**Nutrient Balance Sheet**

## Prepared For

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Lancaster County

## Prepared By

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Jesse A. Landis** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Nutrient Management Specialist or Broker 2 Signature**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_July 30, 2025\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Date of Development**

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

\_\_X\_\_ 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

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **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) 1** | **Notes****(check)** |
| **N** | P2O5 | **K2O** | **N** | P2O5 | **K2O** |
| **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 (1st) | 9 | Siegrist Spring | Spring | No Incorporation | 6250 | 0 | 0 | 0 |  |  |  | 🗸 |
| **7** | Grass Hay (2nd) | 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** |  |  |  |  |  |  |  |  |  |  |  |  |  |

**1** 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. |
|  | **Crop Group** | **CMU/Field ID** | **Manure Group** | **Notes 1** |
|  | Pasture | 1 | Sheep Uncollected | 25 ewes and 2 rams on pasture from March through November for 18 hours per day. |
| **2** | Corn After Corn | 2-8 | Siegrist Spring | Fields 4 – 8 have a 150’ manure application setback from the stream. |
| **3** | Corn After Soybeans | 2-8 | Siegrist Spring | Fields 4 – 8 have a 150’ manure application setback from the stream. |
| **4** | Barley(Winter) | 2-8 | Siegrist Fall | Fields 4 – 8 have a 150’ manure application setback from the stream. |
| **5** | Soybeans(Summer) | 2-8 | Siegrist Spring | Fields 4 – 8 have a 150’ manure application setback from the stream. |
| **6** | Grass Hay (1st) | 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. |
| **7** | Grass Hay (2nd) | 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. |
| **8** | Corn After Alfalfa | 10 | Siegrist Spring | N/A |
| **9** | Corn After Alfalfa | 11 | Siegrist Spring | Nutrient balances for P2O5 and K2O 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. |
| **10** |  |  |  |  |
| **11** |  |  |  |  |
| **12** |  |  |  |  |
| **13** |  |  |  |  |
| **14** |  |  |  |  |
| **15** |  |  |  |  |

**1** If crop removal values were used in Row A for P2O5 and K2O, planners should use the following standard note: Nutrient balances for P2O5 and K2O are based on crop removal and should not be used to determine additional fertilizer needs.

**Nutrient Balance Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Group** | **Yield** | **CMU/Field Identification** (Each field must be clearly identified on a map) | **Acres** |
| **Pasture** | **3 ton/ac** | **1** | **9** |
| **Manure Plan Basis**(check planning option) | **OPTION 1****P Removal** |  | **OPTION 2****N Requirement** | **X** | **OPTION 3****P Index** |  |
| * P removal rates
* 150’ application setback from streams, lakes or ponds
* No winter application
* Use the P2O5 column to determine acceptable rate
* Completion of N column required for all options; P2O5 column is optional for N based rates; K2O is optional for all rates.
 | * N requirement rates
* 150’ application setback from streams, lakes or ponds
* Soil test < 200 ppm Mehlich 3 P
* No winter application
* Use the N column to determine acceptable rate
 | * P Index evaluation of fields
* P Index and Winter Matrix required for winter application
* Use appropriate column based on the P Index to determine acceptable rate
 |
| **Soil Test Mehlich 3 P (ppm)** | **81** |
| **Manure Group** | **Manure Type****(Poultry, Swine, Other, Compost)** | **Application Season** | **Application Management** |
| **Swine Siegrist Fall** | **Swine** | **Early fall** | **No incorporation** |
| **Manure Analysis****Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | **Manure % Solids** |
| **lb/ton or lb/1000 gal** | **18.3** | **12.1** | **22.1** | **16.1** | **4.1** |
| **Notes** |  |
|  | **N** | **P2O5** | **K2O** | **Recommendation Basis** |
| **A) Recommendation or Removal** (lb/A)N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5)P2O5 & K2O – Soil Test or Table 3 (AG Table 1.2-6) | **150** | **0** | **40** | **X** | Soil Tests |
|  | Crop Removal |
| **B) Fertilizer Applied** (lb/A) (Regardless of Manure e.g. Starter) | **0** | **0** | **0** | **Application Record & Notes**Record when the planned manure and fertilizer rates were applied or note changes. |
| **C) Other Organic Sources Applied** (lb/A) (e.g. Biosolids, Other Manure) | **13** | **22** | **56** |
| **D) Residual Manure N** (lb/A) Table 4 (AG Table 1.2-11B) | **35** |  |  | Other Organic Sources: Uncollected manure from 25 ewes and 2 rams on pasture from March through November for 18 hours per day. |
| **E) Previous Legume N** (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report | **0** |  |  |
| **F) Net Nutrient Requirement** (lb/A) (A – B – C – D – E) | **102** | **(22)** | **(16)** |
| **G) Manure Analysis** (lb/ton or lb/1000gal) | NH4-N**18.3** | Org N**12.1** | **22.1** | **16.1** |
| H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A) | NH4-N**0.10** | Org N**0.20** |  |  |
| I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H) | NH4-N**1.83** | Org N**2.42** |  |  |
| **J) Total Available Nitrogen** (sum of Available N Fractions from row I) | NH4-N + Org N**4.25** |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G) | **24,000** | **----** |  |
| **L) Planned Manure Rate** (tons/A or gallons/A)Must be less than or equal to Row K Balanced Rate and based on the plan basis being used | **6,250** |
| **M) Nutrients Applied at Planned Rate** (lb/A) For N: (L x J) For P & K: (L x G) | **27** | **138** | **101** | **Note:** Nutrient balances for P2O5 and K2O 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. |
| **N) Nutrient Balance at Planned Rate** (lb/A) (F - M) (Indicate short or excess)  | **75** | **(160)** | **(117)** |

