**Nutrient Balance Sheet**

## Prepared For

# Importing Operator Name

Importing Operator Address

# Importing Operator Phone Number

County of Application

## Prepared By

Nutrient Management Specialist or Broker 2 Name

Nutrient Management Specialist or Broker 2 Certification Number

Nutrient Management Specialist or Broker 2 Address

Nutrient Management Specialist or Broker 2 Phone Number(s)

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**Nutrient Management Specialist or Broker 2 Signature**

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**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**

Exporting Operator Name

Exporting Operator Address

County of Origin

## 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** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **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** |
| **1** |  |  |  |  |
| **2** |  |  |  |  |
| **3** |  |  |  |  |
| **4** |  |  |  |  |
| **5** |  |  |  |  |
| **6** |  |  |  |  |
| **7** |  |  |  |  |
| **8** |  |  |  |  |
| **9** |  |  |  |  |
| **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** | |
|  | | | | | | |  | |  | | | | | | |  | |
| **Manure Plan Basis**  (check planning option) | | **OPTION 1**  **P Removal** | | |  | | **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)** | | |  | | | | | | | |
| **Manure Group** | | | | **Manure Type**  **(Poultry, Swine, Other, Compost)** | | | | **Application Season** | | | | | | **Application Management** | | | |
|  | | | |  | | | |  | | | | | |  | | | |
| **Manure Analysis**  **Units** (Circle)  **NH4-N Organic N P2O5**  **K2O** . | | | | | | | | | | | | | | | **Manure % Solids** | | |
| **lb/ton or lb/1000 gal** | | |  | | |  | |  | | | |  | | |  | | |
| **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) |  | |  |  |  | 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) |  | |  |  |
| **G) Manure Analysis**  (lb/ton or lb/1000gal) | NH4-N | Org N |  |  |
| H) Nitrogen Availability Factors  Table 6 (AG Table 1.2-11A) | NH4-N | Org N |  |  |
| I) Available Nitrogen Fractions  (lb/ton or lb/1000gal) (G x H) | NH4-N | Org N |  |  |
| **J) Total Available Nitrogen**  (sum of Available N Fractions from row I) | NH4-N + Org N | |  |  |
| **K) Balanced Manure Rate** (tons/A or gallons/A)  Complete 1 column For N: (F ÷ J) For P: (F ÷ G) |  | |  |  |
| **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) |  | |  |  | **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) |  | |  |  |

## 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.