

Manure Analysis



Submitted By
 AgSource Laboratories / Test Acct BN
 100 MBC Drive
 Test 20181115
 Shawano, WI 54166

Submitted For
 BREI HILLSIDE FARM

Date Sampled
 10/27/2022

Date Received
 27-Oct-2022

Laboratory Sample #
 CK57851

Account Number
 BN88888

Test Package
 Comprehensive

Date Reported
 14-Nov-2022

Information Sheet No.
 M20221027Test

Location Barn1 **Sample ID** 1 **Livestock Type** Dairy **Handling Type** Dry

| Analysis | Results as Received | Results as Dry Basis | LIQUID Application Methods Est. Available Nutrient Credits (as received, lbs / 1000 gal) | | | | | DRY Application Methods Est. Available Nutrient Credits (as received, lbs / ton) | | | | | | | |
|---|---------------------|----------------------|---|-------------|------------|-------------|-----------------------|---|-------------------------------|-------------|------|------|-------------|-----------------------|------|
| | | | Nutrients as lbs/1000 gal | In 1st Year | | | In 2nd Year | In 3rd Year | Nutrients as lbs/ton | In 1st Year | | | In 2nd Year | In 3rd Year | |
| Injected | 1-72 Hours | Broadcast** | | <1 Hour | 1-72 Hours | Broadcast** | | | | | | | | | |
| Dry Matter | 20.66 % | | | | | | | | | | | | | | |
| Moisture | 79.34 % | | | | | | | | | | | | | | |
| Total N, (TKN) | 0.26 % | | 21.83 | 7.64 | 6.55 | 5.46 | 2.18 | 1.09 | TKN | 5.2 | 1.83 | 1.57 | 1.31 | 0.52 | 0.26 |
| Ammonium, NH ₄ -N | 0.11 % | | 9.00 | | | | | | NH ₄ -N | 2.16 | | | | | |
| Organic Nitrogen, %N | 0.15 % | | 12.8 | | | | | | Org N | 3.1 | | | | | |
| Nitrate, NO ₃ -N | 0.00 % | | 0.2 | | | | | | NO ₃ -N | 0.0 | | | | | |
| Phosphorus, P ₂ O ₅ | 0.05 % | | 9.0 | 7.22 | 7.22 | 7.22 | Residual After Uptake | | P ₂ O ₅ | 2.2 | 1.74 | 1.74 | 1.74 | Residual After Uptake | |
| Potassium, K ₂ O | 0.23 % | | 22.8 | 18.27 | 18.27 | 18.27 | Residual After Uptake | | K ₂ O | 5.5 | 4.40 | 4.40 | 4.40 | Residual After Uptake | |
| Sulfur, S | 0.04 % | | 3.4 | 1.89 | 1.89 | 1.89 | 0.34 | 0.17 | S | 0.8 | 0.46 | 0.46 | 0.46 | 0.08 | 0.04 |
| Calcium, Ca | 0.28 % | 1.36 % | 23.4 | | | | | | Ca | 5.6 | | | | | |
| Magnesium, Mg | 0.15 % | 0.74 % | 12.8 | | | | | | Mg | 3.1 | | | | | |
| Sodium, Na | 0.07 % | 0.34 % | 5.8 | | | | | | Na | 1.4 | | | | | |
| Zinc, Zn | 22.2 ppm | 107 ppm | 0.2 | | | | | | Zn | 0.0 | | | | | |
| Manganese, Mn | 42.1 ppm | 204 ppm | 0.4 | | | | | | Mn | 0.1 | | | | | |
| Iron, Fe | 781.7 ppm | 3784 ppm | 6.5 | | | | | | Fe | 1.6 | | | | | |
| Copper, Cu | 12.9 ppm | 63 ppm | 0.1 | | | | | | Cu | 0.0 | | | | | |
| Sol Salts, EC _(mmhos/cm) | 1.04 | | | | | | | | | | | | | | |
| pH | 7.3 | | | | | | | | | | | | | | |

Estimated Value of Available Nutrients: 1st Year - \$28.26 2nd Year - \$2.16 3rd Year - \$1.08 1st Year - \$6.80 2nd Year - \$0.52 3rd Year - \$0.26

Value based on commercial fertilizer costs as of 11/11/2022. N(Urea) \$0.9 / lb, P2O5(Diammonium Phosphate(DAP)) \$1.01 / lb, K2O(Potash) \$0.71 / lb, S(Elemental Sulfur) \$0.59 / lb.