**Nutrient Balance Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Group** | **Yield** | **CMU/Field Identification** (Each field must be clearly identified on a map) | **Acres** |
| **Corn after Corn** | **150 bu/ac** | **2-8** | **90** |
| **Manure Plan Basis**(check planning option) | **OPTION 1****P Removal** |  | **OPTION 2****N Requirement** | **X** | **OPTION 3****P Index** |  |
| * P removal rates
* 150’ application setback from streams, lakes or ponds
* No winter application
* Use the P2O5 column to determine acceptable rate
* Completion of N column required for all options; P2O5 column is optional for N based rates; K2O is optional for all rates.
 | * N requirement rates
* 150’ application setback from streams, lakes or ponds
* Soil test < 200 ppm Mehlich 3 P
* No winter application
* Use the N column to determine acceptable rate
 | * P Index evaluation of fields
* P Index and Winter Matrix required for winter application
* Use appropriate column based on the P Index to determine acceptable rate
 |
| **Soil Test Mehlich 3 P (ppm)** | **154** |
| **Manure Group** | **Manure Type****(Poultry, Swine, Other, Compost)** | **Application Season** | **Application Management** |
| **Swine Siegrist Spring** | **Swine** | **Spring** | **No Incorporation** |
| **Manure Analysis****Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | **Manure % Solids** |
| **lb/ton or lb/1000 gal** | **19.6** | **13.1** | **20.3** | **17.4** | **4.2** |
| **Notes** |  |
|  | **N** | **P2O5** | **K2O** | **Recommendation Basis** |
| **A) Recommendation or Removal** (lb/A)N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5)P2O5 & K2O – Soil Test or Table 3 (AG Table 1.2-6) | **150** | **60** | **45** | **X** | Soil Tests |
|  | Crop Removal |
| **B) Fertilizer Applied** (lb/A) (Regardless of Manure e.g. Starter) | **15** | **30** | **30** | **Application Record & Notes**Record when the planned manure and fertilizer rates were applied or note changes. |
| **C) Other Organic Sources Applied** (lb/A) (e.g. Biosolids, Other Manure) | **0** | **0** | **0** |
| **D) Residual Manure N** (lb/A) Table 4 (AG Table 1.2-11B) | **35** |  |  |  |
| **E) Previous Legume N** (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report | **0** |  |  |
| **F) Net Nutrient Requirement** (lb/A) (A – B – C – D – E) | **100** | **30** | **15** |
| **G) Manure Analysis** (lb/ton or lb/1000gal) | NH4-N**19.6** | Org N**13.1** | **20.3** | **17.4** |
| H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A) | NH4-N**0.10** | Org N**0.35** |  |  |
| I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H) | NH4-N**1.96** | Org N**4.56** |  |  |
| **J) Total Available Nitrogen** (sum of Available N Fractions from row I) | NH4-N + Org N**6.55** |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G) | **15,267** | **----** |  |
| **L) Planned Manure Rate** (tons/A or gallons/A)Must be less than or equal to Row K Balanced Rate and based on the plan basis being used | **6,250** |
| **M) Nutrients Applied at Planned Rate** (lb/A) For N: (L x J) For P & K: (L x G) | **41** | **41** | **41** | **Note:** Nutrient balances for P2O5 and K2O 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. |
| **N) Nutrient Balance at Planned Rate** (lb/A) (F - M) (Indicate short or excess)  | **59** | **59** | **59** |

