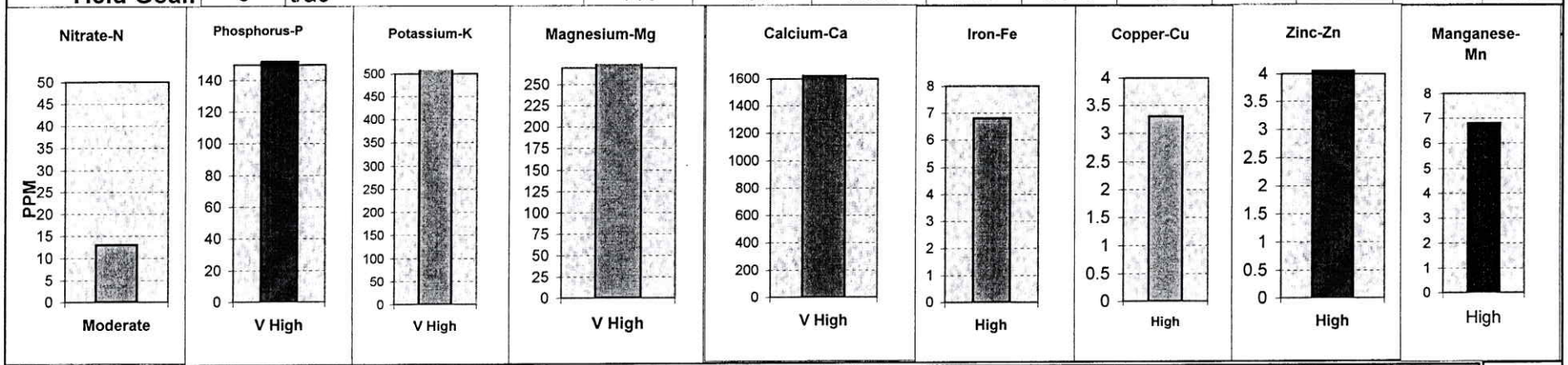
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 3 | Crop Rotation: | Alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 30.00 | Irr. Water (acin/ac): 25.8 |
| Address: | 491 W. Funk Rd | Planner Name: | | Form Notes: | |
| | Lake Arthur, NM | | RG | | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 7.7 | 1.51 | Loam | 3.0 | 13.0 | 169.0 | 599.0 | 405.0 | 6304.0 | 27.0 | 3.3 | 5.7 | 6.8 | 6.8 |
| Crop to grow: | | Pasturegrass, Bermuda, established | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 5 | t/ac | | 115 | 731 | 1362 | 390 | 6070 | 26 | 6 | 11 | 13 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | 103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 91 | 7 | 296 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | 5.72 | | | | | | | | |
| **Supplemental Nutrient Rate:** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring, if needed. Split fertilizer N applications to coincide with harvest regrowth. Consider slow release N for improved efficiency. Follow good Irrigation Water Mgt.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| **Suggested Fertilizer Blend** | 2 lbs/ac | Urea 45% N | 72.2 lbs Total Needed |
| **Total Blend (lbs/ac):** 2 | 0 lbs/ac | | 0.0 lbs Total Needed |
| **Blend Cost ($/ac):** $0.54 | 0 lbs/ac | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | 45% | 0% | 0% | **72.2 Tt Blend (lbs)** |


Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent


**Client Signature:** i9 Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)

**Cottonwood Springs Dairy NMP**
**Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)**

# 590 Nutrient Mgt, Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 30 | **Date:** | 7/28/2010 | **Field ID:** | 3 |
| **Application information (*enter the units that will be or has been applied to the field*):** | **Crop Rotation:** Alfalfa | | | **Needed for field (acin):** | | 117 | |
| | **Liquid Applied:** | 3.9 | Acln/ac | **(gal):** | | 3,176,550 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 60 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
| | | | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content (%)** | **Soil Drainage Class** (See Survey Information) | **Percent Remaining (%)** |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **90.8** | **6.6** | **295.5** |

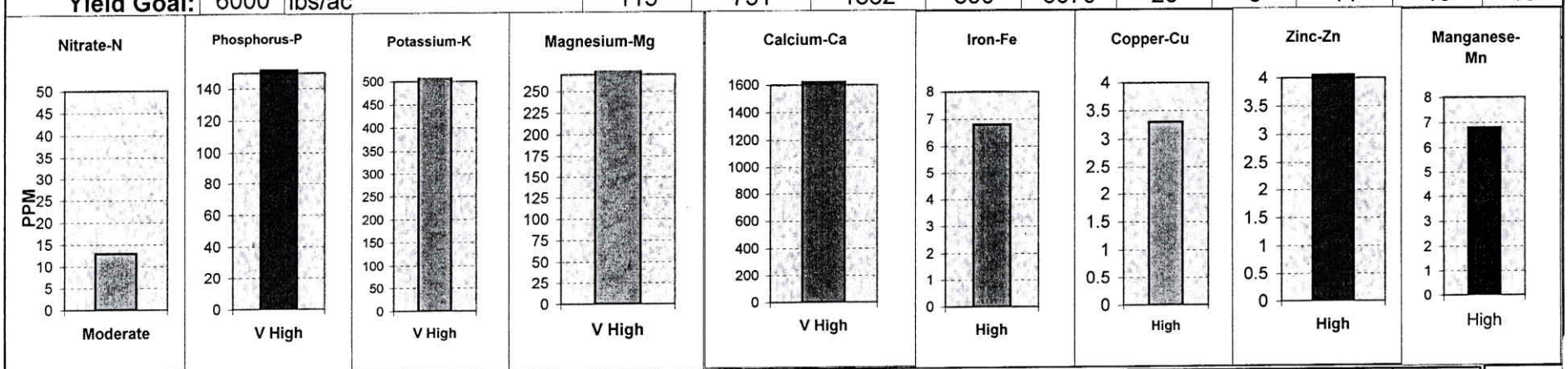
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 3 | Crop Rotation: | Alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 30.00 | Irr. Water (acin/ac): 25.8 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 7.7 | 1.51 | Loam | 3.0 | 13.0 | 169.0 | 599.0 | 405.0 | 6304.0 | 27.0 | 3.3 | 5.7 | 6.8 | 6.8 |
| Crop to grow: | Pasture, grass, G stand, L. season | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 6000 | lbs/ac | | | 115 | 731 | 1362 | 390 | 6070 | 26 | 6 | 11 | 13 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 168 | 11 | 550 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | 5.72 | | | | | | | | |
| Supplemental Nutrient Rate: | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring if needed. Split N into 2-4 applications with the first in early spring.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 2 lbs/ac | Urea 45% N | | 47.0 lbs Total Needed |
| Total Blend (lbs/ac): 2 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.35 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | 45% | 0% | 0% | 47.0 Tt Blend (lbs) |

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

**Client Signature:** i9 Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 3 with Nutrient Application from Catchment
Basin Runoff - 590 Jobsheets (2010)

**Cottonwood Springs Dairy NMP**
**Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)**

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 30 | **Date:** | 7/28/2010 | **Field ID:** | 3 |
| **Application information (*enter the units that will be or has been applied to the field*):** | **Crop Rotation:** Alfalfa | | | **Needed for field (acin):** | | 219 | |
| | **Liquid Applied:** | 7.3 | AcIn/ac | **(gal):** | | 5,945,850 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 60 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | 14.9 (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content (%)** | **Soil Drainage Class** (See Survey Information) | **Percent Remaining (%)** |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **167.8** | **10.9** | **549.6** |

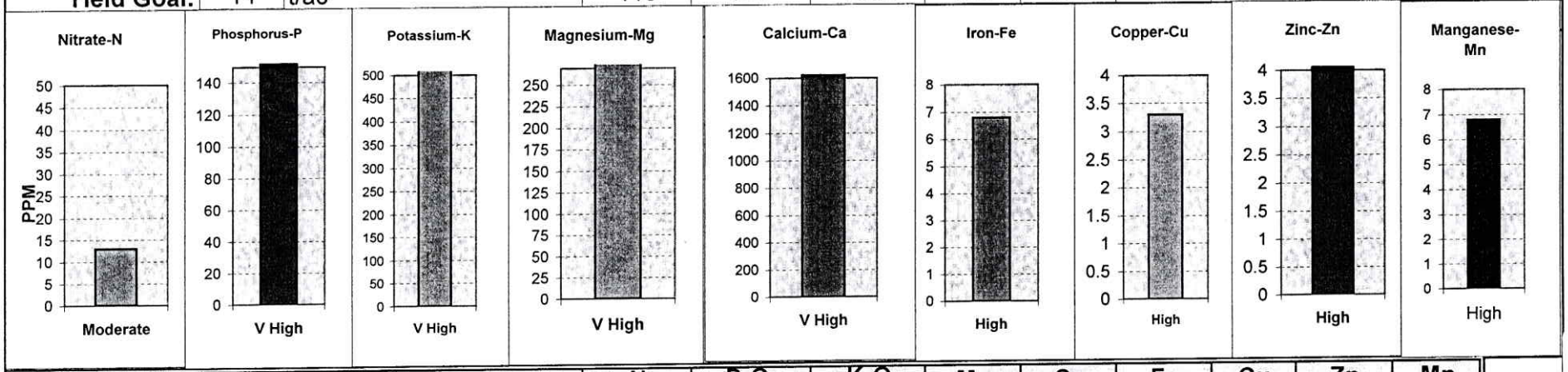
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 3 | Crop Rotation: | Bermuda. |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 30.00 | Irr. Water (acin/ac): 13 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 7.7 | 1.51 | Loam | 3.0 | 13.0 | 169.0 | 599.0 | 405.0 | 6304.0 | 27.0 | 3.3 | 5.7 | 6.8 | 6.8 |
| Crop to grow: | Wheat for silage, Irrigated, wet basis | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 14 | t/ac | | | 115 | 731 | 1362 | 390 | 6070 | 26 | 6 | 11 | 13 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 141 | 10 | 460 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | 5.72 | | | | | | | | |
| **Supplemental Nutrient Rate:** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| **Suggested Fertilizer Blend** | 2 lbs/ac | Urea 45% N | 50.2 lbs Total Needed |
| **Total Blend (lbs/ac):** 2 | 0 lbs/ac | | 0.0 lbs Total Needed |
| **Blend Cost ($/ac):** $0.38 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% 0% 0% | **50.2** Tt Blend (lbs) |

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

**Cottonwood Springs Dairy NMP**
**Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)**

**Cottonwood Springs Dairy NMP**
**Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)**

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 30 | **Date:** | 7/28/2010 | **Field ID:** | 3 |
| **Application information (*enter the units that will be or has been applied to the field*):** | **Crop Rotation:** Bermuda. | | | **Needed for field (acin):** | | 183 | |
| | **Liquid Applied:** | 6.1 | Acin/ac | **(gal):** | | 4,968,450 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 60 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.4 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content (%)** | **Soil Drainage Class** (See Survey Information) | **Percent Remaining (%)** |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

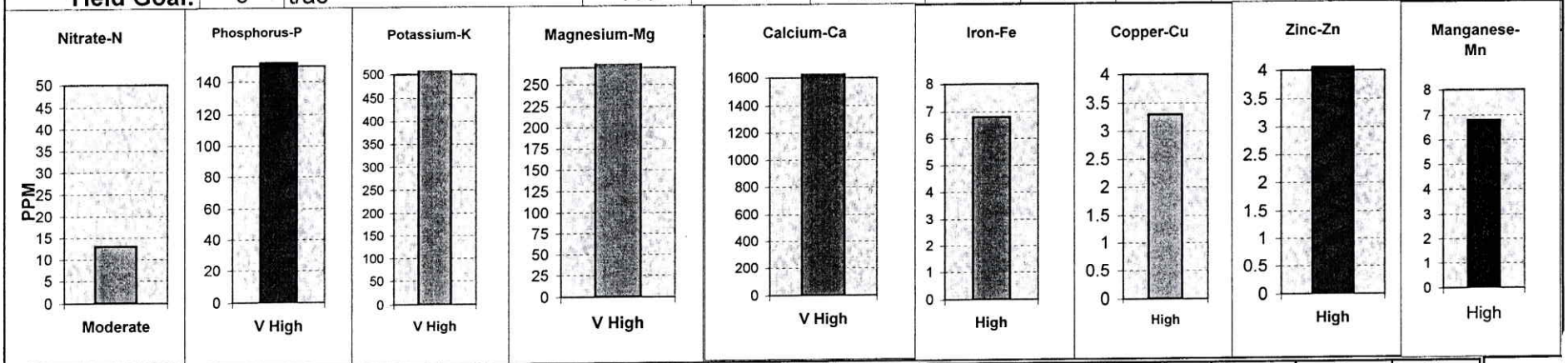
| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **140.6** | **9.9** | **459.9** |

# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 3 | Crop Rotation: | Bermuda. |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 30.00 | Irr. Water (acin/ac): 11.2 |
| Address: | 491 W. Funk Rd | Planner Name: | RG | Form Notes: | |
| | Lake Arthur, NM | | | | |
| Zip Code: | 88253 | Date: 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.1 | ESP: 0.00 |
| Phone: | | Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %. | | | |

Save To Farm Sum

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 7.7 | 1.51 | Loam | 3.0 | 13.0 | 169.0 | 599.0 | 405.0 | 6304.0 | 27.0 | 3.3 | 5.7 | 6.8 | 6.8 |
| Crop to grow: | Oats for silage, Irrigated | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 9 | t/ac | | | 115 | 731 | 1362 | 390 | 6070 | 26 | 6 | 11 | 13 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 141 | 10 | 461 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | 5.72 | | | | | | | | |
| Supplemental Nutrient Rate: | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 2 lbs/ac | Urea 45% N | | 62.1 lbs Total Needed |
| Total Blend (lbs/ac): 2 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.47 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% | 0% | 0% | 62.1 Tt Blend (lbs) |


Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent


**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)

**Cottonwood Springs Dairy NMP**
**Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)**

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 30 | **Date:** | 7/28/2010 | **Field ID:** | 3 |
| **Application information (*enter the units that will be or has been applied to the field*):** | **Crop Rotation:** Bermuda. | | | **Needed for field (acin):** | | 183.3 | |
| | **Liquid Applied:** | 6.11 | Acln/ac | **(gal):** | | 4,976,595 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 60 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.4 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | 14.9 (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content (%)** | **Soil Drainage Class** (See Survey Information) | **Percent Remaining (%)** |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **140.8** | **9.9** | **460.7** |

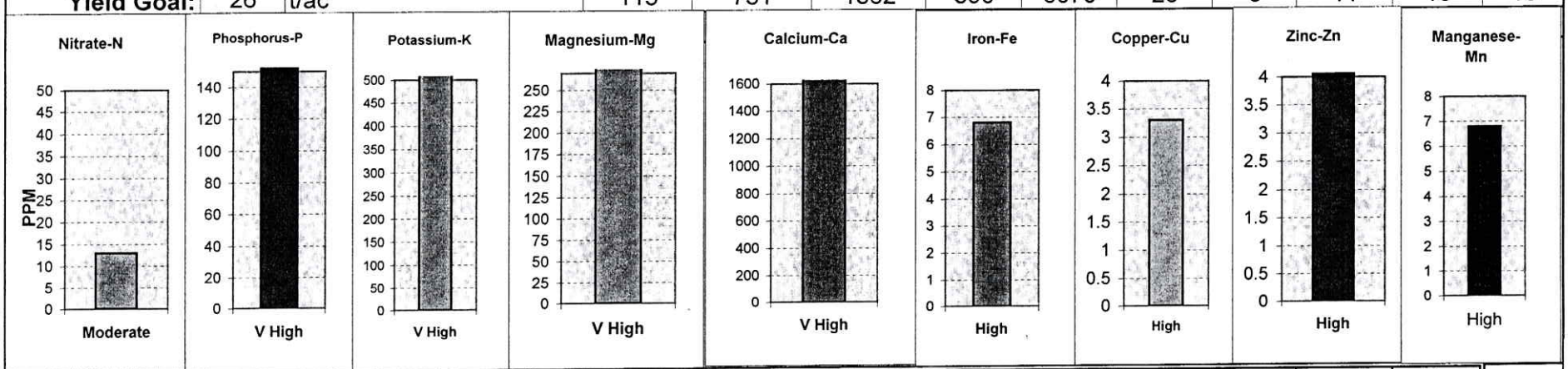
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 3 | Crop Rotation: | Alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 30.00 | Irr. Water (acin/ac): 32.6 |
| Address: | 491 W. Funk Rd | Planner Name: | | Form Notes: | |
| | Lake Arthur, NM | | RG | | |
| Zip Code: | 88253 | Date: 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.1 | ESP: 0.00 |
| Phone: | | | | | |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 7.7 | 1.51 | Loam | 3.0 | 13.0 | 169.0 | 599.0 | 405.0 | 6304.0 | 27.0 | 3.3 | 5.7 | 6.8 | 6.8 |
| Crop to grow: | | Corn, silage 35% DM | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 26 | t/ac | | 115 | 731 | 1362 | 390 | 6070 | 26 | 6 | 11 | 13 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 98 | 7 | 318 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 7 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | 5.72 | | | | | | | | |
| Supplemental Nutrient Rate: | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 2 lbs/ac | Urea 45% N | 70.7 lbs Total Needed |
| Total Blend (lbs/ac): 2 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.53 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% 0% 0% | 70.7 Tt Blend (lbs) |