*Surface applied liquid or solid manure incorporated within 1- 72 hours after application.

**Liquid or solid manure left on the surface 4 or more days without incorporation. Wind and high temperature will result in greater loss of available nitrogen.

The Total N (TKN) values are the sum of Ammonium and Organic N. Availability estimates are corrected for ammonia volatilization loss due to each application method .

Application of this manure on the same field for 2 consecutive years increases the availability of N and S by 10%, and for 3 or more years by 15%.

References: Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin (A2809), Table 9.1

Liquid manure applied as irrigation will lose more nitrogen from volatilization. An additional 15% of the Liquid TKN value should be subtracted off the Liquid Broadcast TKN Range .

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Manure Analysis



Submitted By
 AgSource Laboratories / Test Acct BN
 100 MBC Drive
 Test 20181115
 Shawano, WI 54166

Submitted For
 BREI HILLSIDE FARM

Date Sampled
 10/27/2022

Date Received
 27-Oct-2022

Laboratory Sample #
 CK57852

Account Number
 BN88888

Test Package
 Comprehensive

Date Reported
 14-Nov-2022

Information Sheet No.
 M20221027Test

Location Barn2

Sample ID 2

Livestock Type Dairy

Handling Type Liquid

| Analysis | Results as Received | Results as Dry Basis | LIQUID Application Methods Est. Available Nutrient Credits (as received, lbs / 1000 gal) | | | | | DRY Application Methods Est. Available Nutrient Credits (as received, lbs / ton) | | | | | | | |
|---|---------------------|----------------------|---|-------------|------------|-------------|-----------------------|---|-------------------------------|-------------|------|------|-------------|-----------------------|------|
| | | | Nutrients as lbs/1000 gal | In 1st Year | | | In 2nd Year | In 3rd Year | Nutrients as lbs/ton | In 1st Year | | | In 2nd Year | In 3rd Year | |
| Injected | 1-72 Hours | Broadcast** | | <1 Hour | 1-72 Hours | Broadcast** | | | | | | | | | |
| Dry Matter | 4.20 % | | | | | | | | | | | | | | |
| Moisture | 95.80 % | | | | | | | | | | | | | | |
| Total N, (TKN) | 0.19 % | | 16.00 | 8.00 | 6.40 | 4.80 | 1.60 | 0.80 | TKN | 3.8 | 1.92 | 1.54 | 1.15 | 0.38 | 0.19 |
| Ammonium, NH ₄ -N | 0.10 % | | 8.08 | | | | | | NH ₄ -N | 1.94 | | | | | |
| Organic Nitrogen,%N | 0.10 % | | 7.9 | | | | | | Org N | 1.9 | | | | | |
| Nitrate, NO ₃ -N | 0.00 % | | 0.2 | | | | | | NO ₃ -N | 0.0 | | | | | |
| Phosphorus, P ₂ O ₅ | 0.03 % | | 6.2 | 4.92 | 4.92 | 4.92 | Residual After Uptake | | P ₂ O ₅ | 1.5 | 1.18 | 1.18 | 1.18 | Residual After Uptake | |
| Potassium, K ₂ O | 0.21 % | | 21.4 | 17.10 | 17.10 | 17.10 | Residual After Uptake | | K ₂ O | 5.2 | 4.12 | 4.12 | 4.12 | Residual After Uptake | |
| Sulfur, S | 0.02 % | | 1.7 | 0.92 | 0.92 | 0.92 | 0.17 | 0.08 | S | 0.4 | 0.22 | 0.22 | 0.22 | 0.04 | 0.02 |
| Calcium, Ca | 0.08 % | 2.02 % | 7.1 | | | | | | Ca | 1.7 | | | | | |
| Magnesium, Mg | 0.05 % | 1.13 % | 3.9 | | | | | | Mg | 0.9 | | | | | |
| Sodium, Na | 0.04 % | 1.07 % | 3.8 | | | | | | Na | 0.9 | | | | | |
| Zinc, Zn | 9.3 ppm | 221 ppm | 0.1 | | | | | | Zn | 0.0 | | | | | |
| Manganese, Mn | 10.2 ppm | 242 ppm | 0.1 | | | | | | Mn | 0.0 | | | | | |
| Iron, Fe | 40.2 ppm | 957 ppm | 0.3 | | | | | | Fe | 0.1 | | | | | |
| Copper, Cu | 14.5 ppm | 344 ppm | 0.1 | | | | | | Cu | 0.0 | | | | | |
| Sol Salts, EC _(mmhos/cm) | 1.66 | | | | | | | | | | | | | | |
| pH | 5.6 | | | | | | | | | | | | | | |