**Nutrient Balance Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Group** | **Yield** | **CMU/Field Identification** (Each field must be clearly identified on a map) | **Acres** |
| **Corn after Soybeans** | **150 bu/ac** | **2-8** | **90** |
| **Manure Plan Basis**(check planning option) | **OPTION 1****P Removal** |  | **OPTION 2****N Requirement** | **X** | **OPTION 3****P Index** |  |
| * P removal rates
* 150’ application setback from streams, lakes or ponds
* No winter application
* Use the P2O5 column to determine acceptable rate
* Completion of N column required for all options; P2O5 column is optional for N based rates; K2O is optional for all rates.
 | * N requirement rates
* 150’ application setback from streams, lakes or ponds
* Soil test < 200 ppm Mehlich 3 P
* No winter application
* Use the N column to determine acceptable rate
 | * P Index evaluation of fields
* P Index and Winter Matrix required for winter application
* Use appropriate column based on the P Index to determine acceptable rate
 |
| **Soil Test Mehlich 3 P (ppm)** | **154** |
| **Manure Group** | **Manure Type****(Poultry, Swine, Other, Compost)** | **Application Season** | **Application Management** |
| **Swine Siegrist Spring** | **Swine** | **Spring** | **No Incorporation** |
| **Manure Analysis****Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | **Manure % Solids** |
| **lb/ton or lb/1000 gal** | **19.6** | **13.1** | **20.3** | **17.4** | **4.2** |
| **Notes** |  |
|  | **N** | **P2O5** | **K2O** | **Recommendation Basis** |
| **A) Recommendation or Removal** (lb/A)N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5)P2O5 & K2O – Soil Test or Table 3 (AG Table 1.2-6) | **160** | **0** | **0** | **X** | Soil Tests |
|  | Crop Removal |
| **B) Fertilizer Applied** (lb/A) (Regardless of Manure e.g. Starter) | **15** | **30** | **30** | **Application Record & Notes**Record when the planned manure and fertilizer rates were applied or note changes. |
| **C) Other Organic Sources Applied** (lb/A) (e.g. Biosolids, Other Manure) | **0** | **0** | **0** |
| **D) Residual Manure N** (lb/A) Table 4 (AG Table 1.2-11B) | **35** |  |  |  |
| **E) Previous Legume N** (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report | **50** |  |  |
| **F) Net Nutrient Requirement** (lb/A) (A – B – C – D – E) | **60** | **(30)** | **(30)** |
| **G) Manure Analysis** (lb/ton or lb/1000gal) | NH4-N**19.6** | Org N**13.1** | **20.3** | **17.4** |
| H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A) | NH4-N**0.1** | Org N**0.35** |  |  |
| I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H) | NH4-N**1.96** | Org N**4.56** |  |  |
| **J) Total Available Nitrogen** (sum of Available N Fractions from row I) | NH4-N + Org N**6.55** |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G) | **9,160** | **----** |  |
| **L) Planned Manure Rate** (tons/A or gallons/A)Must be less than or equal to Row K Balanced Rate and based on the plan basis being used | **6,250** |
| **M) Nutrients Applied at Planned Rate** (lb/A) For N: (L x J) For P & K: (L x G) | **41** | **127** | **109** | **Note:** Nutrient balances for P2O5 and K2O 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. |
| **N) Nutrient Balance at Planned Rate** (lb/A) (F - M) (Indicate short or excess)  | **19** | **(157)** | **(139)** |