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Agronomy and Soils
cc: Eddy County Extension Agent

**Client Signature:** i9 Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010).

**Cottonwood Springs Dairy NMP**
**Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)**

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 30 | **Date:** | 7/28/2010 | **Field ID:** | 3 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Alfalfa | | | **Needed for field (acin):** | | 126 | |
| | **Liquid Applied:** | 4.2 | AcIn/ac | **(gal):** | | 3,420,900 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 60 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | % Moisture | TKN (%) (dry) | $NH_4$-N (ppm) (dry) | $P_2O_5$ (%) (dry) | $K_2O$ (%) (dry) |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | % Moisture | | TKN (lbs/wet ton) | | $NH_4$-N (lbs/ton) | | $P_2O_5$ (lbs/wet ton) | | $K_2O$ (lbs/wet ton) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | $NH_3$-N (mg/L) | TKN (mg/L) | $NO_3$-N (mg/L) | Tot-$PO_4$ (mg/L) | K (mg/L) |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | % Moisture | | TKN (lbs/acin) | | $NH_4$-N (lbs/acin) | | $P_2O_5$ (lbs/acin) | | $K_2O$ (lbs/acin) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| TKN (lbs/1000gal) | | $NH_4$-N (lbs/1000gal) | | $P_2O_5$ (lbs/1000gal) | | $K_2O$ (lbs/1000gal) | |
|---|---|---|---|---|---|---|---|
| Book | Test | Book | Test | Book | Test | Book | Test |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | 14.9 (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | Percent Nutrient Available the 1st Year | | | |
|---|---|---|---|---|
| | Organic N | P | K | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | Solid Source |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | Liquid Source |

| **Solid** | Organic N (lbs/ton) | $P_2O_5$ (lbs/ton) | $K_2O$ (lbs/ton) |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | Organic N (lbs/acin) | $P_2O_5$ (lbs/acin) | $K_2O$ (lbs/acin) |
| | 11 | 1 | 75 |
| | Organic N (lbs/100gal) | $P_2O_5$ (lbs/1000gal) | $K_2O$ (lbs/1000gal) |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | lbs/1000gal | lbs/ac in | lbs/ton |
|---|---|---|---|
| N | 0.0 | 23 | 1 |
| $P_2O_5$ | 0.0 | 1 | 1 |
| $K_2O$ | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | All Forms N (lbs/ac) | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) |
|---|---|---|---|
| | 97.6 | 7.0 | 317.9 |

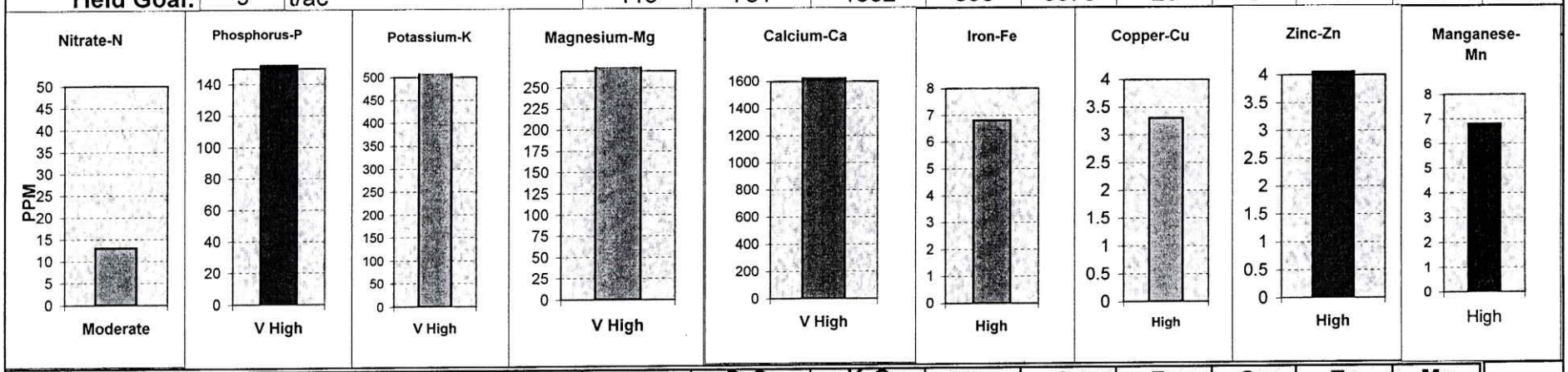
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 3 | Crop Rotation: | Bermuda. |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 30.00 | Irr. Water (acin/ac): 42.5 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: RG | | Form Notes: | |
| Zip Code: | 88253 | Date: 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.1 | ESP: 0.00 |
| Phone: | | | | | |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 7.7 | 1.51 | Loam | 3.0 | 13.0 | 169.0 | 599.0 | 405.0 | 6304.0 | 27.0 | 3.3 | 5.7 | 6.8 | 6.8 |
| Crop to grow: | | Alfalfa, 21% Pro. (manure applied) | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 9 | t/ac | | 115 | 731 | 1362 | 390 | 6070 | 26 | 6 | 11 | 13 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 490 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 474 | 29 | 1561 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 10 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | 5.72 | | | | | | | | |
| Supplemental Nutrient Rate: | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Manures contain P2O5 and sulfur among other plant nutrients. If application rate does not meet crop need then additional fertilizer may be needed.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 2 lbs/ac | Urea 45% N | 58.2 lbs Total Needed |
| Total Blend (lbs/ac): 2 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.44 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% 0% 0% | 58.2 Tt Blend (lbs) |

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)

**Cottonwood Springs Dairy NMP**
**Field 3 with Nutrient Application from Catchment Basin Runoff - 590 Jobsheets (2010)**

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 30 | **Date:** | 7/28/2010 | **Field ID:** | 3 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Bermuda. | | | **Needed for field (acin):** | | 624.9 | |
| | **Liquid Applied:** | 20.83 | AcIn/ac | **(gal):** | | 16,966,035 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 60 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.4 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | 14.9 (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **474.1** | **28.6** | **1560.6** |

# *Grazing-N*: A Nitrogen Balance for Grazing Dairy Heifers and Dry Cows

Victor E. Cabrera, Ph.D., Extension Dairy Specialist, New Mexico State University

| Dairy | Cottonwood Springs Field 3 | | | | Permit # | 734 | | Period | 1/1/2009 | to | 12/30/2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Grazing Management | | 1799 days | |

| Weight (lbs) | DMI | CP intake | N intake | N excretion | N remain | Net Balance | Carrying Capacity (CC) animals/acre | Animals (#) | Days (#) | Acres (#) | N Supplement (lbs/day/animal) | N removal lbs/acre | Exceeds CC ? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (lbs/day/animal) | | | | | | | | | | | | |
| | ADG (lbs) | %CP Grass | | | % Volat. | | DM (tn/ac/month) | | | | | | |
| | 1.98 | 20.9 | | | 50 | | 0.75 | | | | | Meaning | |
| **Heifers** | | | | | | | | | | | | | |
| **Unbred** | | | | | | | | | | | | | |
| 330 | 9.89 | 2.07 | 0.33 | 0.10 | 0.05 | -0.28 | 5.1 | | | | | | |
| 440 | 12.36 | 2.58 | 0.41 | 0.14 | 0.07 | -0.35 | 4.0 | | | | | | |
| 550 | 14.68 | 3.07 | 0.49 | 0.17 | 0.09 | -0.41 | 3.4 | | | | | | |
| 660 | 16.89 | 3.53 | 0.56 | 0.20 | 0.10 | -0.46 | 3.0 | | | | | | |
| 770 | 18.99 | 3.97 | 0.64 | 0.24 | 0.12 | -0.52 | 2.6 | 150 | 90 | 30 | | -232.06 | YES |
| 880 | 21.02 | 4.39 | 0.70 | 0.27 | 0.14 | -0.57 | 2.4 | | | | | | |
| **Bred** | | | | | | | | | | | | | |
| 990 | 22.99 | 4.80 | 0.77 | 0.31 | 0.15 | -0.62 | 2.2 | | | | | | |
| 1100 | 24.90 | 5.20 | 0.83 | 0.34 | 0.17 | -0.66 | 2.0 | | | | | | |
| 1200 | 26.76 | 5.59 | 0.90 | 0.37 | 0.19 | -0.71 | 1.9 | | | | | | |
| 1320 | 28.59 | 5.97 | 0.96 | 0.41 | 0.20 | -0.75 | 1.7 | | | | | | |
| 1430 | 30.37 | 6.35 | 1.02 | 0.44 | 0.22 | -0.79 | 1.6 | | | | | | |
| **Dry** | | | | | | | | | | | | | |
| | %BW | | | | | | | | | | | | |
| | 1.8 | | | | | | | | | | | | |
| 1600 | 28.80 | 6.02 | 0.46 | 0.58 | 0.29 | -0.18 | 1.7 | | | | 0.5 | | |
| | | | | | | | | | | | Total | -232.06 | |

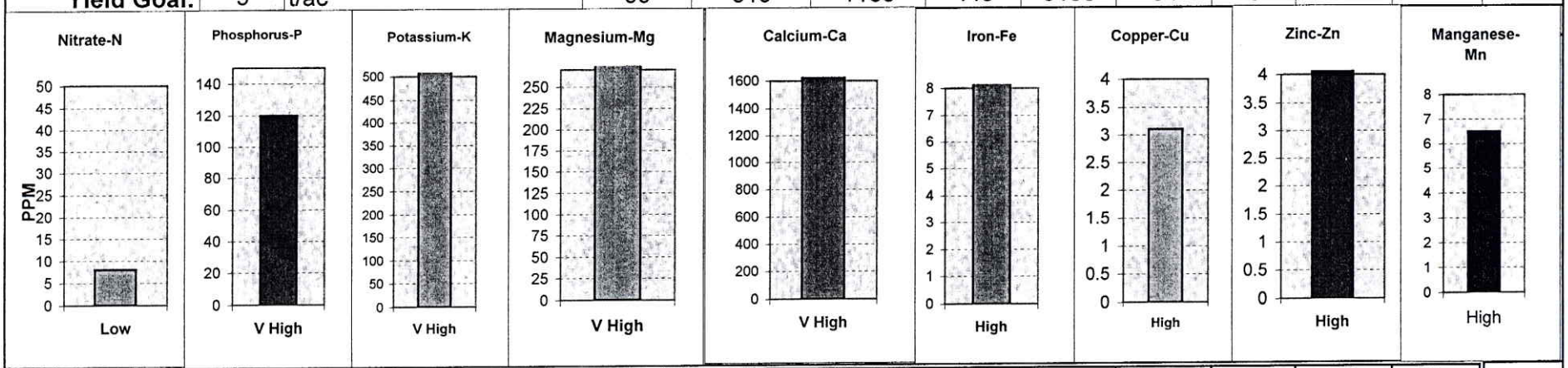
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 4 | Crop Rotation: | Winter wheat -alfalfa -winter wheat |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: | 120.00 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Irr. Water (acin/ac): | 42.5 |
| | | Form Notes: | Full circle pivot | | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | Sodium Adsorb. Ratio: | 0.1 | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 8.1 | 0.49 | Loam | 2.8 | 8.0 | 120.0 | 521.0 | 465.0 | 5349.0 | 35.0 | 3.1 | 9.4 | 6.5 | 8.4 |
| Crop to grow: | | Alfalfa, 21% Pro. (manure applied) | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 9 | t/ac | | 99 | 519 | 1185 | 448 | 5150 | 34 | 6 | 18 | 12 | 16 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | 506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 496 | 29 | 1632 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 10 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | | | | | | | | | |
| **Supplemental Nutrient Rate:** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Manures contain P2O5 and sulfur among other plant nutrients. If application rate does not meet crop need then additional fertilizer may be needed.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| **Suggested Fertilizer Blend** | 1 lbs/ac | Urea 45% N | | 79.6 lbs Total Needed |
| **Total Blend (lbs/ac):** 1 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| **Blend Cost ($/ac):** $0.15 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% | 0% | 0% **79.6** Tt Blend (lbs) |


Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent


**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 120 | **Date:** | 7/28/2010 | **Field ID:** | 4 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Winter wheat -alfalfa -winter wheat | | | **Needed for field (acin):** | | 2614.8 | |
| | **Liquid Applied:** | 21.79 | AcIn/ac | | **(gal):** | 70,991,820 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 240 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **495.8** | **29.3** | **1632.3** |

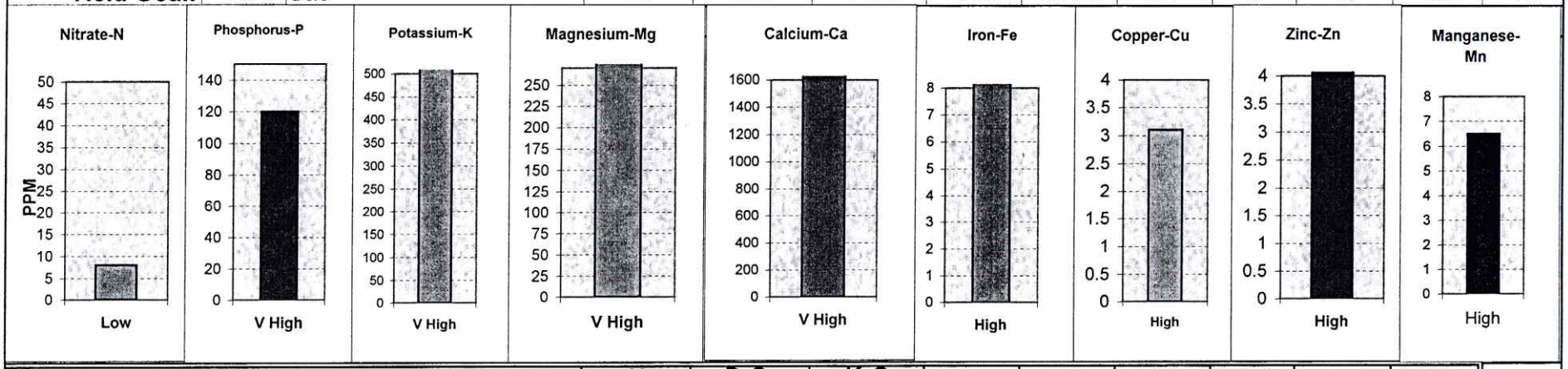
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 4 | Crop Rotation: | Winter wheat - corn -winter wheat |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 120.00 | Irr. Water (acin/ac): 32.6 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | Full circle pivot |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 8.1 | 0.49 | Loam | 2.8 | 8.0 | 120.0 | 521.0 | 465.0 | 5349.0 | 35.0 | 3.1 | 9.4 | 6.5 | 8.4 |
| Crop to grow: | | Corn, silage 35% DM | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 28 | t/ac | | 99 | 519 | 1185 | 448 | 5150 | 34 | 6 | 18 | 12 | 16 |




| Nutrient Recommendation: | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 139 | 9 | 454 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 7 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| Suggested Fertilizer Blend | | | | |
|---|---|---|---|---|
| | 1 lbs/ac | Urea 45% N | | 62.6 lbs Total Needed |
| Total Blend (lbs/ac): 1 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.12 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% | 0% | 0% | 62.6 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organi

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 120 | **Date:** | 7/28/2010 | **Field ID:** | 4 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Winter wheat - corn -winter wheat | | | **Needed for field (acin):** | | 722.4 | |
| | **Liquid Applied:** | 6.02 | AcIn/ac | **(gal):** | | 19,613,160 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 240 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | % Moisture | TKN (%) (dry) | $NH_4$-N (ppm) (dry) | $P_2O_5$ (%) (dry) | $K_2O$ (%) (dry) |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | % Moisture | | TKN (lbs/wet ton) | | $NH_4$-N (lbs/ton) | | $P_2O_5$ (lbs/wet ton) | | $K_2O$ (lbs/wet ton) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | $NH_3$-N (mg/L) | TKN (mg/L) | $NO_3$-N (mg/L) | Tot-$PO_4$ (mg/L) | K (mg/L) |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | % Moisture | | TKN (lbs/acin) | | $NH_4$-N (lbs/acin) | | $P_2O_5$ (lbs/acin) | | $K_2O$ (lbs/acin) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | TKN (lbs/1000gal) | | $NH_4$-N (lbs/1000gal) | | $P_2O_5$ (lbs/1000gal) | | $K_2O$ (lbs/1000gal) | |
| | | | Book | Test | Book | Test | Book | Test | Book | Test |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | 14.9 (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | Percent Nutrient Available the 1st Year | | | |
|---|---|---|---|---|
| | Organic N | P | K | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | Solid Source |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | Liquid Source |

| **Solid** | Organic N (lbs/ton) | $P_2O_5$ (lbs/ton) | $K_2O$ (lbs/ton) |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | Organic N (lbs/acin) | $P_2O_5$ (lbs/acin) | $K_2O$ (lbs/acin) |
| | 11 | 1 | 75 |
| | Organic N (lbs/100gal) | $P_2O_5$ (lbs/1000gal) | $K_2O$ (lbs/1000gal) |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | lbs/1000gal | lbs/ac in | lbs/ton |
|---|---|---|---|
| N | 0.0 | 23 | 1 |
| $P_2O_5$ | 0.0 | 1 | 1 |
| $K_2O$ | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | All Forms N (lbs/ac) | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) |
|---|---|---|---|
| | 138.8 | 9.3 | 453.9 |

