

2010 VARIETY STRIP TRIALS

J.R.MILLER FARMS INC.

Objective of these on farm trials is to take varieties from test plots and to plant them side by side over 40 acres in one field to monitor ;

- 1) emergence
- 2) winter hardiness
- 3) moisture uptake through fall and winter
- 4) tillering in spring
- 5) fertility efficiency throughout life of plant
- 6) yield
- 7) test weight and protein

Thanks to the help of Don Sanger and NuChem , in early spring a full soil test was taken with 5 core samples throughout the whole trial area. Each variety was then tissue tested in those same sample areas in June and sent to Best-Test Analytical Services in Moses Lake . We will take post -harvest soil tests to analyze fertility and moisture efficiency. The whole strip trials will be harvested with the help of WSCIA and Foundation Seed and the weighing will be done by WSU Extension Agent Aaron Essor.

Our Goals over the next few years will be to try to plant the newer varieties from all public and private wheat breeders in the PNW on this farm in 20 acre strip trials to see how they emerge and perform out in the field. Hopefully , with the cooperation from breeders and the three universities, we can better see how the newer wheats work in our drier area and how well they are adapted to our farms.

Next year I hope to have 15 lines from WSU , OSU, UI, AgriPro , LimaGrain ,and Westbred-Monsanto planted here on our farm. I would like to know if we should focus primarily on swl or if there is interest in hrw and possibly hww.



ODESSA UNION WAREHOUSE CO-OP SEED DIVISION

JR Miller 2008 Emergence Yield Results

| Planting date | | 9/1/2008 | |
|---------------|--------|----------|----------|
| Variety | Pounds | BU/Acre | Moisture |
| Xerpha | 530 | 42.3 | 8.8 |
| Eltan | 486 | 38.8 | 9.7 |
| Masami | 484 | 38.6 | 10 |
| Salute | 465 | 37.1 | 9.4 |
| Legion | 382 | 30.5 | 10.6 |

J.R. Miller Farms 8-21-2009

Fall Seeding Strip Trials 11 Varieties seeded w/John Deere HZ 6 x 16" split packer drills. Rates: 40# per acre, 4.5" deep, all foundation seed treated w/ Dividend XT and .315 oz of Cruiser

Each row is ½ Mile in length

Rehn Rd.

| |
|-----------------------------|
| Eltan 7 day emergence |
| Eltan 7 day emergence |
| Whetstone 12 day emergence |
| Whetstone 12 day emergence |
| Bruehl |
| Cara |
| Farnum |
| Nu Dakota |
| Nu Dakota 11 day emergence |
| Farnum 5 day emergence |
| Cara 10 day emergence |
| Bruehl 8 day emergence |
| ORCF 103 - 9 day emergence |
| Legion 10 day emergence |
| Masami 10 day emergence |
| Xerpha 7 day emergence |
| ORCF 102 - 10 day emergence |
| ORCF 102 |
| Xerpha |
| Masami |
| Legion |
| ORCF 103 |

NORTH
↑

| | | |
|--|---|--|
| BEST-TEST ANALYTICAL SERVICES 3394 BELL RD NE MOSES LAKE WA 98837 | Sampler: Sampled: 2/23/2010 Received: 2/23/2010 Reported: 3/1/2010 Dryland?: N | Grower: MIKE MILLER Field ID: LEGION Invoice #: 121682 Price: \$0.00 Fax#: (509)766-7705/ |
|--|---|--|

—Soluble and Exchangeable Bases—

| Depth | TKN | OM (Walk.-Bik) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E, SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture |
|--------|-----|----------------|-------------|-------------|-------------|------------|-------------|-----------|-----------------|-------|----------------------|-----------|--------|--------------------|------|------|------|---------|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | Inches/depth | % | % | % | |
| 0/12 | | 1.55 | 6.6 | 2.0 | 0.14 | 1.33 | 10.1 | 13.3 | | 6.8 | | 0 | | 2.48 | | | | |
| 12/24 | | 1.07 | 8.3 | 2.2 | 0.15 | 0.88 | 11.5 | 14.6 | | 7.3 | | 0 | | 1.42 | | | | |
| 24/36 | | 0.75 | 10.6 | 2.6 | 0.19 | 0.58 | 14.0 | 14.0 | | 7.7 | | 1 | | 1.02 | | | | |
| 36/48 | | 0.62 | 8.9 | 2.7 | 0.23 | 0.45 | 12.3 | 12.3 | | 8.0 | | 4 | | 0.74 | | | | |
| 48/60 | | 0.53 | 8.5 | 2.7 | 0.26 | 0.46 | 11.9 | 11.9 | | 8.0 | | 3 | | 0.64 | | | | |