**Nutrient Balance Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Group** | **Yield** | **CMU/Field Identification** (Each field must be clearly identified on a map) | **Acres** |
| **Barley (Winter)** | **60 bu/ac** | **2-8** | **90** |
| **Manure Plan Basis**(check planning option) | **OPTION 1****P Removal** |  | **OPTION 2****N Requirement** | **X** | **OPTION 3****P Index** |  |
| * P removal rates
* 150’ application setback from streams, lakes or ponds
* No winter application
* Use the P2O5 column to determine acceptable rate
* Completion of N column required for all options; P2O5 column is optional for N based rates; K2O is optional for all rates.
 | * N requirement rates
* 150’ application setback from streams, lakes or ponds
* Soil test < 200 ppm Mehlich 3 P
* No winter application
* Use the N column to determine acceptable rate
 | * P Index evaluation of fields
* P Index and Winter Matrix required for winter application
* Use appropriate column based on the P Index to determine acceptable rate
 |
| **Soil Test Mehlich 3 P (ppm)** | **154** |
| **Manure Group** | **Manure Type****(Poultry, Swine, Other, Compost)** | **Application Season** | **Application Management** |
| **Swine Siegrist Fall** | **Swine** | **Early fall** | **No incorporation** |
| **Manure Analysis****Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | **Manure % Solids** |
| **lb/ton or lb/1000 gal** | **18.3** | **12.1** | **22.1** | **16.1** | **4.1** |
| **Notes** |  |
|  | **N** | **P2O5** | **K2O** | **Recommendation Basis** |
| **A) Recommendation or Removal** (lb/A)N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5)P2O5 & K2O – Soil Test or Table 3 (AG Table 1.2-6) | **55** | **0** | **0** | **X** | Soil Tests |
|  | Crop Removal |
| **B) Fertilizer Applied** (lb/A) (Regardless of Manure e.g. Starter) | **0** | **0** | **0** | **Application Record & Notes**Record when the planned manure and fertilizer rates were applied or note changes. |
| **C) Other Organic Sources Applied** (lb/A) (e.g. Biosolids, Other Manure) | **0** | **0** | **0** |
| **D) Residual Manure N** (lb/A) Table 4 (AG Table 1.2-11B) | **7** |  |  | Residual manure is for winter crop in double crop.Per Table 6 footnote, when manure solids <5% the NH4-N availability factor is increased by 0.2.**Calculate Carryover Organic N available to next year’s soybeans (summer crop in this double crop scenario):** 12.1 lb N X 3,200 gal = 38.72 lb N 1000 gal. acre acre38.72 lb N X 0.25 Org N avail. Factor Acre  = 9.68 = 10  carried to soybean worksheet |
| **E) Previous Legume N** (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report | **0** |  |  |
| **F) Net Nutrient Requirement** (lb/A) (A – B – C – D – E) | **48** | **0** | **0** |
| **G) Manure Analysis** (lb/ton or lb/1000gal) | NH4-N**18.3** | Org N**12.1** | **22.1** | **16.1** |
| H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A) | NH4-N**0.30** | Org N**0.30** |  |  |
| I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H) | NH4-N**5.49** | Org N**3.63** |  |  |
| **J) Total Available Nitrogen** (sum of Available N Fractions from row I) | NH4-N + Org N**9.12** |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G) | **5,263** | **----** |  |
| **L) Planned Manure Rate** (tons/A or gallons/A)Must be less than or equal to Row K Balanced Rate and based on the plan basis being used | **6,250** |
| **M) Nutrients Applied at Planned Rate** (lb/A) For N: (L x J) For P & K: (L x G) | **41** | **127** | **109** | **Note:** Nutrient balances for P2O5 and K2O 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. |
| **N) Nutrient Balance at Planned Rate** (lb/A) (F - M) (Indicate short or excess)  | **19** | **(157)** | **(139)** |