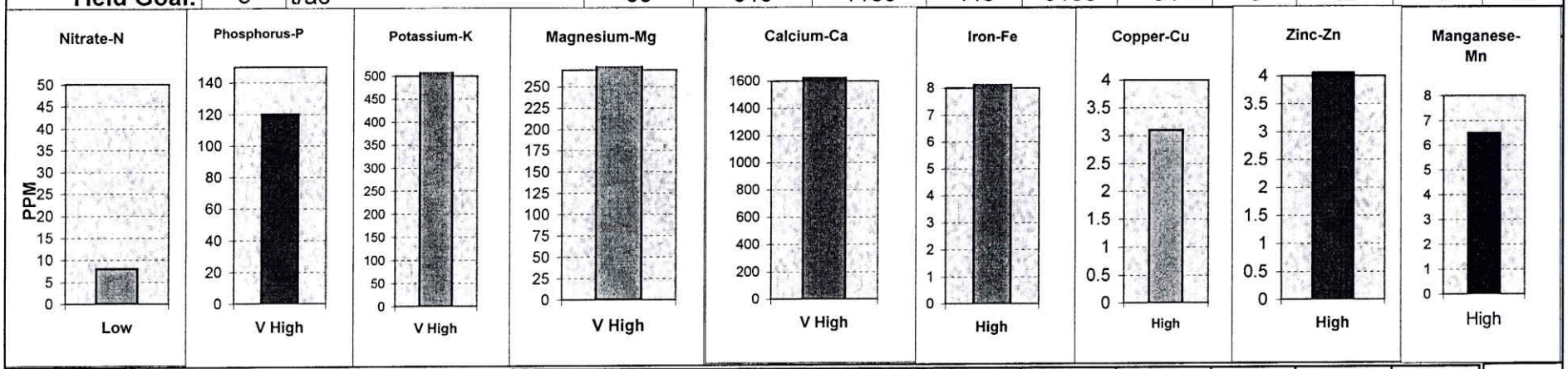
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 4 | Crop Rotation: | Corn - winter wheat |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 120.00 | Irr. Water (acin/ac): 11.2 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | Full circle pivot |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 8.1 | 0.49 | Loam | 2.8 | 8.0 | 120.0 | 521.0 | 465.0 | 5349.0 | 35.0 | 3.1 | 9.4 | 6.5 | 8.4 |
| Crop to grow: | | Oats for silage, Irrigated | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 5 | t/ac | | 99 | 519 | 1185 | 448 | 5150 | 34 | 6 | 18 | 12 | 16 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | 225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 222 | 14 | 729 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | | | | | | | | | |
| **Supplemental Nutrient Rate:** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$


Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent


| | | | | |
|---|---|---|---|---|
| **Suggested Fertilizer Blend** | 1 lbs/ac | Urea 45% N | | 99.1 lbs Total Needed |
| **Total Blend (lbs/ac):** 1 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| **Blend Cost ($/ac):** $0.19 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | 45% | 0% | 0% | **99.1** Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organi

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 120 | **Date:** | 7/28/2010 | **Field ID:** | 4 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Corn - winter wheat | | | **Needed for field (acin):** | | 1164 | |
| | **Liquid Applied:** | 9.7 | AcIn/ac | **(gal):** | | 31,602,600 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 240 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | 14.9 (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **222.1** | **13.9** | **728.9** |

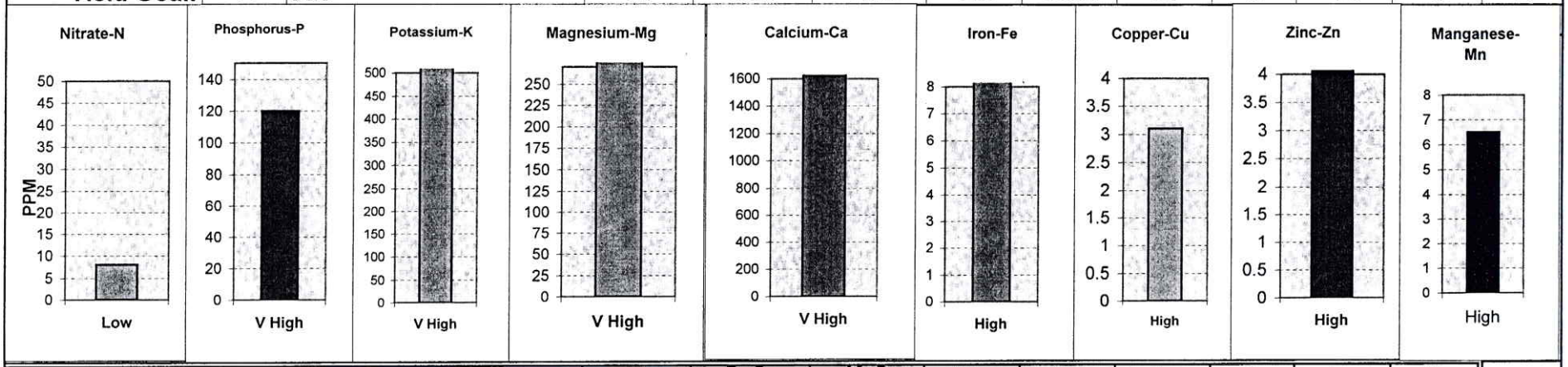
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 4 | Crop Rotation: | Corn - winter wheat |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 120.00 | Irr. Water (acin/ac): 13 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | Full circle pivot |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 8.1 | 0.49 | Loam | 2.8 | 8.0 | 120.0 | 521.0 | 465.0 | 5349.0 | 35.0 | 3.1 | 9.4 | 6.5 | 8.4 |
| Crop to grow: | Wheat for silage, Irrigated, wet basis | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 14 | t/ac | | | 99 | 519 | 1185 | 448 | 5150 | 34 | 6 | 18 | 12 | 16 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 222 | 14 | 727 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$


Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent


| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 1 lbs/ac | Urea 45% N | | 111.9 lbs Total Needed |
| Total Blend (lbs/ac): 1 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.21 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | 45% | 0% | 0% | 111.9 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 120 | **Date:** | 10/22/2009 | **Field ID:** | 4 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Corn - winter wheat | | | **Needed for field (acin):** | | 1161.6 | |
| | **Liquid Applied:** | 9.68 | Acin/ac | **(gal):** | | 31,537,440 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 240 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 22 | 0 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | | 0.0 | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 16 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 16 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **221.7** | **159.9** | **727.4** |

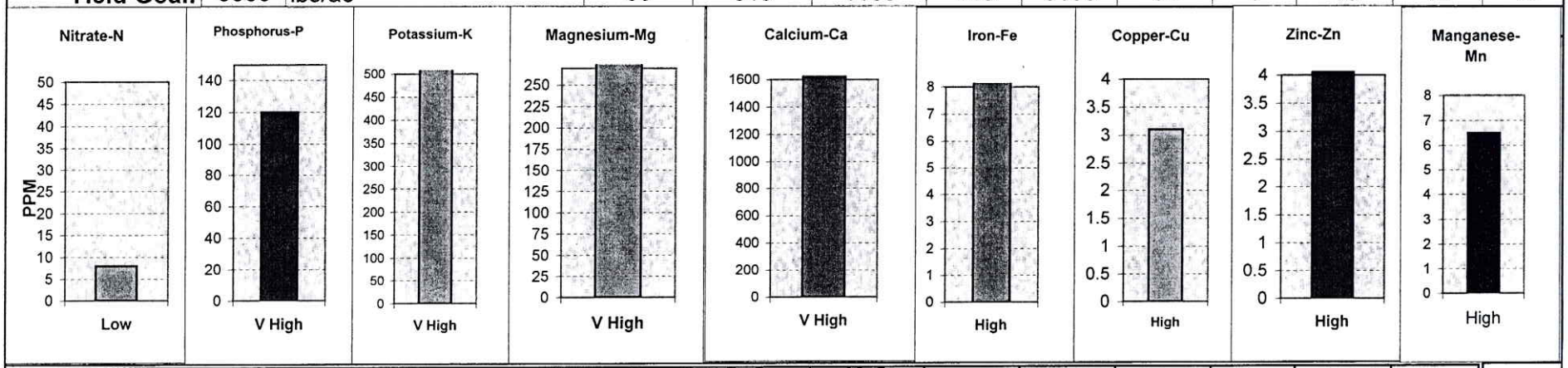
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 4 | Crop Rotation: | Pasture |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 120.00 | Irr. Water (acin/ac): 25.8 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | Full circle pivot |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 8.1 | 0.49 | Loam | 2.8 | 8.0 | 120.0 | 521.0 | 465.0 | 5349.0 | 35.0 | 3.1 | 9.4 | 6.5 | 8.4 |
| Crop to grow: | Pasture, grass, G stand, L. season | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 6000 | lbs/ac | | | 99 | 519 | 1185 | 448 | 5150 | 34 | 6 | 18 | 12 | 16 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 213 | 13 | 699 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring if needed. Split N into 2-4 applications with the first in early spring.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Robert P. Flynn, Ph.D. | Suggested Fertilizer Blend | 3 lbs/ac | Urea 45% N | 304.8 lbs Total Needed |
| Agronomy and Soils | Total Blend (lbs/ac): 3 | 0 lbs/ac | | 0.0 lbs Total Needed |
| cc: Eddy County Extension Agent | Blend Cost ($/ac): $0.57 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Client Signature: | Planner Signature: | N-P2O5-K2O G | 45% 0% 0% | 304.8 Tt Blend (lbs) |

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 120 | **Date:** | 7/28/2010 | **Field ID:** | 4 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Pasture | | | **Needed for field (acin):** | | 1116 | |
| | **Liquid Applied:** | 9.3 | AcIn/ac | **(gal):** | | 30,299,400 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 240 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **213.1** | **13.4** | **699.0** |

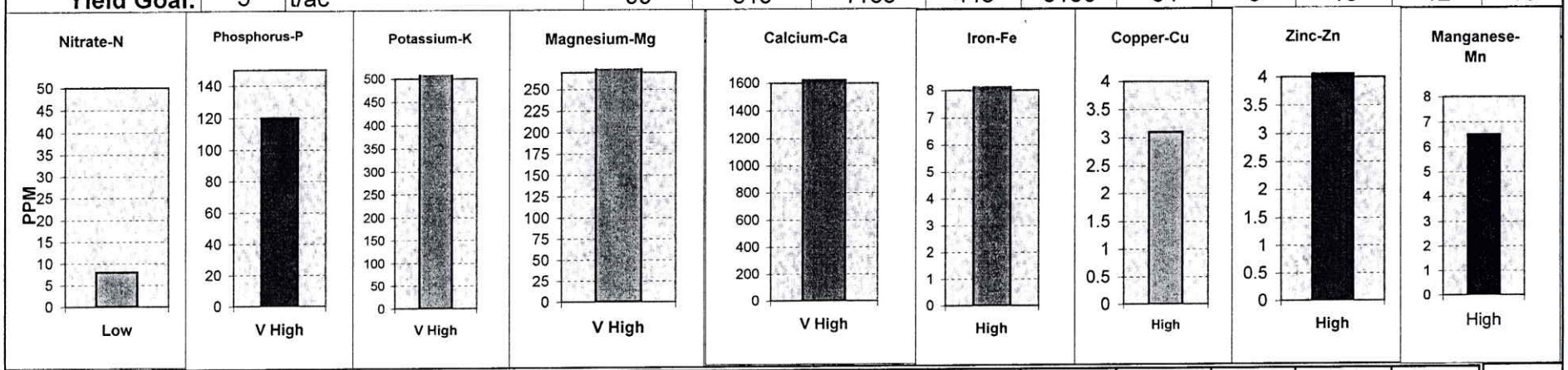
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 4 | Crop Rotation: | Corn - winter wheat |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: | 120.00 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Irr. Water (acin/ac): | 25.6 |
| | | Form Notes: | Full circle pivot | | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | Sodium Adsorb. Ratio: | 0.1 | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 8.1 | 0.49 | Loam | 2.8 | 8.0 | 120.0 | 521.0 | 465.0 | 5349.0 | 35.0 | 3.1 | 9.4 | 6.5 | 8.4 |
| Crop to grow: | | Pasturegrass, Bermuda, established | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 5 | t/ac | | 99 | 519 | 1185 | 448 | 5150 | 34 | 6 | 18 | 12 | 16 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 113 | 8 | 368 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring, if needed. Split fertilizer N applications to coincide with harvest regrowth. Consider slow release N for improved efficiency. Follow good Irrigation Water Mgt.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 1 lbs/ac | Urea 45% N | | 87.2 lbs Total Needed |
| Total Blend (lbs/ac): 1 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.16 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% | 0% | 0% | 87.2 Tt Blend (lbs) |


Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent


**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 4 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 120 | **Date:** | 7/28/2010 | **Field ID:** | 4 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Corn - winter wheat | | | **Needed for field (acin):** | | 584.4 | |
| | **Liquid Applied:** | 4.87 | AcIn/ac | **(gal):** | | 15,866,460 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 240 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **112.8** | **7.8** | **368.0** |

# *Grazing-N*: A Nitrogen Balance for Grazing Dairy Heifers and Dry Cows

Victor E. Cabrera, Ph.D., Extension Dairy Specialist, New Mexico State University

Dairy: Cottonwood Springs Field 4 | Permit #: 734 | Period: 1/1/2009 to 12/30/2013 | 1799 days

ADG (lbs): 1.98 | %CP Grass: 20.9 | % Volat.: 50 | DM (tn/ac/month): 0.75 | %BW: 1.8

| Weight (lbs) | DMI (lbs/day/animal) | CP intake (lbs/day/animal) | N intake (lbs/day/animal) | N excretion (lbs/day/animal) | N remain (lbs/day/animal) | Net Balance (lbs/day/animal) | Carrying Capacity (CC) animals/acre | Grazing Management: Animals (#) | Days (#) | Acres (#) | N Supplement (lbs/day/animal) | N removal lbs/acre | Exceeds CC ? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Heifers** | | | | | | | | | | | | | |
| **Unbred** | | | | | | | | | | | | | |
| 330 | 9.89 | 2.07 | 0.33 | 0.10 | 0.05 | -0.28 | 5.1 | | | | | | |
| 440 | 12.36 | 2.58 | 0.41 | 0.14 | 0.07 | -0.35 | 4.0 | | | | | | |
| 550 | 14.68 | 3.07 | 0.49 | 0.17 | 0.09 | -0.41 | 3.4 | | | | | | |
| 660 | 16.89 | 3.53 | 0.56 | 0.20 | 0.10 | -0.46 | 3.0 | | | | | | |
| 770 | 18.99 | 3.97 | 0.64 | 0.24 | 0.12 | -0.52 | 2.6 | 575 | 95 | 120 | | -234.75 | YES |
| 880 | 21.02 | 4.39 | 0.70 | 0.27 | 0.14 | -0.57 | 2.4 | | | | | | |
| **Bred** | | | | | | | | | | | | | |
| 990 | 22.99 | 4.80 | 0.77 | 0.31 | 0.15 | -0.62 | 2.2 | | | | | | |
| 1100 | 24.90 | 5.20 | 0.83 | 0.34 | 0.17 | -0.66 | 2.0 | | | | | | |
| 1200 | 26.76 | 5.59 | 0.90 | 0.37 | 0.19 | -0.71 | 1.9 | | | | | | |
| 1320 | 28.59 | 5.97 | 0.96 | 0.41 | 0.20 | -0.75 | 1.7 | | | | | | |
| 1430 | 30.37 | 6.35 | 1.02 | 0.44 | 0.22 | -0.79 | 1.6 | | | | | | |
| **Dry** | | | | | | | | | | | | | |
| 1600 | 28.80 | 6.02 | 0.46 | 0.58 | 0.29 | -0.18 | 1.7 | | | | 0.5 | | |
| | | | | | | | | | | | Total | -234.75 | |