Estimated Value of Available Nutrients:

| | | | | | |
|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 1st Year - \$24.85 | 2nd Year - \$1.54 | 3rd Year - \$0.77 | 1st Year - \$5.97 | 2nd Year - \$0.37 | 3rd Year - \$0.18 |
|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|

Value based on commercial fertilizer costs as of 11/11/2022.

N(Urea) \$0.9 / lb, P2O5(Diammonium Phosphate(DAP)) \$1.01 / lb, K2O(Potash) \$0.71 / lb, S(Elemental Sulfur) \$0.59 / lb.

*Surface applied liquid or solid manure incorporated within 1- 72 hours after application.

**Liquid or solid manure left on the surface 4 or more days without incorporation. Wind and high temperature will result in greater loss of available nitrogen.

The Total N (TKN) values are the sum of Ammonium and Organic N. Availability estimates are corrected for ammonia volatilization loss due to each application method .

Application of this manure on the same field for 2 consecutive years increases the availability of N and S by 10%, and for 3 or more years by 15%.

References: Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin (A2809), Table 9.1

Liquid manure applied as irrigation will lose more nitrogen from volatilization. An additional 15% of the Liquid TKN value should be subtracted off the Liquid Broadcast TKN Range .

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Manure Analysis



Submitted By
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 100 MBC Drive
 Test 20181115
 Shawano, WI 54166