**Nutrient Balance Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Group** | **Yield** | **CMU/Field Identification** (Each field must be clearly identified on a map) | **Acres** |
| **Soybean (Summer)** | **50 bu/ac** | **2-8** | **90** |
| **Manure Plan Basis**(check planning option) | **OPTION 1****P Removal** |  | **OPTION 2****N Requirement** | **X** | **OPTION 3****P Index** |  |
| * P removal rates
* 150’ application setback from streams, lakes or ponds
* No winter application
* Use the P2O5 column to determine acceptable rate
* Completion of N column required for all options; P2O5 column is optional for N based rates; K2O is optional for all rates.
 | * N requirement rates
* 150’ application setback from streams, lakes or ponds
* Soil test < 200 ppm Mehlich 3 P
* No winter application
* Use the N column to determine acceptable rate
 | * P Index evaluation of fields
* P Index and Winter Matrix required for winter application
* Use appropriate column based on the P Index to determine acceptable rate
 |
| **Soil Test Mehlich 3 P (ppm)** | **154** |
| **Manure Group** | **Manure Type****(Poultry, Swine, Other, Compost)** | **Application Season** | **Application Management** |
| **Swine Siegrist Spring** | **Swine** | **Summer** | **No Incorporation** |
| **Manure Analysis****Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | **Manure % Solids** |
| **lb/ton or lb/1000 gal** | **19.6** | **13.1** | **20.3** | **17.4** | **4.2** |
| **Notes** |  |
|  | **N** | **P2O5** | **K2O** | **Recommendation Basis** |
| **A) Recommendation or Removal** (lb/A)N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5)P2O5 & K2O – Soil Test or Table 3 (AG Table 1.2-6) | **160** | **0** | **0** | **X** | Soil Tests |
|  | Crop Removal |
| **B) Fertilizer Applied** (lb/A) (Regardless of Manure e.g. Starter) | **0** | **0** | **0** | **Application Record & Notes**Record when the planned manure and fertilizer rates were applied or note changes. |
| **C) Other Organic Sources Applied** (lb/A) (e.g. Biosolids, Other Manure) | **10** | **(71)** | **(52)** |
| **D) Residual Manure N** (lb/A) Table 4 (AG Table 1.2-11B) | **13** |  |  | 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 NH4-N availability factor is increased by 0.2. |
| **E) Previous Legume N** (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report | **13** |  |  |
| **F) Net Nutrient Requirement** (lb/A) (A – B – C – D – E) | **137** | **(71)** | **(52)** |
| **G) Manure Analysis** (lb/ton or lb/1000gal) | NH4-N**19.6** | Org N**13.1** |  |  |
| H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A) | NH4-N**0.30** | Org N**0.50** |  |  |
| I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H) | NH4-N**5.88** | Org N**6.55** |  |  |
| **J) Total Available Nitrogen** (sum of Available N Fractions from row I) | NH4-N + Org N**12.43** |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G) | **11,022** | **----** |  |
| **L) Planned Manure Rate** (tons/A or gallons/A)Must be less than or equal to Row K Balanced Rate and based on the plan basis being used | **6,250** |
| **M) Nutrients Applied at Planned Rate** (lb/A) For N: (L x J) For P & K: (L x G) | **79** | **79** | **79** | **Note:** Nutrient balances for P2O5 and K2O 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. |
| **N) Nutrient Balance at Planned Rate** (lb/A) (F - M) (Indicate short or excess)  | **59** | **59** | **59** |