Meaning

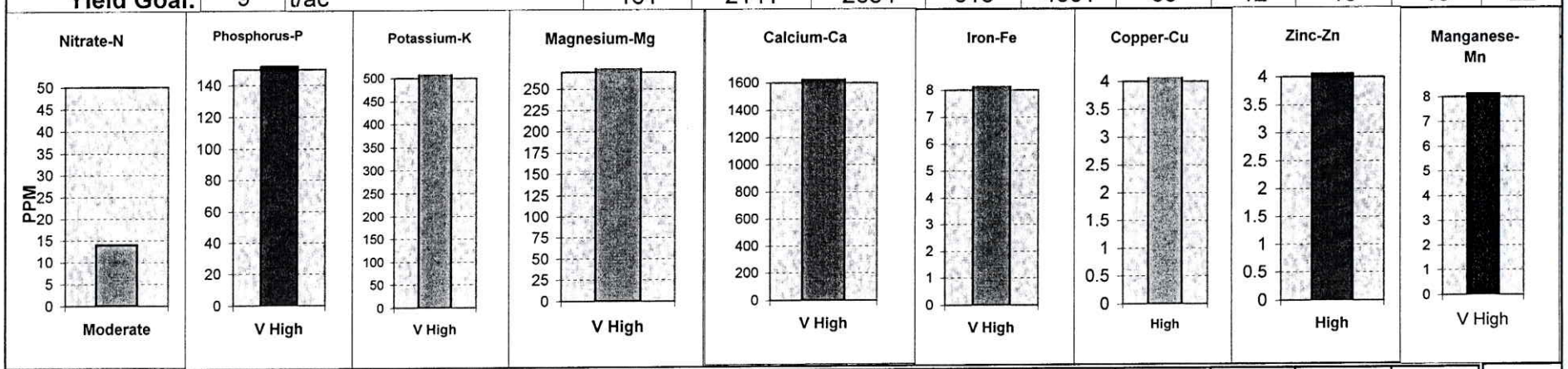
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 5 | Crop Rotation: | Oats - alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 85.00 | Irr. Water (acin/ac): 42.5 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.2 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 8.1 | 0.56 | Loam | 4.5 | 14.0 | 495.0 | 1158.0 | 642.0 | 4778.0 | 67.0 | 6.4 | 9.9 | 10.3 | 11.8 |
| Crop to grow: | | Alfalfa, 21% Pro. (manure applied) | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 9 | t/ac | | 161 | 2141 | 2634 | 618 | 4601 | 65 | 12 | 19 | 19 | 22 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | **443** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 433 | 26 | 1426 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 10 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | | | | | | | | | |
| **Supplemental Nutrient Rate:** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Manures contain P2O5 and sulfur among other plant nutrients. If application rate does not meet crop need then additional fertilizer may be needed.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| **Suggested Fertilizer Blend** | | 1 lbs/ac | Urea 45% N | 86.7 lbs Total Needed |
| **Total Blend (lbs/ac):** | 1 | 0 lbs/ac | | 0.0 lbs Total Needed |
| **Blend Cost ($/ac):** | $0.23 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | | N-P2O5-K2O G | 45% 0% 0% | **86.7** Tt Blend (lbs) |


Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent


**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 85 | **Date:** | 7/28/2010 | **Field ID:** | 5 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Oats - alfalfa | | | **Needed for field (acin):** | | 1617.55 | |
| | **Liquid Applied:** | 19.03 | AcIn/ac | **(gal):** | | 43,916,483 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 170 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **433.3** | **25.8** | **1426.1** |

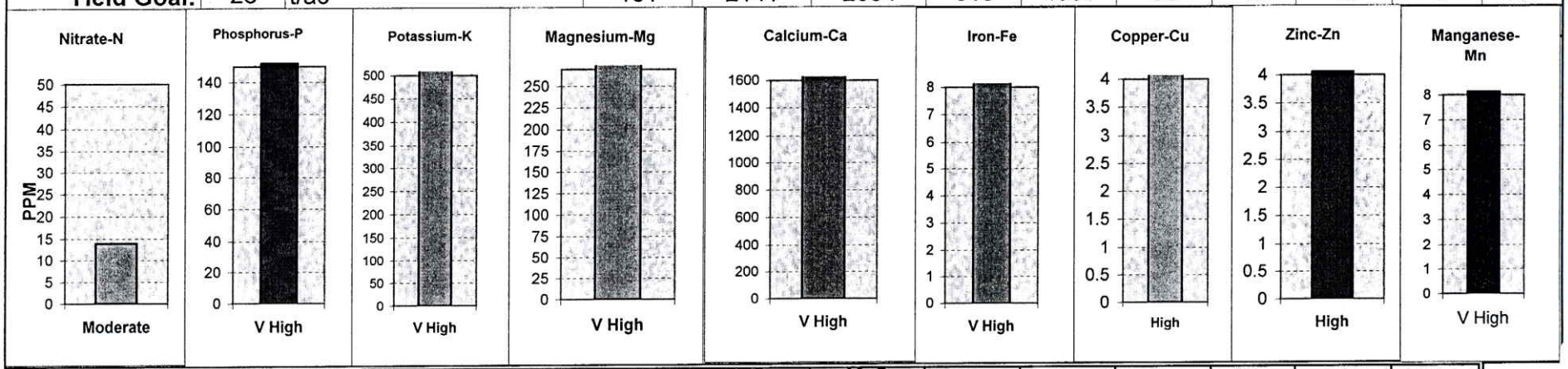
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 5 | Crop Rotation: | Alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 85.00 | Irr. Water (acin/ac): 32.6 |
| Address: | 491 W. Funk Rd | Planner Name: | RG | Form Notes: | |
| | Lake Arthur, NM | | | | |
| Zip Code: | 88253 | Date: 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.2 | ESP: 0.00 |
| Phone: | | | | | |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 8.1 | 0.56 | Loam | 4.5 | 14.0 | 495.0 | 1158.0 | 642.0 | 4778.0 | 67.0 | 6.4 | 9.9 | 10.3 | 11.8 |
| Crop to grow: | | Corn, silage 35% DM | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 28 | t/ac | | 161 | 2141 | 2634 | 618 | 4601 | 65 | 12 | 19 | 19 | 22 |




| Nutrient Recommendation: | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 82 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 74 | 6 | 242 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 7 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$


Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent


| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | | 0 lbs/ac | Urea 45% N | 14.1 lbs Total Needed |
| Total Blend (lbs/ac): | 0 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): | $0.04 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | | N-P2O5-K2O G | 45% 0% 0% | 14.1 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 85 | **Date:** | 7/28/2010 | **Field ID:** | 5 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Alfalfa | | | **Needed for field (acin):** | | 270.3 | |
| | **Liquid Applied:** | 3.18 | AcIn/ac | **(gal):** | | 7,338,645 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 170 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **74.5** | **5.7** | **241.7** |

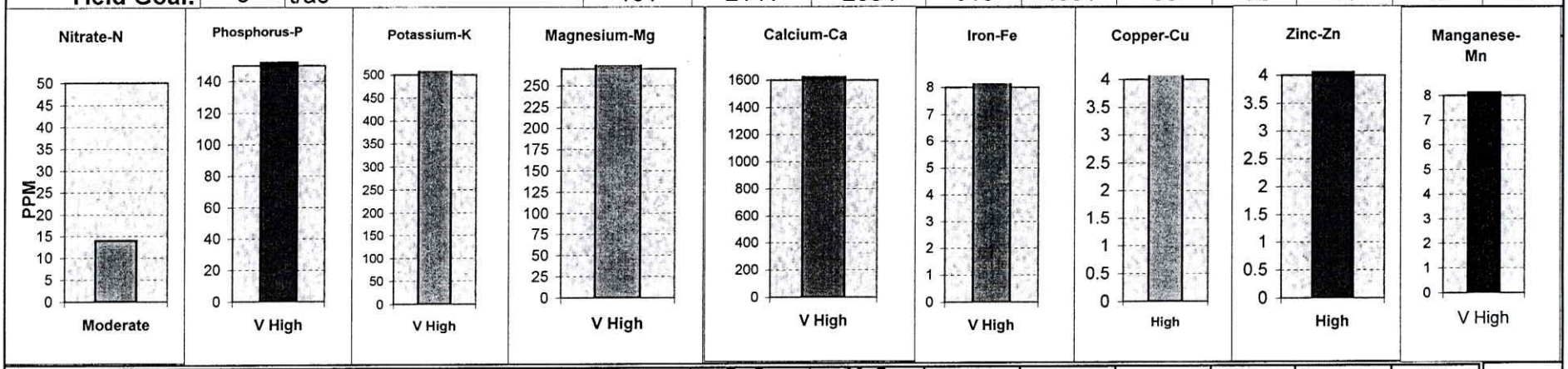
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 5 | Crop Rotation: | Alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 85.00 | Irr. Water (acin/ac): 11.2 |
| Address: | 491 W. Funk Rd | Planner Name: | | Form Notes: | |
| | Lake Arthur, NM | | RG | | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.2 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 8.1 | 0.56 | Loam | 4.5 | 14.0 | 495.0 | 1158.0 | 642.0 | 4778.0 | 67.0 | 6.4 | 9.9 | 10.3 | 11.8 |
| Crop to grow: | | Oats for silage, Irrigated | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 5 | t/ac | | 161 | 2141 | 2634 | 618 | 4601 | 65 | 12 | 19 | 19 | 22 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 147 | 10 | 482 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | | 0 lbs/ac | Urea 45% N | 16.3 lbs Total Needed |
| Total Blend (lbs/ac): | 0 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): | $0.04 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | | N-P2O5-K2O G | 45% 0% 0% | 16.3 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organi

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Client Name: | Cottonwood Springs | Acres: | 85 | Date: | 7/28/2010 | Field ID: | 5 |
| Application information (*enter the units that will be or has been applied to the field*): | Crop Rotation: Alfalfa | | | Needed for field (acin): | | 544 | |
| | Liquid Applied: | 6.4 | AcIn/ac | (gal): | | 14,769,600 | |
| | Solids Applied: | 2 | ton/ac | Needed for field (tons): | | 170 | |
| | Liquid Loads Applied: | | 1000gal/ac | Loads needed for field: | | | |

## Nutrient Content of Organic Material

| Solid-Lab Report | % Moisture | TKN (%) (dry) | $NH_4$-N (ppm) (dry) | $P_2O_5$ (%) (dry) | $K_2O$ (%) (dry) |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| Solid Book Values (select even if test values are used) | % Moisture | | TKN (lbs/wet ton) | | $NH_4$-N (lbs/ton) | | $P_2O_5$ (lbs/wet ton) | | $K_2O$ (lbs/wet ton) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| Liquid-Lab Report | $NH_3$-N (mg/L) | TKN (mg/L) | $NO_3$-N (mg/L) | Tot-$PO_4$ (mg/L) | K (mg/L) |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| Liquid | % Moisture | | TKN (lbs/acin) | | $NH_4$-N (lbs/acin) | | $P_2O_5$ (lbs/acin) | | $K_2O$ (lbs/acin) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| | TKN (lbs/1000gal) | | $NH_4$-N (lbs/1000gal) | | $P_2O_5$ (lbs/1000gal) | | $K_2O$ (lbs/1000gal) | |
|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test |
| | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| Solid (type of application) | Type of Climate | Percent Remaining | $NH_4$-N Remaining |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid (type of application)** | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| Manure Source | Percent Nutrient Available the 1st Year | | | |
|---|---|---|---|---|
| | Organic N | P | K | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | Solid Source |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | Liquid Source |

| Solid | Organic N (lbs/ton) | $P_2O_5$ (lbs/ton) | $K_2O$ (lbs/ton) |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| Organic Matter Content (%) | Soil Drainage Class (See Survey Information) | Percent Remaining (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| Net by Form as applied | lbs/1000gal | lbs/ac in | lbs/ton |
|---|---|---|---|
| N | 0.0 | 23 | 1 |
| $P_2O_5$ | 0.0 | 1 | 1 |
| $K_2O$ | 0.0 | 75 | 2 |

| Total Nutrients Applied (net to the field) | All Forms N (lbs/ac) | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) |
|---|---|---|---|
| | 147.4 | 9.8 | 482.3 |

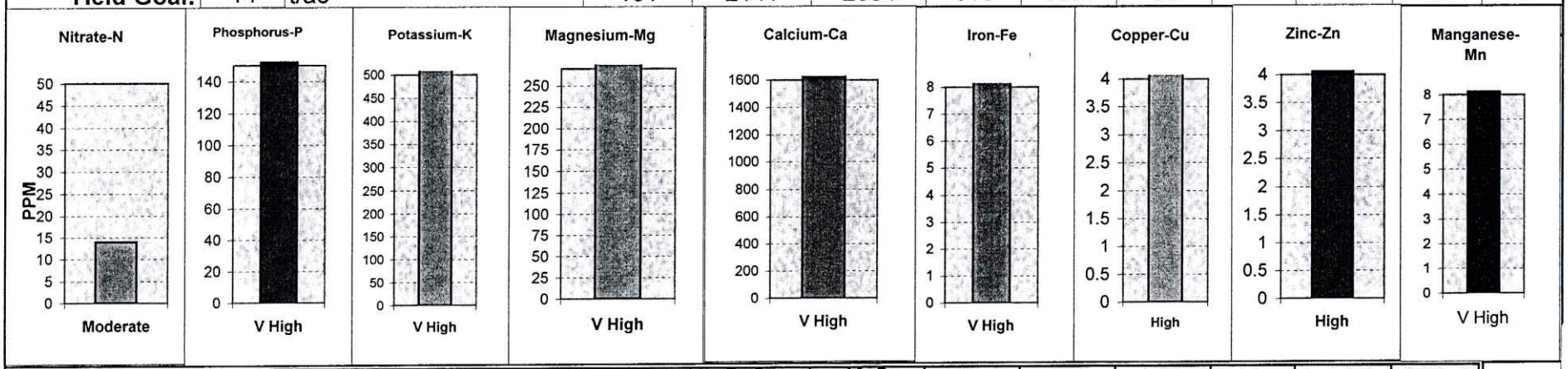
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 5 | Crop Rotation: | Alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 85.00 | Irr. Water (acin/ac): 13 |
| Address: | 491 W. Funk Rd | Planner Name: | | Form Notes: | |
| | Lake Arthur, NM | | RG | | |
| Zip Code: | 88253 | Date: 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.2 | ESP: 0.00 |
| Phone: | | | | | |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 8.1 | 0.56 | Loam | 4.5 | 14.0 | 495.0 | 1158.0 | 642.0 | 4778.0 | 67.0 | 6.4 | 9.9 | 10.3 | 11.8 |
| Crop to grow: | | Wheat for silage, Irrigated, wet basis | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 14 | t/ac | | 161 | 2141 | 2634 | 618 | 4601 | 65 | 12 | 19 | 19 | 22 |




| Nutrient Recommendation: | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 147 | 10 | 480 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 1 lbs/ac | Urea 45% N | | 68.1 lbs Total Needed |
| Total Blend (lbs/ac): 1 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.18 | 0 lbs/ac | | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% | 0% | 0% | 68.1 Tt Blend (lbs) |

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 85 | **Date:** | 7/28/2010 | **Field ID:** | 5 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Alfalfa | | | **Needed for field (acin):** | | 541.45 | |
| | **Liquid Applied:** | 6.37 | AcIn/ac | **(gal):** | | 14,700,368 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 170 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | | **TKN (%) (dry)** | | **$NH_4$-N (ppm) (dry)** | | **$P_2O_5$ (%) (dry)** | | **$K_2O$ (%) (dry)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | | 1.2 | | | | 0.3 | | 0.7 | |
| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |
| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | | **TKN (mg/L)** | | **$NO_3$-N (mg/L)** | | **Tot-$PO_4$ (mg/L)** | | **K (mg/L)** | |
| Fill in Lab data: | | | 308 | | | | 10 | | | |
| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
| | | | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **146.7** | **9.7** | **480.1** |

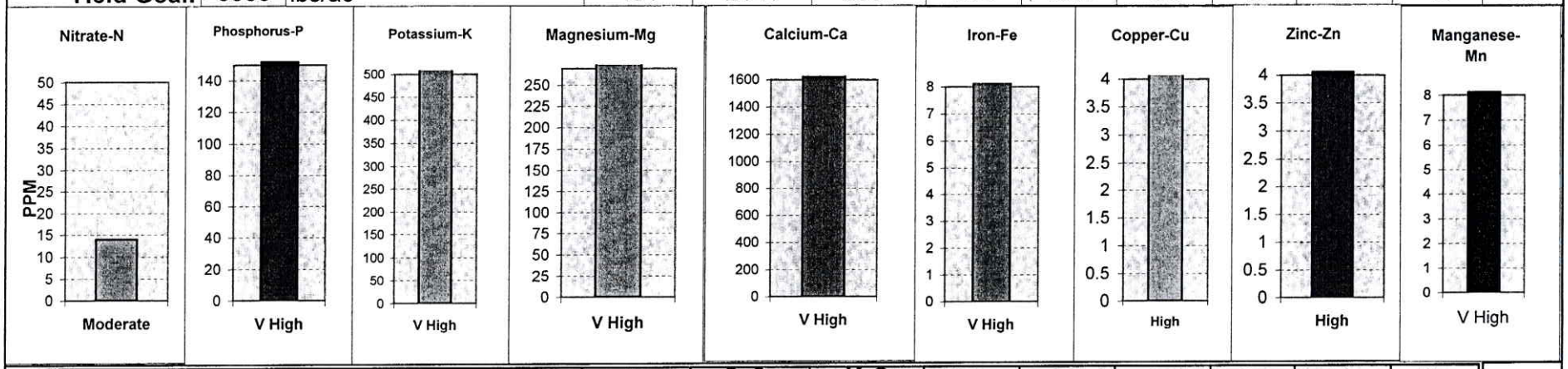
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 5 | Crop Rotation: | Pasture |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 85.00 | Irr. Water (acin/ac): 25.8 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | |
| Zip Code: | 88253 | Date: | 10/22/2009 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.2 ESP: 0.00 |
| Phone: | | | | | |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 8.1 | 0.56 | Loam | 4.5 | 14.0 | 495.0 | 1158.0 | 642.0 | 4778.0 | 67.0 | 6.4 | 9.9 | 10.3 | 11.8 |
| Crop to grow: | Pasture, grass, G stand, L. season | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 6000 | lbs/ac | | | 161 | 2141 | 2634 | 618 | 4601 | 65 | 12 | 19 | 19 | 22 |




| Nutrient Recommendation: | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 172 | 11 | 565 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring if needed. Split N into 2-4 applications with the first in early spring.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| Suggested Fertilizer Blend | | | | |
|---|---|---|---|---|
| | 4 lbs/ac | Urea 45% N | 358.2 lbs Total Needed |
| Total Blend (lbs/ac): 4 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.95 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% 0% 0% | 358.2 Tt Blend (lbs) |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cc: Eddy County Extension Agent