Submitted For
 BREI HILLSIDE FARM

Date Sampled
 10/27/2022

Date Received
 27-Oct-2022

Laboratory Sample #
 CK57853

Account Number
 BN88888

Test Package
 Comprehensive

Date Reported
 14-Nov-2022

Information Sheet No.
 M20221027Test

Location Barn3

Sample ID 3

Livestock Type Dairy

Handling Type Solid

| Analysis | Results as Received | Results as Dry Basis | LIQUID Application Methods Est. Available Nutrient Credits (as received, lbs / 1000 gal) | | | | | DRY Application Methods Est. Available Nutrient Credits (as received, lbs / ton) | | | | | | | |
|---|---------------------|----------------------|---|-------------|------------|-------------|-----------------------|---|-------------------------------|-------------|------|------|-------------|-----------------------|------|
| | | | Nutrients as lbs/1000 gal | In 1st Year | | | In 2nd Year | In 3rd Year | Nutrients as lbs/ton | In 1st Year | | | In 2nd Year | In 3rd Year | |
| Injected | 1-72 Hours | Broadcast** | | <1 Hour | 1-72 Hours | Broadcast** | | | | | | | | | |
| Dry Matter | 13.42 % | | | | | | | | | | | | | | |
| Moisture | 86.58 % | | | | | | | | | | | | | | |
| Total N, (TKN) | 0.51 % | | 42.40 | 14.84 | 12.72 | 10.60 | 4.24 | 2.12 | TKN | 10.2 | 3.56 | 3.05 | 2.55 | 1.02 | 0.51 |
| Ammonium, NH ₄ -N | 0.28 % | | 23.58 | | | | | | NH ₄ -N | 5.66 | | | | | |
| Organic Nitrogen, %N | 0.23 % | | 18.8 | | | | | | Org N | 4.5 | | | | | |
| Nitrate, NO ₃ -N | 0.00 % | | 0.1 | | | | | | NO ₃ -N | 0.0 | | | | | |
| Phosphorus, P ₂ O ₅ | 0.10 % | | 19.7 | 15.76 | 15.76 | 15.76 | Residual After Uptake | | P ₂ O ₅ | 4.8 | 3.80 | 3.80 | 3.80 | Residual After Uptake | |
| Potassium, K ₂ O | 0.40 % | | 40.1 | 32.11 | 32.11 | 32.11 | Residual After Uptake | | K ₂ O | 9.7 | 7.74 | 7.74 | 7.74 | Residual After Uptake | |
| Sulfur, S | 0.07 % | | 5.7 | 3.12 | 3.12 | 3.12 | 0.57 | 0.28 | S | 1.4 | 0.75 | 0.75 | 0.75 | 0.14 | 0.07 |
| Calcium, Ca | 0.28 % | 2.11 % | 23.7 | | | | | | Ca | 5.7 | | | | | |
| Magnesium, Mg | 0.12 % | 0.86 % | 9.6 | | | | | | Mg | 2.3 | | | | | |
| Sodium, Na | 0.05 % | 0.36 % | 4.1 | | | | | | Na | 1.0 | | | | | |
| Zinc, Zn | 37.4 ppm | 279 ppm | 0.3 | | | | | | Zn | 0.1 | | | | | |
| Manganese, Mn | 38.6 ppm | 288 ppm | 0.3 | | | | | | Mn | 0.1 | | | | | |
| Iron, Fe | 372.3 ppm | 2774 ppm | 3.1 | | | | | | Fe | 0.7 | | | | | |
| Copper, Cu | 0.4 ppm | 3 ppm | < 0.1 | | | | | | Cu | < 0.1 | | | | | |
| Sol Salts, EC _(mmhos/cm) | 1.84 | | | | | | | | | | | | | | |
| pH | 6.8 | | | | | | | | | | | | | | |

Estimated Value of Available Nutrients:

| | | | | | |
|--------------------|-------------------|-------------------|--------------------|-------------------|-------------------|
| 1st Year - \$53.91 | 2nd Year - \$4.15 | 3rd Year - \$2.07 | 1st Year - \$12.98 | 2nd Year - \$1.00 | 3rd Year - \$0.50 |
|--------------------|-------------------|-------------------|--------------------|-------------------|-------------------|

Value based on commercial fertilizer costs as of 11/11/2022.

N(Urea) \$0.9 / lb, P2O5(Diammonium Phosphate(DAP)) \$1.01 / lb, K2O(Potash) \$0.71 / lb, S(Elemental Sulfur) \$0.59 / lb.

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Submitted for BREI HILLSIDE FARM

Location Barn3

REPORT OF ANALYTICAL RESULTS

| Client Sample Identification | Analysis | Result |
|------------------------------|-------------------------------------|-----------|
| Barn1_1 | Manure ASH Dry Basis | 22.00 % |
| Barn1_1 | Manure ASH As Rcvd Basis | 4.55 % |
| Barn1_1 | Manure Boron Dry Basis | 16.55 ppm |
| Barn1_1 | Manure Boron As Rcvd Basis | 3.42 ppm |
| Barn1_1 | Manure Organic Matter Dry Basis | 42.46 % |
| Barn1_1 | Manure Organic Matter As Rcvd Basis | 8.78 % |
| Barn2_2 | Manure ASH Dry Basis | 20.20 % |
| Barn2_2 | Manure ASH As Rcvd Basis | 0.85 % |
| Barn2_2 | Manure Boron Dry Basis | 34.99 ppm |
| Barn2_2 | Manure Boron As Rcvd Basis | 1.47 ppm |
| Barn2_2 | Manure Organic Matter Dry Basis | 5.89 % |
| Barn2_2 | Manure Organic Matter As Rcvd Basis | 0.25 % |
| Barn3_3 | Manure ASH Dry Basis | 26.50 % |
| Barn3_3 | Manure ASH As Rcvd Basis | 3.56 % |
| Barn3_3 | Manure Boron Dry Basis | 78.00 ppm |
| Barn3_3 | Manure Boron As Rcvd Basis | 10.47 ppm |
| Barn3_3 | Manure Organic Matter Dry Basis | 40.95 % |
| Barn3_3 | Manure Organic Matter As Rcvd Basis | 5.50 % |