**Nutrient Balance Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Group** | **Yield** | **CMU/Field Identification** (Each field must be clearly identified on a map) | **Acres** |
| **Grass Hay (1st in Multiple)** | **3 ton/ac** | **9** | **16** |
| **Manure Plan Basis**(check planning option) | **OPTION 1****P Removal** |  | **OPTION 2****N Requirement** | **X** | **OPTION 3****P Index** |  |
| * P removal rates
* 150’ application setback from streams, lakes or ponds
* No winter application
* Use the P2O5 column to determine acceptable rate
* Completion of N column required for all options; P2O5 column is optional for N based rates; K2O is optional for all rates.
 | * N requirement rates
* 150’ application setback from streams, lakes or ponds
* Soil test < 200 ppm Mehlich 3 P
* No winter application
* Use the N column to determine acceptable rate
 | * P Index evaluation of fields
* P Index and Winter Matrix required for winter application
* Use appropriate column based on the P Index to determine acceptable rate
 |
| **Soil Test Mehlich 3 P (ppm)** | **93** |
| **Manure Group** | **Manure Type****(Poultry, Swine, Other, Compost)** | **Application Season** | **Application Management** |
| **Swine Siegrist Spring** | **Swine** | **Summer** | **No Incorporation** |
| **Manure Analysis****Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | **Manure % Solids** |
| **lb/ton or lb/1000 gal** | **19.6** | **13.1** | **20.3** | **17.4** | **4.2** |
| **Notes** | **First (initial) of multiple manure applications to this crop group.** |
|  | **N** | **P2O5** | **K2O** | **Recommendation Basis** |
| **A) Recommendation or Removal** (lb/A)N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5)P2O5 & K2O – Soil Test or Table 3 (AG Table 1.2-6) | **150** | **0** | **0** | **X** | Soil Tests |
|  | Crop Removal |
| **B) Fertilizer Applied** (lb/A) (Regardless of Manure e.g. Starter) | **0** | **0** | **0** | **Application Record & Notes**Record when the planned manure and fertilizer rates were applied or note changes. |
| **C) Other Organic Sources Applied** (lb/A) (e.g. Biosolids, Other Manure) | **0** | **0** | **0** |
| **D) Residual Manure N** (lb/A) Table 4 (AG Table 1.2-11B) | **20** |  |  | Per Table 6 footnote, when manure solids <5% the NH4-N availability factor is increased by 0.2. |
| **E) Previous Legume N** (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report | **0** |  |  |
| **F) Net Nutrient Requirement** (lb/A) (A – B – C – D – E) | **130** | **0** | **0** |
| **G) Manure Analysis** (lb/ton or lb/1000gal) | NH4-N**19.6** | Org N**13.1** | **20.3** | **17.4** |
| H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A) | NH4-N**0.30** | Org N**0.50** |  |  |
| I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H) | NH4-N**5.88** | Org N**6.55** |  |  |
| **J) Total Available Nitrogen** (sum of Available N Fractions from row I) | NH4-N + Org N**12.43** |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G) | **10,459** | **----** | **----** |
| **L) Planned Manure Rate** (tons/A or gallons/A)Must be less than or equal to Row K Balanced Rate and based on the plan basis being used | **6,250** |
| **M) Nutrients Applied at Planned Rate** (lb/A) For N: (L x J) For P & K: (L x G) | **78** | **127** | **109** | **Note:** Nutrient balances for P2O5 and K2O 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. |
| **N) Nutrient Balance at Planned Rate** (lb/A) (F - M) (Indicate short or excess)  | **52** | **(127)** | **(109)** |

**Nutrient Balance Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Group** | **Yield** | **CMU/Field Identification** (Each field must be clearly identified on a map) | **Acres** |
| **Grass Hay (2nd in Multiple)** | **3 ton/ac** | **9** | **16** |
| **Manure Plan Basis**(check planning option) | **OPTION 1****P Removal** |  | **OPTION 2****N Requirement** | **X** | **OPTION 3****P Index** |  |
| * P removal rates
* 150’ application setback from streams, lakes or ponds
* No winter application
* Use the P2O5 column to determine acceptable rate
* Completion of N column required for all options; P2O5 column is optional for N based rates; K2O is optional for all rates.
 | * N requirement rates
* 150’ application setback from streams, lakes or ponds
* Soil test < 200 ppm Mehlich 3 P
* No winter application
* Use the N column to determine acceptable rate
 | * P Index evaluation of fields
* P Index and Winter Matrix required for winter application
* Use appropriate column based on the P Index to determine acceptable rate
 |
| **Soil Test Mehlich 3 P (ppm)** | **93** |
| **Manure Group** | **Manure Type****(Poultry, Swine, Other, Compost)** | **Application Season** | **Application Management** |
| **Swine Siegrist Spring** | **Swine** | **Summer** | **No Incorporation** |
| **Manure Analysis****Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | **Manure % Solids** |
| **lb/ton or lb/1000 gal** | **19.6** | **13.1** | **20.3** | **17.4** | **4.2** |
| **Notes** | **Second (final) of multiple manure applications to this crop group** |
|  | **N** | **P2O5** | **K2O** | **Recommendation Basis** |
| **A) Recommendation or Removal** (lb/A)N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5)P2O5 & K2O – Soil Test or Table 3 (AG Table 1.2-6) |  |  |  | **X** | Soil Tests |
|  | Crop Removal |
| **B) Fertilizer Applied** (lb/A) (Regardless of Manure e.g. Starter) |  |  |  | **Application Record & Notes**Record when the planned manure and fertilizer rates were applied or note changes. |
| **C) Other Organic Sources Applied** (lb/A) (e.g. Biosolids, Other Manure) |  |  |  |
| **D) Residual Manure N** (lb/A) Table 4 (AG Table 1.2-11B) |  |  |  |  |
| **E) Previous Legume N** (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report |  |  |  |
| **F) Net Nutrient Requirement** (lb/A) (A – B – C – D – E) | **52** | **(127)** | **(109)** |
| **G) Manure Analysis** (lb/ton or lb/1000gal) | NH4-N**19.6** | Org N**13.1** |  |  |
| H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A) | NH4-N**0.30** | Org N**0.50** |  |  |
| I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H) | NH4-N**5.88** | Org N**6.55** |  |  |
| **J) Total Available Nitrogen** (sum of Available N Fractions from row I) | NH4-N + Org N**12.43** |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G) | **4,183** | **----** |  |
| **L) Planned Manure Rate** (tons/A or gallons/A)Must be less than or equal to Row K Balanced Rate and based on the plan basis being used | **3,200** |
| **M) Nutrients Applied at Planned Rate** (lb/A) For N: (L x J) For P & K: (L x G) | **40** | **65** | **56** | **Note:** Nutrient balances for P2O5 and K2O 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. |
| **N) Nutrient Balance at Planned Rate** (lb/A) (F - M) (Indicate short or excess)  | **12** | **(192)** | **(165)** |