**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organi

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Client Name: | Cottonwood Springs | Acres: | 85 | Date: | 10/22/2009 | Field ID: | 5 |
| Application information (*enter the units that will be or has been applied to the field*): | Crop Rotation: Pasture | | | Needed for field (acin): | | 637.5 | |
| | Liquid Applied: | 7.5 | AcIn/ac | (gal): | | 17,308,125 | |
| | Solids Applied: | 2 | ton/ac | Needed for field (tons): | | 170 | |
| | Liquid Loads Applied: | | 1000gal/ac | Loads needed for field: | | | |

## Nutrient Content of Organic Material

| Solid-Lab Report | % Moisture | TKN (%) (dry) | $NH_4$-N (ppm) (dry) | $P_2O_5$ (%) (dry) | $K_2O$ (%) (dry) |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| Solid Book Values (select even if test values are used) | % Moisture | | TKN (lbs/wet ton) | | $NH_4$-N (lbs/ton) | | $P_2O_5$ (lbs/wet ton) | | $K_2O$ (lbs/wet ton) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| Liquid-Lab Report | $NH_3$-N (mg/L) | TKN (mg/L) | $NO_3$-N (mg/L) | Tot-$PO_4$ (mg/L) | K (mg/L) |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| Liquid | % Moisture | | TKN (lbs/acin) | | $NH_4$-N (lbs/acin) | | $P_2O_5$ (lbs/acin) | | $K_2O$ (lbs/acin) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | TKN (lbs/1000gal) | | $NH_4$-N (lbs/1000gal) | | $P_2O_5$ (lbs/1000gal) | | $K_2O$ (lbs/1000gal) | |
| | | | Book | Test | Book | Test | Book | Test | Book | Test |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| Solid (type of application) | Type of Climate | Percent Remaining | $NH_4$-N Remaining |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid (type of application)** | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 14.9 (lbs/acin) NH4-N |
| | | | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| Manure Source | Percent Nutrient Available the 1st Year | | | |
|---|---|---|---|---|
| | Organic N | P | K | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | Solid Source |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | Liquid Source |

| Solid | Organic N (lbs/ton) | $P_2O_5$ (lbs/ton) | $K_2O$ (lbs/ton) |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| Organic Matter Content (%) | Soil Drainage Class (See Survey Information) | Percent Remaining (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| Net by Form as applied | lbs/1000gal | lbs/ac in | lbs/ton |
|---|---|---|---|
| N | 0.0 | 23 | 1 |
| $P_2O_5$ | 0.0 | 1 | 1 |
| $K_2O$ | 0.0 | 75 | 2 |

| Total Nutrients Applied (net to the field) | All Forms N (lbs/ac) | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) |
|---|---|---|---|
| | 172.3 | 11.2 | 564.5 |

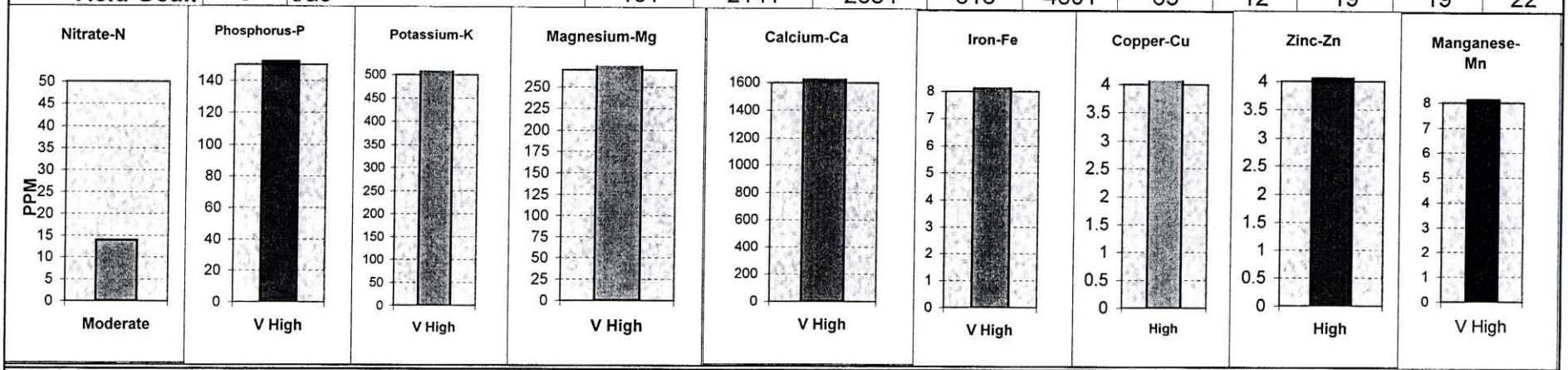
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 5 | Crop Rotation: | Alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 85.00 | Irr. Water (acin/ac): 25.8 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.2 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 8.1 | 0.56 | Loam | 4.5 | 14.0 | 495.0 | 1158.0 | 642.0 | 4778.0 | 67.0 | 6.4 | 9.9 | 10.3 | 11.8 |
| Crop to grow: | | Pasturegrass, Bermuda, established | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 5 | t/ac | | 161 | 2141 | 2634 | 618 | 4601 | 65 | 12 | 19 | 19 | 22 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 50 | 4 | 163 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring, if needed. Split fertilizer N applications to coincide with harvest regrowth. Consider slow release N for improved efficiency. Follow good Irrigation Water Mgt.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 0 lbs/ac | Urea 45% N | 40.8 lbs Total Needed |
| Total Blend (lbs/ac): 0 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.11 | 0 lbs/ac | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | 45% | 0% | 0% | 40.8 Tt Blend (lbs) |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Agronomy and Soils
cc: Eddy County Extension Agent


**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 5 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 85 | **Date:** | 7/28/2010 | **Field ID:** | 5 |
| **Application information (*enter the units that will be or has been applied to the field*):** | **Crop Rotation:** Alfalfa | | | **Needed for field (acin):** | | 180.2 | |
| | **Liquid Applied:** | 2.12 | AcIn/ac | **(gal):** | | 4,892,430 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 170 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content (%)** | **Soil Drainage Class** (See Survey Information) | **Percent Remaining (%)** |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **50.5** | **4.3** | **162.5** |

# *Grazing-N*: A Nitrogen Balance for Grazing Dairy Heifers and Dry Cows

Victor E. Cabrera, Ph.D., Extension Dairy Specialist, New Mexico State University

| Dairy | Cottonwood Springs Field 5 | Permit # | 734 | Period | 1/1/2009 | to | 12/30/2013 |
|---|---|---|---|---|---|---|---|

1799 days

| Weight (lbs) | DMI | CP intake | N intake | N excretion | N remain | Net Balance | Carrying Capacity (CC) animals/acre | Animals (#) | Days (#) | Acres (#) | N Supplement (lbs/day/animal) | N removal lbs/acre | Exceeds CC ? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (lbs/day/animal) | | | | | | | | | | | | |
| | ADG (lbs) 1.98 | %CP Grass 20.9 | | | % Volat. 50 | | DM (tn/ac/month) 0.75 | | | | | Meaning | |
| **Heifers** | | | | | | | | | | | | | |
| **Unbred** | | | | | | | | | | | | | |
| 330 | 9.89 | 2.07 | 0.33 | 0.10 | 0.05 | -0.28 | 5.1 | | | | | | |
| 440 | 12.36 | 2.58 | 0.41 | 0.14 | 0.07 | -0.35 | 4.0 | | | | | | |
| 550 | 14.68 | 3.07 | 0.49 | 0.17 | 0.09 | -0.41 | 3.4 | | | | | | |
| 660 | 16.89 | 3.53 | 0.56 | 0.20 | 0.10 | -0.46 | 3.0 | | | | | | |
| 770 | 18.99 | 3.97 | 0.64 | 0.24 | 0.12 | -0.52 | 2.6 | 420 | 95 | 85 | | -242.07 | YES |
| 880 | 21.02 | 4.39 | 0.70 | 0.27 | 0.14 | -0.57 | 2.4 | | | | | | |
| **Bred** | | | | | | | | | | | | | |
| 990 | 22.99 | 4.80 | 0.77 | 0.31 | 0.15 | -0.62 | 2.2 | | | | | | |
| 1100 | 24.90 | 5.20 | 0.83 | 0.34 | 0.17 | -0.66 | 2.0 | | | | | | |
| 1200 | 26.76 | 5.59 | 0.90 | 0.37 | 0.19 | -0.71 | 1.9 | | | | | | |
| 1320 | 28.59 | 5.97 | 0.96 | 0.41 | 0.20 | -0.75 | 1.7 | | | | | | |
| 1430 | 30.37 | 6.35 | 1.02 | 0.44 | 0.22 | -0.79 | 1.6 | | | | | | |
| **Dry** | | | | | | | | | | | | | |
| | %BW 1.8 | | | | | | | | | | | | |
| 1600 | 28.80 | 6.02 | 0.46 | 0.58 | 0.29 | -0.18 | 1.7 | | | | 0.5 | | |
| | | | | | | | | | | | Total | -242.07 | |

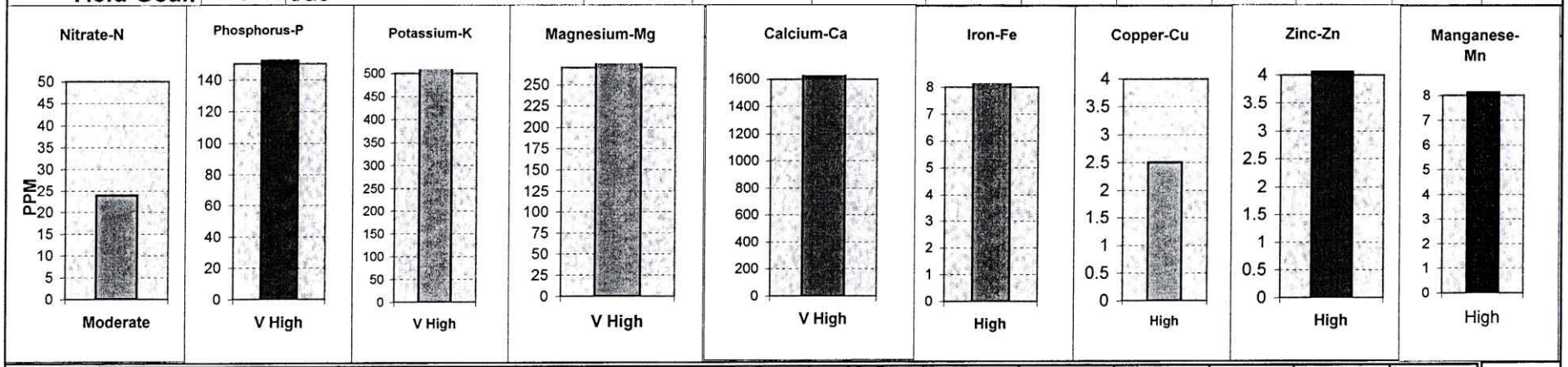
Grazing Management

# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 6 | Crop Rotation: | Oats - alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 36.00 | Irr. Water (acin/ac): 42.5 |
| Address: | 491 W. Funk Rd | Planner Name: | RG | Form Notes: | Formerly designated as Field 6b in 2006 CNMP |
| | Lake Arthur, NM | | | | |
| Zip Code: | 88253 | Date: 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.1 | ESP: 0.00 |
| Phone: | | Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %. | | | |

Save To Farm Sum

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 WEST | 7.8 | 0.5 | Loam | 3.4 | 24.0 | 246.0 | 541.0 | 459.0 | 5185.0 | 27.0 | 2.5 | 7.9 | 9.8 | 8.3 |
| Crop to grow: | Alfalfa, 21% Pro. (manure applied) | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 9 | t/ac | | | 147 | 1064 | 1230 | 442 | 4993 | 26 | 5 | 15 | 19 | 16 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 457 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 447 | 27 | 1473 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 10 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Manures contain P2O5 and sulfur among other plant nutrients. If application rate does not meet crop need then additional fertilizer may be needed.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 1 lbs/ac | Urea 45% N | 34.3 lbs Total Needed |
| Total Blend (lbs/ac): 1 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.22 | 0 lbs/ac | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | 45% | 0% | 0% | 34.3 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 36 | **Date:** | 7/28/2010 | **Field ID:** | 6 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Oats - alfalfa | | | **Needed for field (acin):** | | 707.58 | |
| | **Liquid Applied:** | 19.655 | AcIn/ac | **(gal):** | | 19,210,797 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 72 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
| | | | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **447.5** | **26.6** | **1472.8** |

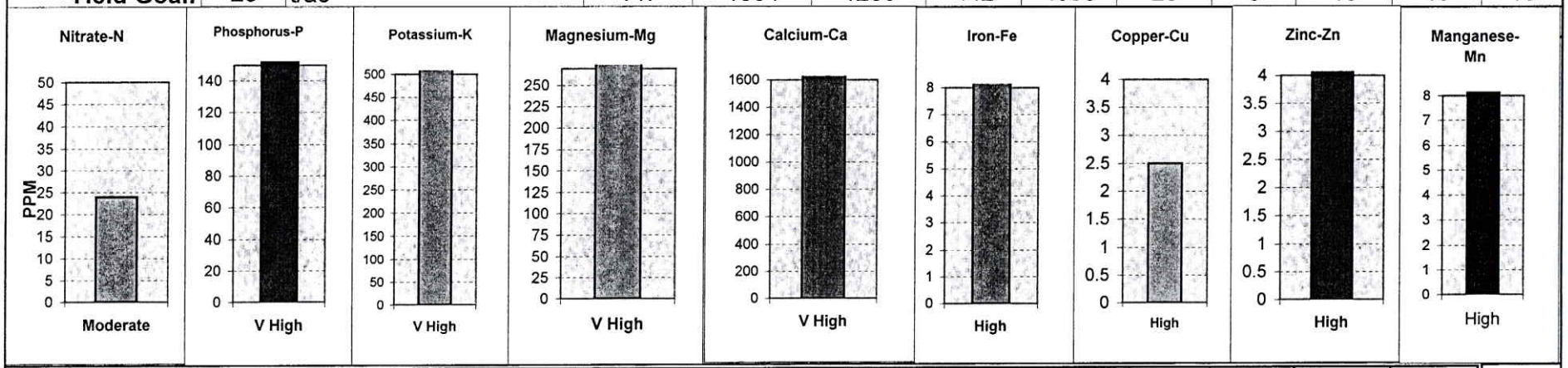
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 6 | Crop Rotation: | Alfalfa - winter wheat |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 36.00 | Irr. Water (acin/ac): 32.6 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | Formerly designated as Field 6b in 2006 CNMP |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 WEST | 7.8 | 0.5 | Loam | 3.4 | 24.0 | 246.0 | 541.0 | 459.0 | 5185.0 | 27.0 | 2.5 | 7.9 | 9.8 | 8.3 |
| Crop to grow: | | Corn, silage 35% DM | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 28 | t/ac | | 147 | 1064 | 1230 | 442 | 4993 | 26 | 5 | 15 | 19 | 16 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 61 | 5 | 196 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 7 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | | 0 lbs/ac | Urea 45% N | 5.2 lbs Total Needed |
| Total Blend (lbs/ac): | 0 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): | $0.03 | 0 lbs/ac | | 0.0 lbs Total Needed |

N-P2O5-K2O G 45% 0% 0% **5.2** Tt Blend (lbs)

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 36 | **Date:** | 7/28/2010 | **Field ID:** | 6 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Alfalfa - winter wheat | | | **Needed for field (acin):** | | 92.52 | |
| | **Liquid Applied:** | 2.57 | AcIn/ac | **(gal):** | | 2,511,918 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 72 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
| | | | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