Sum of available : 6.30

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₃ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Simg Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride |
|--------|-----------------|-------------------|---------|--|--|----------------------------|----------------------------|------------|----------------|------------|---|---|---|-----------|-----------|-----------|-----------|----------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm |
| 0/12 | 3.43 | 0.83 | 0.32 | 5.6 | 19 | 2.0 | 7 | 15 | | 519 | 11 | 38 | 0.2 | 0.3 | 3.0 | 1.3 | 26 | 1 |
| 12/24 | 3.40 | 0.52 | 0.20 | 10.8 | 37 | 1.1 | 4 | 6 | | 346 | 2 | 7 | 0.4 | 0.1 | 1.0 | 1.1 | 11 | 1 |
| 24/36 | 3.43 | 0.78 | 0.30 | 4.6 | 16 | 1.1 | 4 | 5 | | 228 | 1 | 3 | 0.4 | 0.1 | 0.6 | 1.4 | 10 | 1 |
| 36/48 | 3.65 | 0.73 | 0.28 | 2.3 | 8 | 1.3 | 5 | 5 | | 176 | 3 | 11 | 0.3 | 0.1 | 0.5 | 1.8 | 9 | 1 |
| 48/60 | 3.43 | 0.68 | 0.26 | 1.1 | 4 | 1.0 | 3 | 4 | | 178 | 3 | 10 | 0.2 | 0.1 | 0.5 | 1.6 | 8 | 1 |

| | | | |
|-------------------|----|----|----|
| Sum of lbs/acre = | 84 | 23 | 69 |
|-------------------|----|----|----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 62 |
| Sum of available nitrogen = | 168 |

Comment:

DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

- 1
- 2
- 3

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|----------|-------------------------------|------------------|---|---|----|----|----|----|----|----|----------|------------|------------------|
| | | lbs/acre | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Best-test Analytical Services will make every effort to provide an accurate analysis of the sample as received, with liability limited to the cost of the analysis. For reasonable cause tests will be repeated. No other warranties, expressed or implied are given. Recommendations serve only as a general guide and should be adjusted to specific situations and conditions.

Best-Test Analytical Services

3394 Bell Rd. NE
 Moses Lake, WA 98837
 Phone: (509) 766-7701
 Fax: (509) 766-7705
 Toll Free: (877) 950-2378

Grower: **MIKE MILLER**Field ID: **LEGION**Crop: **Winter Wheat May**

Fieldman:

Taken: **6/1/10**Rec'd: **6/1/10**Sample Price: **\$0.00****BEST-TEST ANALYTICAL SERVICES**

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: **107178**Total Invoice Price: **\$0.00**Result: **Yellow (Top) — Mean: Blue (Bottom)**

| Element | Units | Result | Sufficiency Range | | Mean |
|-------------------------------|-------|--------|-------------------|-----|------|
| Total Kjeldahl Nitrogen (TKN) | % | 3.377 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.18 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 1.21 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.27 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.28 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.18 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.01 | | | |
| Zinc (Zn) | ppm | 12 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 34 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 6 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 75 | 10 | 300 | 150 |
| Boron (B) | ppm | 10 | 4 | 20 | 10 |

Field History

JUNE 16th HEAD Counts - Andy Williams WSCIA inspector

5 counts over 1 mile strip

Ave. heads per sq ft. x 43,560 sq ft / ACRE = HEADS / ACRE

1.72 million / ACRE

| | | |
|--|---|--|
| BEST-TEST ANALYTICAL SERVICES 3394 BELL RD NE MOSES LAKE WA 98837 | Sampler: Sampled: 2/23/2010 Received: 2/23/2010 Reported: 3/1/2010 Dryland?: N | Grower: MIKE MILLER Field ID: ORCF 103 Invoice #: 121676 Price: \$0.00 Fax#: (509)766-7705/ |
|--|---|--|

---Soluble and Exchangeable Bases---

| Depth | TKN | OM (Walk-Bik) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E, SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture |
|--------|-----|------------------|----------------|----------------|----------------|---------------|----------------|--------------|--------------------|-------|-------------------------|-----------|--------|-----------------------|------|------|------|---------|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | inches/depth | % | % | % | |
| 0/12 | | 1.51 | 6.2 | 2.2 | 0.12 | 1.34 | 9.9 | 13.7 | | 6.2 | | 0 | | 2.29 | | | | |
| 12/24 | | 1.15 | 8.0 | 2.6 | 0.13 | 0.95 | 11.7 | 15.1 | | 7.1 | | 0 | | 1.26 | | | | |
| 24/36 | | 0.83 | 9.0 | 2.9 | 0.20 | 0.67 | 12.8 | 15.7 | | 7.7 | | 0 | | 0.76 | | | | |
| 36/48 | | 0.70 | 8.3 | 2.8 | 0.19 | 0.59 | 11.9 | 14.1 | | 8.0 | | 0 | | 0.64 | | | | |
| 48/60 | | 0.53 | 7.7 | 3.7 | 0.45 | 0.46 | 12.3 | 12.3 | | 8.2 | | 6 | | 0.64 | | | | |