**Nutrient Balance Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Group** | **Yield** | **CMU/Field Identification** (Each field must be clearly identified on a map) | **Acres** |
| **Corn after Alfalfa** | **175 bu/ac** | **10** | **12** |
| **Manure Plan Basis**(check planning option) | **OPTION 1****P Removal** |  | **OPTION 2****N Requirement** |  | **OPTION 3****P Index** | **X** |
| * P removal rates
* 150’ application setback from streams, lakes or ponds
* No winter application
* Use the P2O5 column to determine acceptable rate
* Completion of N column required for all options; P2O5 column is optional for N based rates; K2O is optional for all rates.
 | * N requirement rates
* 150’ application setback from streams, lakes or ponds
* Soil test < 200 ppm Mehlich 3 P
* No winter application
* Use the N column to determine acceptable rate
 | * P Index evaluation of fields
* P Index and Winter Matrix required for winter application
* Use appropriate column based on the P Index to determine acceptable rate
 |
| **Soil Test Mehlich 3 P (ppm)** | **315** |
| **Manure Group** | **Manure Type****(Poultry, Swine, Other, Compost)** | **Application Season** | **Application Management** |
| **Swine Siegrist Spring** | **Swine** | **Spring** | **No Incorporation** |
| **Manure Analysis****Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | **Manure % Solids** |
| **lb/ton or lb/1000 gal** | **19.6** | **13.1** | **20.3** | **17.4** | **4.2** |
| **Notes** | **P Index evaluation value = 51; allows N balanced manure rate.** |
|  | **N** | **P2O5** | **K2O** | **Recommendation Basis** |
| **A) Recommendation or Removal** (lb/A)N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5)P2O5 & K2O – Soil Test or Table 3 (AG Table 1.2-6) | **190** | **0** | **0** | **X** | Soil Tests |
|  | Crop Removal |
| **B) Fertilizer Applied** (lb/A) (Regardless of Manure e.g. Starter) | **0** | **0** | **0** | **Application Record & Notes**Record when the planned manure and fertilizer rates were applied or note changes. |
| **C) Other Organic Sources Applied** (lb/A) (e.g. Biosolids, Other Manure) | **0** | **0** | **0** |
| **D) Residual Manure N** (lb/A) Table 4 (AG Table 1.2-11B) | **20** |  |  | Previous legume was alfalfa <25% stand. |
| **E) Previous Legume N** (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report | **40** |  |  |
| **F) Net Nutrient Requirement** (lb/A) (A – B – C – D – E) | **130** | **0** | **0** |
| **G) Manure Analysis** (lb/ton or lb/1000gal) | NH4-N**19.6** | Org N**13.1** |  |  |
| H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A) | NH4-N**0.30** | Org N**0.50** |  |  |
| I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H) | NH4-N5.88 | Org N6.55 |  |  |
| **J) Total Available Nitrogen** (sum of Available N Fractions from row I) | NH4-N + Org N**12.43** |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G) | **10,459** | **----** |  |
| **L) Planned Manure Rate** (tons/A or gallons/A)Must be less than or equal to Row K Balanced Rate and based on the plan basis being used |  |
| **M) Nutrients Applied at Planned Rate** (lb/A) For N: (L x J) For P & K: (L x G) | **40** | **65** | **56** | **Note:** Nutrient balances for P2O5 and K2O 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. |
| **N) Nutrient Balance at Planned Rate** (lb/A) (F - M) (Indicate short or excess)  | **90** | **(65)** | **(56)** |