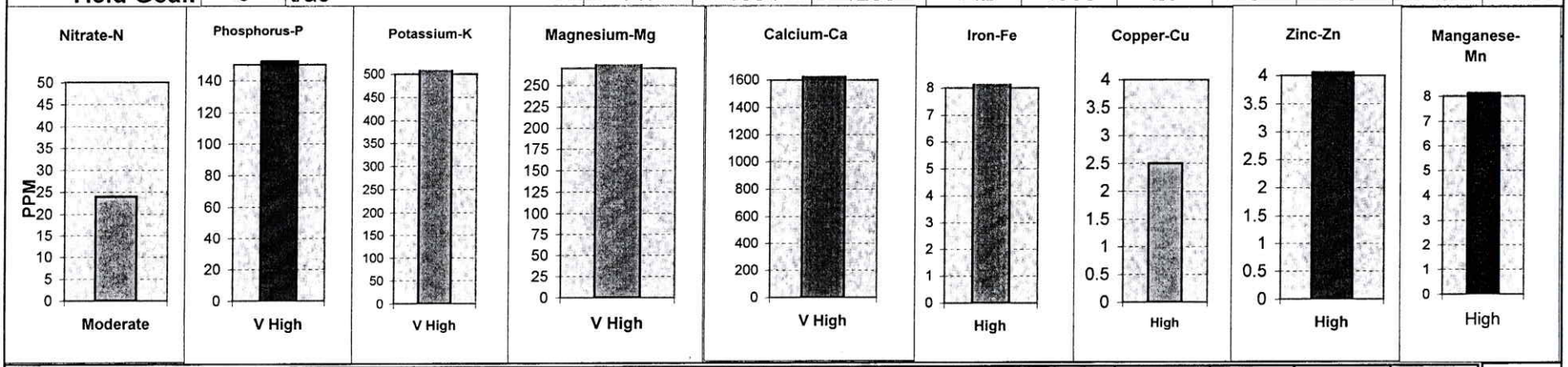
| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **60.7** | **4.9** | **196.1** |

# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| **County:** | Eddy | Save To Farm Sum | **Field ID:** 6 | **Crop Rotation:** | Alfalfa -oats |
| **Client Name:** | Cottonwood Springs | | **Record #:** 1 | **Acres:** 36.00 | **Irr. Water (acin/ac):** 11.2 |
| **Address:** | 491 W. Funk Rd<br>Lake Arthur, NM | | **Planner Name:** RG | **Form Notes:** | Formerly designated as Field 6b in 2006 CNMP |
| **Zip Code:** | 88253 | **Date:** 7/28/2010 | **Depth increment (in):** 6 | **Sodium Adsorb. Ratio:** 0.1 | **ESP:** 0.00 |
| **Phone:** | | | Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %. | | |

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 WEST | 7.8 | 0.5 | Loam | 3.4 | 24.0 | 246.0 | 541.0 | 459.0 | 5185.0 | 27.0 | 2.5 | 7.9 | 9.8 | 8.3 |
| **Crop to grow:** | Oats for silage, Irrigated | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| **Yield Goal:** | 5 | t/ac | | | 147 | 1064 | 1230 | 442 | 4993 | 26 | 5 | 15 | 19 | 16 |




| Nutrient Recommendation: | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 147 | 10 | 482 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | | | | | | | | | |
| **Supplemental Nutrient Rate:** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| | | | | |
|---|---|---|---|---|
| **Suggested Fertilizer Blend** | | 0 lbs/ac | Urea 45% N | 6.9 lbs Total Needed |
| **Total Blend (lbs/ac):** | 0 | 0 lbs/ac | | 0.0 lbs Total Needed |
| **Blend Cost ($/ac):** | $0.04 | 0 lbs/ac | | 0.0 lbs Total Needed |

**Client Signature:** Planner Signature: N-P2O5-K2O G 45% 0% 0% **6.9 Tt Blend (lbs)**

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 36 | **Date:** | 7/28/2010 | **Field ID:** | 6 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Alfalfa -oats | | | **Needed for field (acin):** | | 230.4 | |
| | **Liquid Applied:** | 6.4 | Acln/ac | **(gal):** | | 6,255,360 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 72 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
| | | | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

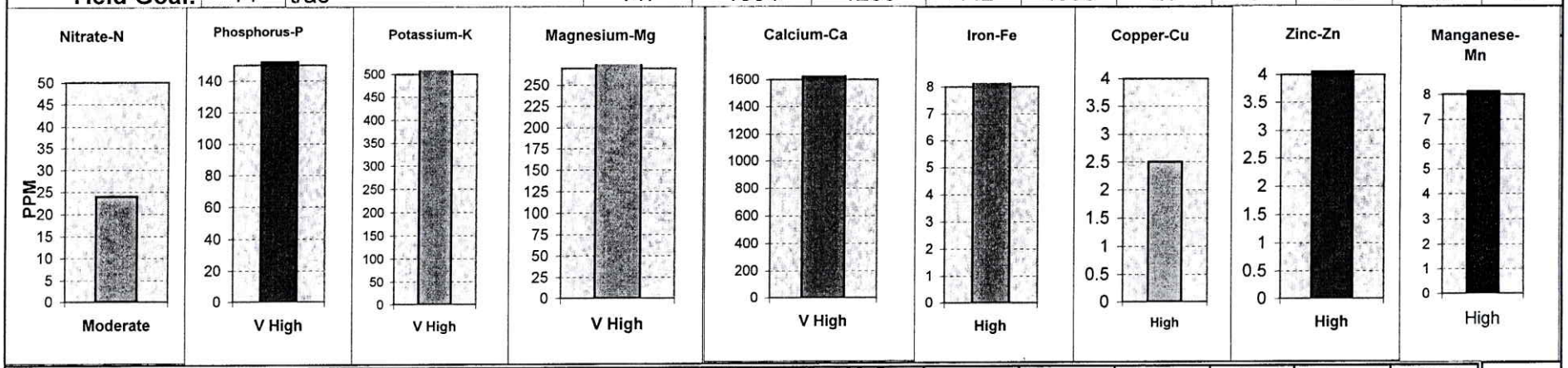
| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **147.4** | **9.8** | **482.3** |

# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| **County:** | Eddy | Save To Farm Sum | **Field ID:** 6 | **Crop Rotation:** | Alfalfa - winter wheat |
| **Client Name:** | Cottonwood Springs | | **Record #:** 1 | **Acres:** 36.00 | **Irr. Water (acin/ac):** 13 |
| **Address:** | 491 W. Funk Rd<br>Lake Arthur, NM | | **Planner Name:** RG | **Form Notes:** | Formerly designated as Field 6b in 2006 CNMP |
| **Zip Code:** | 88253 | **Date:** 7/28/2010 | **Depth increment (in):** 6 | **Sodium Adsorb. Ratio:** 0.1 | **ESP:** 0.00 |
| **Phone:** | | | Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %. | | |

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 WEST | 7.8 | 0.5 | Loam | 3.4 | 24.0 | 246.0 | 541.0 | 459.0 | 5185.0 | 27.0 | 2.5 | 7.9 | 9.8 | 8.3 |
| **Crop to grow:** | Wheat for silage, Irrigated, wet basis | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| **Yield Goal:** | 14 | t/ac | | | 147 | 1064 | 1230 | 442 | 4993 | 26 | 5 | 15 | 19 | 16 |




| Nutrient Recommendation: | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 147 | 10 | 480 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | | | | | | | | | |
| **Supplemental Nutrient Rate:** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| | | | | |
|---|---|---|---|---|
| **Suggested Fertilizer Blend** | | 1 lbs/ac | Urea 45% N | 28.8 lbs Total Needed |
| **Total Blend (lbs/ac):** | 1 | 0 lbs/ac | | 0.0 lbs Total Needed |
| **Blend Cost ($/ac):** | $0.18 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | | N-P2O5-K2O G | 45% 0% 0% | **28.8** Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 36 | **Date:** | 7/28/2010 | **Field ID:** | 6 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Alfalfa - winter wheat | | | **Needed for field (acin):** | | 229.32 | |
| | **Liquid Applied:** | 6.37 | AcIn/ac | **(gal):** | | 6,226,038 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 72 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 14.9 (lbs/acin) NH4-N |
| | | | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **146.7** | **9.7** | **480.1** |

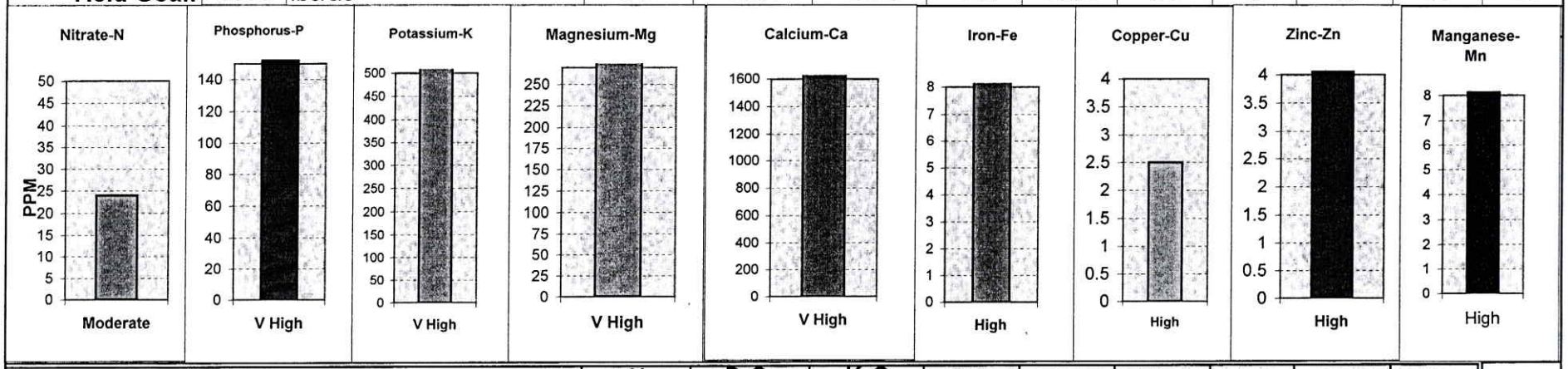
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 6 | Crop Rotation: | Pasture |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 36.00 | Irr. Water (acin/ac): 25 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | Formerly designated as Field 6b in 2006 CNMP |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 WEST | 7.8 | 0.5 | Loam | 3.4 | 24.0 | 246.0 | 541.0 | 459.0 | 5185.0 | 27.0 | 2.5 | 7.9 | 9.8 | 8.3 |
| Crop to grow: | Pasture, grass, G stand, L. season | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 6000 | lbs/ac | | | 147 | 1064 | 1230 | 442 | 4993 | 26 | 5 | 15 | 19 | 16 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 172 | 11 | 565 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | | | | | | | | | |
| **Supplemental Nutrient Rate:** | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring if needed. Split N into 2-4 applications with the first in early spring.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| Suggested Fertilizer Blend | | | | |
|---|---|---|---|---|
| | 5 lbs/ac | Urea 45% N | 166.1 lbs Total Needed |
| Total Blend (lbs/ac): 5 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $1.04 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | N-P2O5-K2O G | 45% 0% 0% | 166.1 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Client Name: | Cottonwood Springs | Acres: | 36 | Date: | 7/28/2010 | Field ID: | 6 |
| Application information (*enter the units that will be or has been applied to the field*): | Crop Rotation: Pasture | | | Needed for field (acin): | | 270 | |
| | Liquid Applied: | 7.5 | Acln/ac | (gal): | | 7,330,500 | |
| | Solids Applied: | 2 | ton/ac | Needed for field (tons): | | 72 | |
| | Liquid Loads Applied: | | 1000gal/ac | Loads needed for field: | | | |

## Nutrient Content of Organic Material

| Solid-Lab Report | % Moisture | TKN (%) (dry) | $NH_4$-N (ppm) (dry) | $P_2O_5$ (%) (dry) | $K_2O$ (%) (dry) |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| Solid Book Values (select even if test values are used) | % Moisture | | TKN (lbs/wet ton) | | $NH_4$-N (lbs/ton) | | $P_2O_5$ (lbs/wet ton) | | $K_2O$ (lbs/wet ton) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| Liquid-Lab Report | $NH_3$-N (mg/L) | TKN (mg/L) | $NO_3$-N (mg/L) | Tot-$PO_4$ (mg/L) | K (mg/L) |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| Liquid | % Moisture | | TKN (lbs/acin) | | $NH_4$-N (lbs/acin) | | $P_2O_5$ (lbs/acin) | | $K_2O$ (lbs/acin) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| | TKN (lbs/1000gal) | | $NH_4$-N (lbs/1000gal) | | $P_2O_5$ (lbs/1000gal) | | $K_2O$ (lbs/1000gal) | |
|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test |
| | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| Solid (type of application) | Type of Climate | Percent Remaining | $NH_4$-N Remaining |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid (type of application)** | **Type of Climate** | **Percent Remaining** | 14.9 (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| Manure Source | Percent Nutrient Available the 1st Year | | | |
|---|---|---|---|---|
| | Organic N | P | K | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | Solid Source |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | Liquid Source |

| Solid | Organic N (lbs/ton) | $P_2O_5$ (lbs/ton) | $K_2O$ (lbs/ton) |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| Organic Matter Content (%) | Soil Drainage Class (See Survey Information) | Percent Remaining (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| Net by Form as applied | lbs/1000gal | lbs/ac in | lbs/ton |
|---|---|---|---|
| N | 0.0 | 23 | 1 |
| $P_2O_5$ | 0.0 | 1 | 1 |
| $K_2O$ | 0.0 | 75 | 2 |

| Total Nutrients Applied (net to the field) | All Forms N (lbs/ac) | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) |
|---|---|---|---|
| | 172.3 | 11.2 | 564.5 |

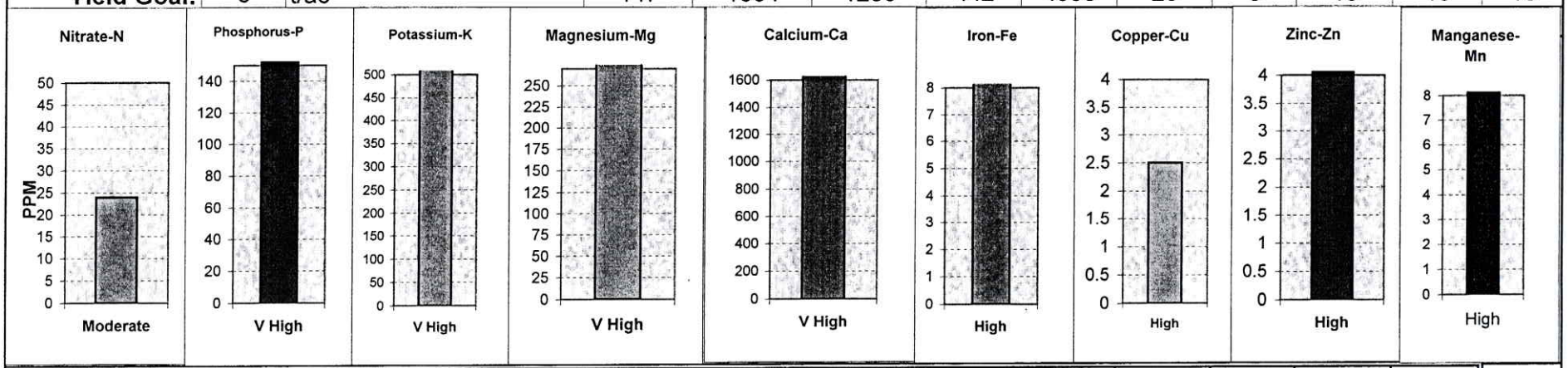
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 6 | Crop Rotation: | Pasture -oats |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 36.00 | Irr. Water (acin/ac): 25 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | Formerly designated as Field 6b in 2006 CNMP |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): | 6 |
| Phone: | | | | Sodium Adsorb. Ratio: | 0.1 |
| | | | | ESP: | 0.00 |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 WEST | 7.8 | 0.5 | Loam | 3.4 | 24.0 | 246.0 | 541.0 | 459.0 | 5185.0 | 27.0 | 2.5 | 7.9 | 9.8 | 8.3 |
| Crop to grow: | | Pasturegrass, Bermuda, established | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 5 | t/ac | | 147 | 1064 | 1230 | 442 | 4993 | 26 | 5 | 15 | 19 | 16 |




| Nutrient Recommendation: | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 65 | 5 | 210 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring, if needed. Split fertilizer N applications to coincide with harvest regrowth. Consider slow release N for improved efficiency. Follow good Irrigation Water Mgt.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

| | | | | |
|---|---|---|---|---|
| Robert P. Flynn, Ph.D. | Suggested Fertilizer Blend | 1 lbs/ac | Urea 45% N | 20.2 lbs Total Needed |
| Agronomy and Soils | Total Blend (lbs/ac): 1 | 0 lbs/ac | | 0.0 lbs Total Needed |
| cc: Eddy County Extension Agent | Blend Cost ($/ac): $0.13 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Client Signature: | Planner Signature: | N-P2O5-K2O G | 45% 0% 0% | 20.2 Tt Blend (lbs) |

