SUPPLEMENTAL P FERTILIZER						Fertilizer P (lb P2O5/acre)	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER <sup>3</sup>	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil		-
<b>Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method</b>							0
MANURE P RATE						Manure P (lb P2O5/acre)	65
MANURE APPLICATION METHOD <sup>3</sup>	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil		0.6
P SOURCE COEFFICIENT <sup>3</sup>	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1						1
<b>Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient</b>							39
<b>Source Factor Sum</b>							102
<b>PART B: TRANSPORT FACTORS</b>							
EROSION	Soil Loss (ton/acre/yr)						2
RUNOFF POTENTIAL	0 <i>Drainage Class is Excessively</i>	2 <i>Drainage Class is Somewhat Excessively</i>	4 <i>Drainage Class is Well/Moderately Well</i>	6 <i>Drainage Class is Somewhat Poorly</i>	8 <i>Drainage Class is Poorly/Very Poorly</i>		4
SUBSURFACE DRAINAGE	0 None		1 Random		2 Patterned		0
CONTRIBUTING DISTANCE	0 > 500 ft.	2 350 to 500 ft.	4 200 to 349 ft.	6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer	8 9 < 100 ft.		0
<b>Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance</b>							6
MODIFIED CONNECTIVITY	0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT		1.0 Grassed Waterway or None	1.1 Direct Connection APPLIES TO DIST > 100 FT			1
<b>Transport Sum x Modified Connectivity / 24</b>							0.25
<b>P Index Value = 2 x Source x Transport</b>							<b>51</b>

Low: 59 or less  
Nitrogen based management

Medium: 60 to 79  
Nitrogen based management

High: 80 to 99  
Phosphorus limited to crop removal

Very High: 100 or greater  
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".