**Nutrient Balance Worksheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Group** | **Yield** | **CMU/Field Identification** (Each field must be clearly identified on a map) | **Acres** |
| **Corn after Alfalfa** | **175 bu/ac** | **11** | **12** |
| **Manure Plan Basis**(check planning option) | **OPTION 1****P Removal** | **X** | **OPTION 2****N Requirement** |  | **OPTION 3****P Index** |  |
| * P removal rates
* 150’ application setback from streams, lakes or ponds
* No winter application
* Use the P2O5 column to determine acceptable rate
* Completion of N column required for all options; P2O5 column is optional for N based rates; K2O is optional for all rates.
 | * N requirement rates
* 150’ application setback from streams, lakes or ponds
* Soil test < 200 ppm Mehlich 3 P
* No winter application
* Use the N column to determine acceptable rate
 | * P Index evaluation of fields
* P Index and Winter Matrix required for winter application
* Use appropriate column based on the P Index to determine acceptable rate
 |
| **Soil Test Mehlich 3 P (ppm)** | **No Soil Test** |
| **Manure Group** | **Manure Type****(Poultry, Swine, Other, Compost)** | **Application Season** | **Application Management** |
| **Swine Siegrist Spring** |  | **Spring** | **No Incorporation** |
| **Manure Analysis****Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | **Manure % Solids** |
| **lb/ton or lb/1000 gal** | **19.6** | **13.1** | **20.3** | **17.4** | **4.2** |
| **Notes** |  |
|  | **N** | **P2O5** | **K2O** | **Recommendation Basis** |
| **A) Recommendation or Removal** (lb/A)N – Soil Test or Tables 1 & 2 (AG Table 1.2-3;1.2-5)P2O5 & K2O – Soil Test or Table 3 (AG Table 1.2-6) | **175** | **70** | **53** |  | Soil Tests |
| **X** | Crop Removal |
| **B) Fertilizer Applied** (lb/A) (Regardless of Manure e.g. Starter) | **0** | **0** | **0** | **Application Record & Notes**Record when the planned manure and fertilizer rates were applied or note changes. |
| **C) Other Organic Sources Applied** (lb/A) (e.g. Biosolids, Other Manure) | **0** | **0** | **0** |
| **D) Residual Manure N** (lb/A) Table 4 (AG Table 1.2-11B) | **20** |  |  |  |
| **E) Previous Legume N** (lb/A) Table 5 (AG Table 1.2-4) or Soil Test Report | **40** |  |  |
| **F) Net Nutrient Requirement** (lb/A) (A – B – C – D – E) | **115** | **70** | **53** |
| **G) Manure Analysis** (lb/ton or lb/1000gal) | NH4-N**19.6** | Org N**13.1** |  |  |
| H) Nitrogen Availability Factors Table 6 (AG Table 1.2-11A) | NH4-N**03.0** | Org N**0.50** |  |  |
| I) Available Nitrogen Fractions (lb/ton or lb/1000gal) (G x H) | NH4-N5.88 | Org N6.55 |  |  |
| **J) Total Available Nitrogen** (sum of Available N Fractions from row I) | NH4-N + Org N**12.43** |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A) Complete 1 column For N: (F ÷ J) For P: (F ÷ G) | **---** | **3,448** |  |
| **L) Planned Manure Rate** (tons/A or gallons/A)Must be less than or equal to Row K Balanced Rate and based on the plan basis being used | **3,200** |
| **M) Nutrients Applied at Planned Rate** (lb/A) For N: (L x J) For P & K: (L x G) | **40** | **65** | **56** | **Note:** Nutrient balances for P2O5 and K2O 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. |
| **N) Nutrient Balance at Planned Rate** (lb/A) (F - M) (Indicate short or excess)  | **0** | **5** | **(4)** |

## 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.