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 6 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 36 | **Date:** | 7/28/2010 | **Field ID:** | 6 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Pasture -oats | | | **Needed for field (acin):** | | 99 | |
| | **Liquid Applied:** | 2.75 | AcIn/ac | **(gal):** | | 2,687,850 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 72 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | 14.9 (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **64.8** | **5.1** | **209.6** |

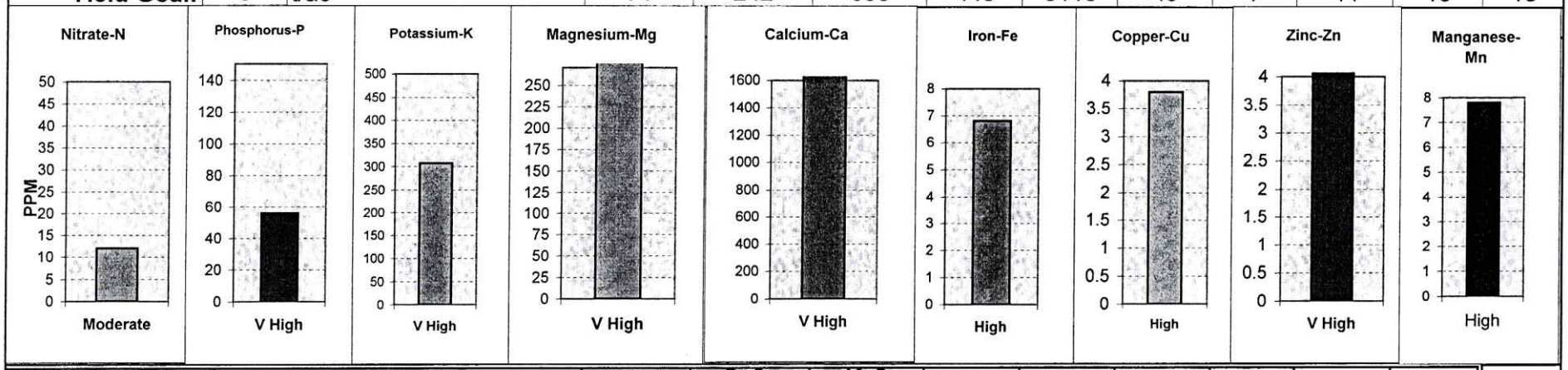
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 7 | Crop Rotation: | Alfalfa |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 40.00 | Irr. Water (acin/ac): 42.5 |
| Address: | 491 W. Funk Rd | Planner Name: | | Form Notes: | |
| | Lake Arthur, NM | | RG | | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.2 ESP: 0.00 |
| Phone: | | | | | |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 8.1 | 0.51 | Loam | 1.6 | 12.0 | 56.0 | 307.0 | 465.0 | 5313.0 | 51.0 | 3.8 | 23.5 | 7.8 | 6.8 |
| Crop to grow: | | Alfalfa, 21% Pro. (manure applied) | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 9 | t/ac | | 71 | 242 | 698 | 448 | 5116 | 49 | 7 | 44 | 15 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 534 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 524 | 31 | 1726 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 10 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Manures contain P2O5 and sulfur among other plant nutrients. If application rate does not meet crop need then additional fertilizer may be needed.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | 0 lbs/ac | Urea 45% N | 19.5 lbs Total Needed |
| Total Blend (lbs/ac): 0 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.11 | 0 lbs/ac | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | 45% | 0% | 0% | 19.5 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 40 | **Date:** | 7/28/2010 | **Field ID:** | 7 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Alfalfa | | | **Needed for field (acin):** | | 922 | |
| | **Liquid Applied:** | 23.05 | AcIn/ac | **(gal):** | | 25,032,300 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 80 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
| | | | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

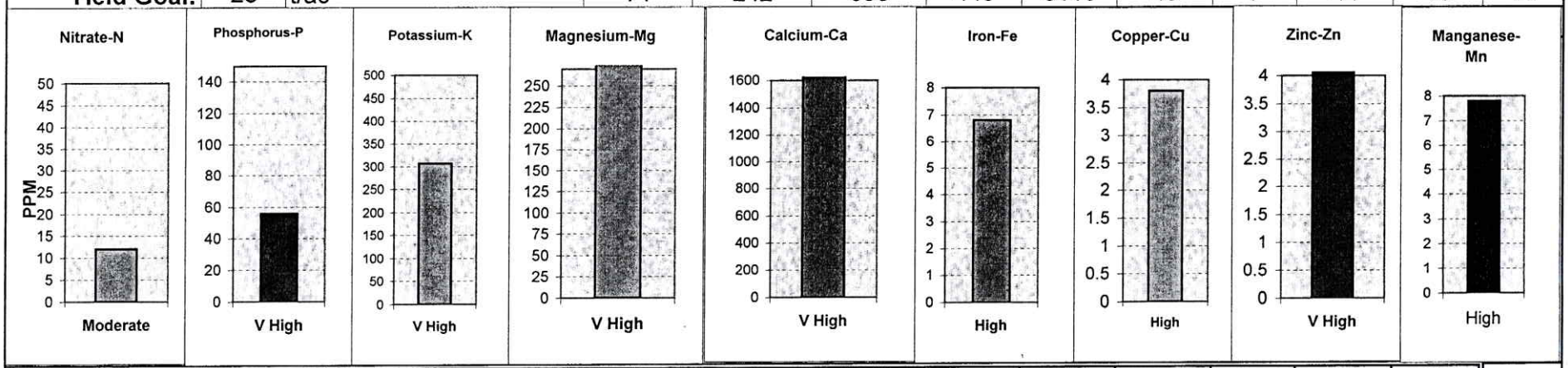
| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **524.4** | **30.9** | **1726.5** |

# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| **County:** | Eddy | Save To Farm Sum | **Field ID:** 7 | **Crop Rotation:** | Corn silage |
| **Client Name:** | Cottonwood Springs | | **Record #:** 1 | **Acres:** 40.00 | **Irr. Water (acin/ac):** 32.6 |
| **Address:** | 491 W. Funk Rd<br>Lake Arthur, NM | | **Planner Name:** RG | **Form Notes:** | |
| **Zip Code:** | 88253 | **Date:** 7/28/2010 | **Depth increment (in):** 6 | **Sodium Adsorb. Ratio:** 0.2 | **ESP:** 0.00 |
| **Phone:** | | | | | |

**Note:** E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 8.1 | 0.51 | Loam | 1.6 | 12.0 | 56.0 | 307.0 | 465.0 | 5313.0 | 51.0 | 3.8 | 23.5 | 7.8 | 6.8 |
| **Crop to grow:** | | Corn, silage 35% DM | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| **Yield Goal:** | | 28 | t/ac | | 71 | 242 | 698 | 448 | 5116 | 49 | 7 | 44 | 15 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | 159 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 151 | 10 | 496 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 7 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | | | | | | | | | |
| **Supplemental Nutrient Rate:** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| | | | | |
|---|---|---|---|---|
| **Suggested Fertilizer Blend** | | 0 lbs/ac | Urea 45% N | 10.3 lbs Total Needed |
| **Total Blend (lbs/ac):** | 0 | 0 lbs/ac | | 0.0 lbs Total Needed |
| **Blend Cost ($/ac):** | $0.06 | 0 lbs/ac | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | | 45% | 0% 0% | **10.3** Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 40 | **Date:** | 7/28/2010 | **Field ID:** | 7 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Corn silage | | | **Needed for field (acin):** | | 263.2 | |
| | **Liquid Applied:** | 6.58 | Acln/ac | **(gal):** | | 7,145,880 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 80 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
| | | | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **151.5** | **10.0** | **495.8** |

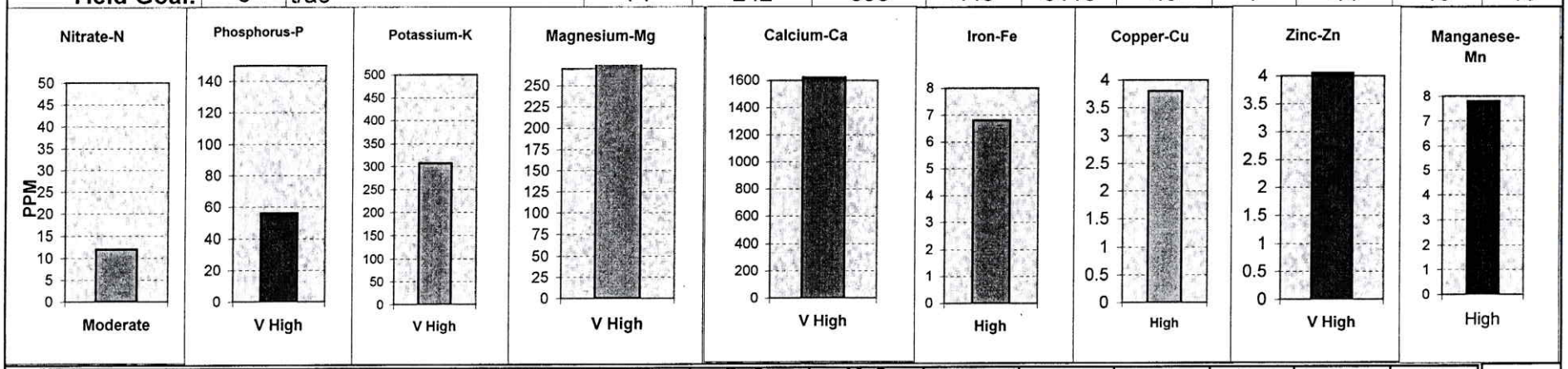
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 7 | Crop Rotation: | Oats silage |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 40.00 | Irr. Water (acin/ac): 11.2 |
| Address: | 491 W. Funk Rd | Planner Name: | | Form Notes: | |
| | Lake Arthur, NM | | RG | | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.2 ESP: 0.00 |
| Phone: | | | | | |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 8.1 | 0.51 | Loam | 1.6 | 12.0 | 56.0 | 307.0 | 465.0 | 5313.0 | 51.0 | 3.8 | 23.5 | 7.8 | 6.8 |
| Crop to grow: | | Oats for silage, Irrigated | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | | 5 | t/ac | | 71 | 242 | 698 | 448 | 5116 | 49 | 7 | 44 | 15 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 147 | 10 | 482 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| | | | | |
|---|---|---|---|---|
| Suggested Fertilizer Blend | | 0 lbs/ac | Urea 45% N | 7.7 lbs Total Needed |
| Total Blend (lbs/ac): | 0 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): | $0.04 | 0 lbs/ac | | 0.0 lbs Total Needed |
| | | N-P2O5-K2O G | 45% 0% 0% | 7.7 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 40 | **Date:** | 7/28/2010 | **Field ID:** | 7 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Oats silage | | | **Needed for field (acin):** | | 256 | |
| | **Liquid Applied:** | 6.4 | AcIn/ac | **(gal):** | | 6,950,400 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 80 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| Solid-Lab Report | % Moisture | TKN (%) (dry) | $NH_4$-N (ppm) (dry) | $P_2O_5$ (%) (dry) | $K_2O$ (%) (dry) |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| Solid Book Values (select even if test values are used) | % Moisture | | TKN (lbs/wet ton) | | $NH_4$-N (lbs/ton) | | $P_2O_5$ (lbs/wet ton) | | $K_2O$ (lbs/wet ton) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| Liquid-Lab Report | $NH_3$-N (mg/L) | TKN (mg/L) | $NO_3$-N (mg/L) | Tot-$PO_4$ (mg/L) | K (mg/L) |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| Liquid | % Moisture | | TKN (lbs/acin) | | $NH_4$-N (lbs/acin) | | $P_2O_5$ (lbs/acin) | | $K_2O$ (lbs/acin) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Book | Test | Book | Test | Book | Test | Book | Test | Book | Test |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| TKN (lbs/1000gal) | | $NH_4$-N (lbs/1000gal) | | $P_2O_5$ (lbs/1000gal) | | $K_2O$ (lbs/1000gal) | |
|---|---|---|---|---|---|---|---|
| Book | Test | Book | Test | Book | Test | Book | Test |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| Solid (type of application) | Type of Climate | Percent Remaining | $NH_4$-N Remaining |
|---|---|---|---|
| | Warm Wet | 0 % | 0 (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | 14.9 (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | 0.0 (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| Manure Source | Percent Nutrient Available the 1st Year | | | |
|---|---|---|---|---|
| | Organic N | P | K | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | Solid Source |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | Liquid Source |

| Solid | Organic N (lbs/ton) | $P_2O_5$ (lbs/ton) | $K_2O$ (lbs/ton) |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| Organic Matter Content (%) | Soil Drainage Class (See Survey Information) | Percent Remaining (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

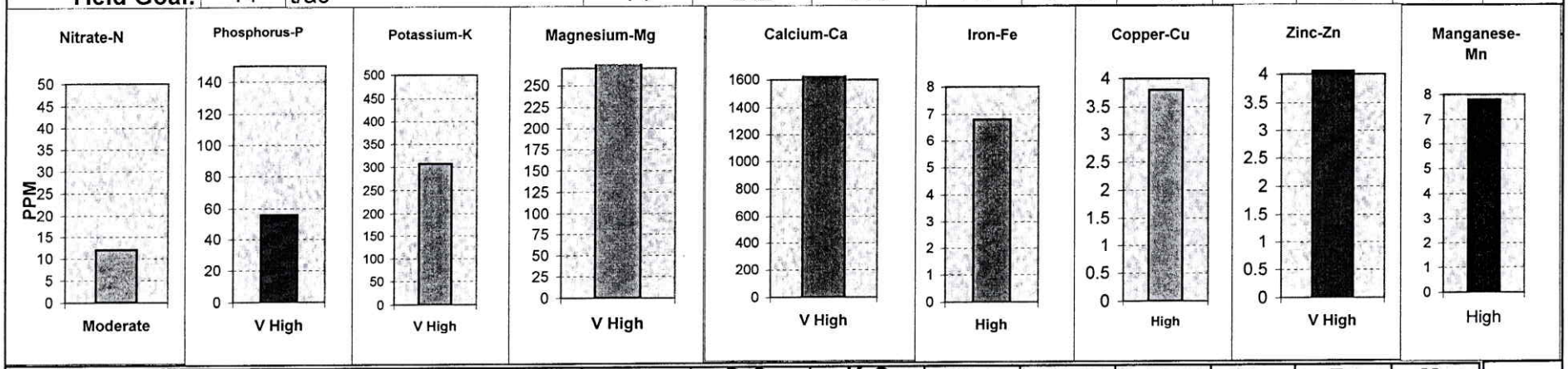
| Net by Form as applied | lbs/1000gal | lbs/ac in | lbs/ton |
|---|---|---|---|
| N | 0.0 | 23 | 1 |
| $P_2O_5$ | 0.0 | 1 | 1 |
| $K_2O$ | 0.0 | 75 | 2 |

| Total Nutrients Applied (net to the field) | All Forms N (lbs/ac) | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) |
|---|---|---|---|
| | 147.4 | 9.8 | 482.3 |

# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| **County:** | Eddy | Save To Farm Sum | **Field ID:** 7 | **Crop Rotation:** | Wheat silage |
| **Client Name:** | Cottonwood Springs | | **Record #:** 1 | **Acres:** 40.00 | **Irr. Water (acin/ac):** 13.6 |
| **Address:** | 491 W. Funk Rd<br>Lake Arthur, NM | | **Planner Name:** RG | **Form Notes:** | |
| **Zip Code:** | 88253 | **Date:** 7/28/2010 | **Depth increment (in):** 6 | **Sodium Adsorb. Ratio:** 0.2 | **ESP:** 0.00 |
| **Phone:** | | | Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %. | | |

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 8.1 | 0.51 | Loam | 1.6 | 12.0 | 56.0 | 307.0 | 465.0 | 5313.0 | 51.0 | 3.8 | 23.5 | 7.8 | 6.8 |
| **Crop to grow:** | Wheat for silage, Irrigated, wet basis | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| **Yield Goal:** | 14 | t/ac | | | 71 | 242 | 698 | 448 | 5116 | 49 | 7 | 44 | 15 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| **Recommended Nutrient Rate:** | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Organic Nutrient Source** (Liquid or Solid Manure): | 147 | 10 | 480 | | | | | | |
| **Irrigation Water Credits** (ppm $NO_3$-N): 1 | 3 | | | | | | | | |
| **Other Nutrient Sources** (Standing Legume Crop.): | | | | | | | | | |
| **Supplemental Nutrient Rate:** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Available Nutrients > Crop Requirements:** | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O at planting time if needed. Apply 1/2 N at planting time and side-dress 1/2 at lay-by. Split applying and banding can improve fertilizer efficiency.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| | | | | |
|---|---|---|---|---|
| **Suggested Fertilizer Blend** | | 1 lbs/ac | Urea 45% N | 20.0 lbs Total Needed |
| **Total Blend (lbs/ac):** | 1 | 0 lbs/ac | | 0.0 lbs Total Needed |
| **Blend Cost ($/ac):** | $0.11 | 0 lbs/ac | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | | 45% | 0% | 0% **20.0** Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 40 | **Date:** | 7/28/2010 | **Field ID:** | 7 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Wheat silage | | | **Needed for field (acin):** | | 254.8 | |
| | **Liquid Applied:** | 6.37 | Acin/ac | **(gal):** | | 6,917,820 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 80 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
| | | | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | 0 % | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | 35 % | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | 88 |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **146.7** | **9.7** | **480.1** |

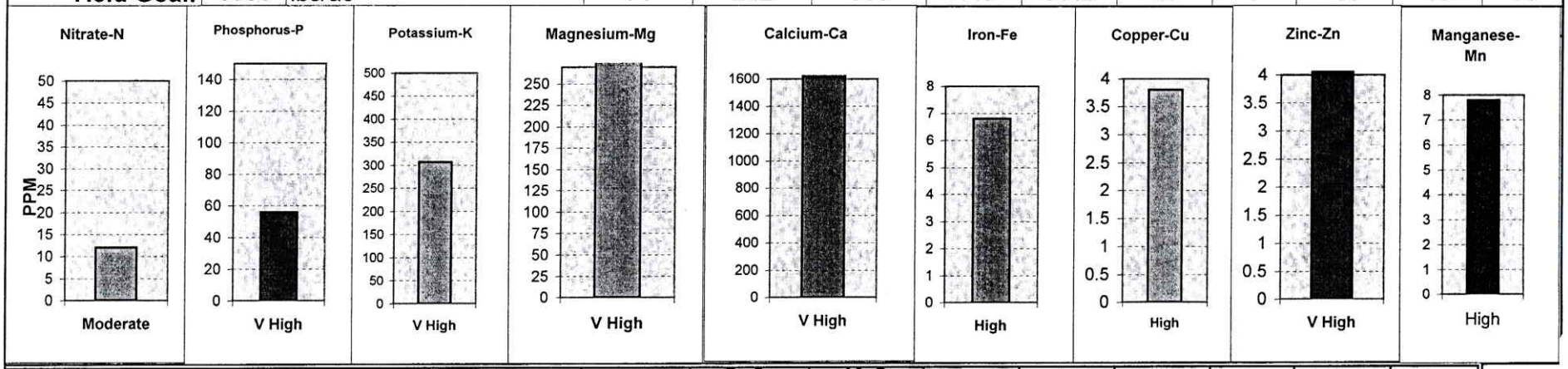
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 7 | Crop Rotation: | Pasture |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 40.00 | Irr. Water (acin/ac): 25.8 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.2 ESP: 0.00 |
| Phone: | | | | | |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 8.1 | 0.51 | Loam | 1.6 | 12.0 | 56.0 | 307.0 | 465.0 | 5313.0 | 51.0 | 3.8 | 23.5 | 7.8 | 6.8 |
| Crop to grow: | Pasture, grass, G stand, L. season | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 6000 | lbs/ac | | | 71 | 242 | 698 | 448 | 5116 | 49 | 7 | 44 | 15 | 13 |




| Nutrient Recommendation: | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 170 | 11 | 557 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring if needed. Split N into 2-4 applications with the first in early spring.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$

Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent

| Suggested Fertilizer Blend | | | | |
|---|---|---|---|---|
| | 9 lbs/ac | Urea 45% N | 369.8 lbs Total Needed |
| Total Blend (lbs/ac): 9 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $2.09 | 0 lbs/ac | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | 45% | 0% | 0% | 369.8 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 40 | **Date:** | 7/28/2010 | **Field ID:** | 7 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Pasture | | | **Needed for field (acin):** | | 296 | |
| | **Liquid Applied:** | 7.4 | Acin/ac | **(gal):** | | 8,036,400 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 80 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 4 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |
| | | | **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
| | | | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| | | | 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **170.0** | **11.0** | **557.1** |

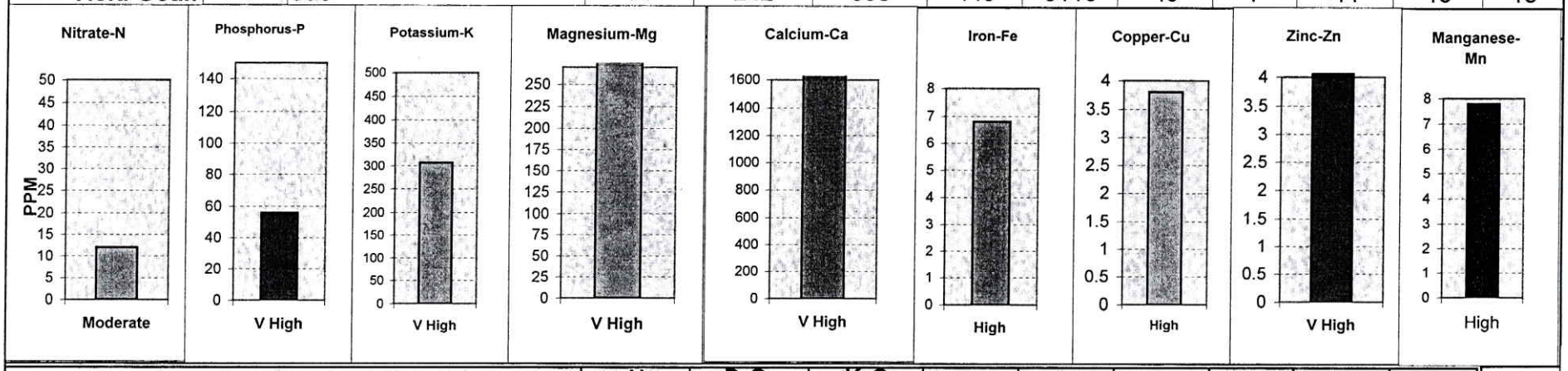
# N.M.S.U.-Soil Test Interpretation Report vs 4.10 - (590 Nutrient Management Jobsheet)

| | | | | | |
|---|---|---|---|---|---|
| County: | Eddy | Field ID: | 7 | Crop Rotation: | Bermuda |
| Client Name: | Cottonwood Springs | Record #: | 1 | Acres: 40.00 | Irr. Water (acin/ac): 25.8 |
| Address: | 491 W. Funk Rd<br>Lake Arthur, NM | Planner Name: | RG | Form Notes: | |
| Zip Code: | 88253 | Date: | 7/28/2010 | Depth increment (in): 6 | Sodium Adsorb. Ratio: 0.2 ESP: 0.00 |
| Phone: | | | | | |

Save To Farm Sum

Note: E.C.-Electrical Conductivity or Saltiness, O.M.-Organic Matter, and ESP-Exchangeable Sodium %.

| Samp. ID (#) | pH (#) | E.C. (mmhos/cm) | Soil Texture (class) | O. M. (%) | $NO_3$-N (ppm) | P (ppm) | K (ppm) | Mg (ppm) | Ca (ppm) | Na (ppm) | Cu (ppm) | Zn (ppm) | Mn (ppm) | Fe (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 8.1 | 0.51 | Loam | 1.6 | 12.0 | 56.0 | 307.0 | 465.0 | 5313.0 | 51.0 | 3.8 | 23.5 | 7.8 | 6.8 |
| Crop to grow: | Pasturegrass, Bermuda, established | | | | lbs/ac | $P_2O_5$ (lbs/ac) | $K_2O$ (lbs/ac) | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac | lbs/ac |
| Yield Goal: | 5 | t/ac | | | 71 | 242 | 698 | 448 | 5116 | 49 | 7 | 44 | 15 | 13 |




## Nutrient Recommendation:

| | N lbs/ac | $P_2O_5$ lbs/ac | $K_2O$ lbs/ac | Mg lbs/ac | Ca lbs/ac | Fe lbs/ac | Cu lbs/ac | Zn lbs/ac | Mn lbs/ac |
|---|---|---|---|---|---|---|---|---|---|
| Recommended Nutrient Rate: | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Organic Nutrient Source (Liquid or Solid Manure): | 141 | 10 | 461 | | | | | | |
| Irrigation Water Credits (ppm $NO_3$-N): 1 | 6 | | | | | | | | |
| Other Nutrient Sources (Standing Legume Crop.): | | | | | | | | | |
| Supplemental Nutrient Rate: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Available Nutrients > Crop Requirements: | NO | Caution P | Caution K | NO | NO | NO | NO | NO | NO |

**General Note:** Apply P2O5 & K2O in the spring, if needed. Split fertilizer N applications to coincide with harvest regrowth. Consider slow release N for improved efficiency. Follow good Irrigation Water Mgt.

**Specific Notes:**

**EC Note:** Very Low | No limitations

**Gypsum Recom:** 0 lbs/ac or 0 lbs/1000 $ft^2$


Robert P. Flynn, Ph.D.
Agronomy and Soils
cc: Eddy County Extension Agent


| Suggested Fertilizer Blend | | | |
|---|---|---|---|
| | 1 lbs/ac | Urea 45% N | 32.1 lbs Total Needed |
| Total Blend (lbs/ac): 1 | 0 lbs/ac | | 0.0 lbs Total Needed |
| Blend Cost ($/ac): $0.18 | 0 lbs/ac | | 0.0 lbs Total Needed |
| N-P2O5-K2O G | 45% | 0% | 0% — 32.1 Tt Blend (lbs) |

**Client Signature:** Planner Signature:

**Fertilizer Cost Note:** *Default costs are from NASS 10yr ave. ending 2001. Actual cost need local material cost and application charges. (See fert cost tab).*

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

Cottonwood Springs Dairy NMP
Field 7 – 590 Jobsheets (2010)

# 590 Nutrient Mgt. Jobsheet for Organic

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Client Name:** | Cottonwood Springs | **Acres:** | 40 | **Date:** | 7/28/2010 | **Field ID:** | 7 |
| **Application information** (*enter the units that will be or has been applied to the field*): | **Crop Rotation:** Bermuda | | | **Needed for field (acin):** | | 244.8 | |
| | **Liquid Applied:** | 6.12 | AcIn/ac | **(gal):** | | 6,646,320 | |
| | **Solids Applied:** | 2 | ton/ac | **Needed for field (tons):** | | 80 | |
| | **Liquid Loads Applied:** | | 1000gal/ac | **Loads needed for field:** | | | |

## Nutrient Content of Organic Material

| **Solid-Lab Report** | **% Moisture** | **TKN (%) (dry)** | **$NH_4$-N (ppm) (dry)** | **$P_2O_5$ (%) (dry)** | **$K_2O$ (%) (dry)** |
|---|---|---|---|---|---|
| Fill in Lab data: | 81.65 | 1.2 | | 0.3 | 0.7 |

| **Solid Book Values** (select even if test values are used) | **% Moisture** | | **TKN (lbs/wet ton)** | | **$NH_4$-N (lbs/ton)** | | **$P_2O_5$ (lbs/wet ton)** | | **$K_2O$ (lbs/wet ton)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| Dairy Cattle (30% wet wt) NM (Aver | | 82 | 0 | 5 | 0.4 | 0.0 | 0 | 1 | 0 | 3 |

| **Liquid-Lab Report** | **$NH_3$-N (mg/L)** | **TKN (mg/L)** | **$NO_3$-N (mg/L)** | **Tot-$PO_4$ (mg/L)** | **K (mg/L)** |
|---|---|---|---|---|---|
| Fill in Lab data: | | 308 | | 10 | |

| **Liquid** | **% Moisture** | | **TKN (lbs/acin)** | | **$NH_4$-N (lbs/acin)** | | **$P_2O_5$ (lbs/acin)** | | **$K_2O$ (lbs/acin)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| NM Dairy Ponds (>99.5% liq.) Ave. | 99.5 | | 0 | 70 | 0 | 43 | 0 | 2 | 93 | 0 |

| **TKN (lbs/1000gal)** | | **$NH_4$-N (lbs/1000gal)** | | **$P_2O_5$ (lbs/1000gal)** | | **$K_2O$ (lbs/1000gal)** | |
|---|---|---|---|---|---|---|---|
| **Book** | **Test** | **Book** | **Test** | **Book** | **Test** | **Book** | **Test** |
| 0.0 | | | 0.0 | 0.0 | | | 0.0 |

## N Volatilization

| **Solid** (type of application) | **Type of Climate** | **Percent Remaining** | **$NH_4$-N Remaining** |
|---|---|---|---|
| | Warm Wet | **0 %** | **0** (lbs/ton) NH4-N |
| **Liquid** (type of application) | **Type of Climate** | **Percent Remaining** | **14.9** (lbs/acin) NH4-N |
| Sprinkler w/o incorporation | Warm Dry | **35 %** | **0.0** (lbs/1000gal) NH4-N |

## Mineralization of N, P, & K

| **Manure Source** | **Percent Nutrient Available the 1st Year** | | | |
|---|---|---|---|---|
| | **Organic N** | **P** | **K** | |
| Beef & Dairy Solid w/o bedding | 35 % | 75 % | 80 % | **Solid Source** |
| Lagoon or diluted Pond | 40 % | 75 % | 80 % | **Liquid Source** |

| **Solid** | **Organic N (lbs/ton)** | **$P_2O_5$ (lbs/ton)** | **$K_2O$ (lbs/ton)** |
|---|---|---|---|
| | 1 | 1 | 2 |
| **Liquid** | **Organic N (lbs/acin)** | **$P_2O_5$ (lbs/acin)** | **$K_2O$ (lbs/acin)** |
| | 11 | 1 | 75 |
| | **Organic N (lbs/100gal)** | **$P_2O_5$ (lbs/1000gal)** | **$K_2O$ (lbs/1000gal)** |
| | 0.00 | 0.0 | 0.0 |

## Denitrification of N

| **Organic Matter Content** (%) | **Soil Drainage Class** (See Survey Information) | **Percent Remaining** (%) |
|---|---|---|
| <2 | Well Drained | **88** |

## Summary of Nutrients

| **Net by Form as applied** | **lbs/1000gal** | **lbs/ac in** | **lbs/ton** |
|---|---|---|---|
| **N** | 0.0 | 23 | 1 |
| **$P_2O_5$** | 0.0 | 1 | 1 |
| **$K_2O$** | 0.0 | 75 | 2 |

| **Total Nutrients Applied (net to the field)** | **All Forms N (lbs/ac)** | **$P_2O_5$ (lbs/ac)** | **$K_2O$ (lbs/ac)** |
|---|---|---|---|
| | **141.1** | **9.6** | **461.4** |

# *Grazing-N*: A Nitrogen Balance for Grazing Dairy Heifers and Dry Cows

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| Dairy | Cottonwood Springs Field 7 | | | Permit # | 734 | | | Period | 1/1/2009 | to | 12/30/2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Grazing Management | | | 1799 days |
| Weight (lbs) | DMI | CP intake | N intake | N excretion | N remain | Net Balance | Carrying Capacity (CC) animals/acre | Animals (#) | Days (#) | Acres (#) | N Supplement (lbs/day/animal) | N removal lbs/acre | Exceeds CC ? |
| | (lbs/day/animal) | | | | | | | | | | | | |
| | ADG (lbs) | %CP Grass | | | % Volat. | | DM (tn/ac/month) | | | | | | |
| | 1.98 | 20.9 | | | 50 | | 0.75 | | | | | Meaning | |
| Heifers | | | | | | | | | | | | | |
| Unbred | | | | | | | | | | | | | |
| 330 | 9.89 | 2.07 | 0.33 | 0.10 | 0.05 | -0.28 | 5.1 | | | | | | |
| 440 | 12.36 | 2.58 | 0.41 | 0.14 | 0.07 | -0.35 | 4.0 | | | | | | |
| 550 | 14.68 | 3.07 | 0.49 | 0.17 | 0.09 | -0.41 | 3.4 | | | | | | |
| 660 | 16.89 | 3.53 | 0.56 | 0.20 | 0.10 | -0.46 | 3.0 | | | | | | |
| 770 | 18.99 | 3.97 | 0.64 | 0.24 | 0.12 | -0.52 | 2.6 | 200 | 95 | 40 | | -244.95 | YES |
| 880 | 21.02 | 4.39 | 0.70 | 0.27 | 0.14 | -0.57 | 2.4 | | | | | | |
| Bred | | | | | | | | | | | | | |
| 990 | 22.99 | 4.80 | 0.77 | 0.31 | 0.15 | -0.62 | 2.2 | | | | | | |
| 1100 | 24.90 | 5.20 | 0.83 | 0.34 | 0.17 | -0.66 | 2.0 | | | | | | |
| 1200 | 26.76 | 5.59 | 0.90 | 0.37 | 0.19 | -0.71 | 1.9 | | | | | | |
| 1320 | 28.59 | 5.97 | 0.96 | 0.41 | 0.20 | -0.75 | 1.7 | | | | | | |
| 1430 | 30.37 | 6.35 | 1.02 | 0.44 | 0.22 | -0.79 | 1.6 | | | | | | |
| Dry | | | | | | | | | | | | | |
| | %BW | | | | | | | | | | | | |
| | 1.8 | | | | | | | | | | | | |
| 1600 | 28.80 | 6.02 | 0.46 | 0.58 | 0.29 | -0.18 | 1.7 | | | | 0.5 | | |
| | | | | | | | | | | | Total | -244.95 | |