Sum of available | 5.59

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₃ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Stmg Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride |
|--------|-----------------|----------------------|---------|---|---|-------------------------------|-------------------------------|---------------|-------------------|---------------|--|--|--|-----------|--------------|--------------|--------------|----------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm |
| 0/12 | 3.43 | 0.52 | 0.20 | 11.3 | 39 | 2.1 | 7 | 16 | | 523 | 3 | 10 | 0.2 | 0.3 | 3.9 | 1.4 | 32 | 1 |
| 12/24 | 3.35 | 0.47 | 0.18 | 8.1 | 27 | 1.4 | 5 | 8 | | 373 | 1 | 3 | 0.3 | 0.1 | 1.2 | 1.2 | 13 | 1 |
| 24/36 | 3.48 | 0.47 | 0.18 | 1.7 | 6 | 0.9 | 3 | 6 | | 263 | 1 | 3 | 0.3 | 0.1 | 0.6 | 1.2 | 11 | 1 |
| 36/48 | 3.56 | 0.55 | 0.21 | 1.4 | 5 | 0.7 | 2 | 2 | | 231 | 1 | 4 | 0.3 | 0.1 | 0.6 | 1.4 | 10 | 1 |
| 48/60 | 3.67 | 0.70 | 0.27 | 1.3 | 5 | 0.6 | 2 | 2 | | 179 | 5 | 18 | 0.4 | 0.1 | 0.4 | 1.3 | 7 | 2 |

| | | | |
|-------------------|----|----|----|
| Sum of lbs/acre = | 82 | 20 | 39 |
|-------------------|----|----|----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 60 |
| Sum of available nitrogen = | 162 |

Comment: DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|----------|-------------------------------|------------------|---|---|----|----|----|----|----|----|-------------|---------------|------------------------|
| | | lbs/acre | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |

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Grower: MIKE MILLER

Field ID: ORCF103

Crop: Winter Wheat May

Fieldman:

Taken: 5/20/10

Rec'd: 5/20/10

Sample Price: \$0.00

BEST-TEST ANALYTICAL SERVICES

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: 107141

Total Invoice Price: \$0.00

Result: Yellow (Top) — Mean: Blue (Bottom)

| <u>Element</u> | <u>Units</u> | <u>Result</u> | <u>Sufficiency Range</u> | | <u>Mean</u> |
|-------------------------------|--------------|---------------|--------------------------|-----|-------------|
| Total Kjeldahl Nitrogen (TKN) | % | 3.257 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.22 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 2.65 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.25 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.2 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.11 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.008 | | | |
| Zinc (Zn) | ppm | 12 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 22 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 6 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 126 | 10 | 300 | 150 |
| Boron (B) | ppm | 7 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.23 | 0.4 | 0.8 | 0.7 |
| | | | | | |
| | | | | | |
| | | | | | |

Field History

June 16th

HEAD count 1.72 million HEADS / ACRE

| | | |
|--------------------------------------|----------------------------|-----------------------------|
| BEST-TEST ANALYTICAL SERVICES | Sampler: | Grower: MIKE MILLER |
| 3394 BELL RD NE | Sampled: 2/23/2010 | Field ID: ORCF 102 |
| MOSES LAKE WA 98837 | Received: 2/23/2010 | Invoice #: 121678 |
| | Reported: 3/1/2010 | Price: \$0.00 |
| | Dryland?: N | Fax#: (509)766-7705/ |

---Soluble and Exchangeable Bases---

| Depth | TKN | OM (Walk-Bik) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E, SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture |
|--------|-----|---------------|-------------|-------------|-------------|------------|-------------|-----------|-----------------|-------|----------------------|-----------|--------|--------------------|------|------|------|---------|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | inches/depth | % | % | % | |
| 0/12 | | 1.47 | 6.1 | 1.9 | 0.12 | 1.29 | 9.4 | 13.3 | | 6.1 | | 0 | | 2.46 | | | | |
| 12/24 | | 1.06 | 9.3 | 2.2 | 0.15 | 0.76 | 12.4 | 15.5 | | 7.5 | | 0 | | 1.46 | | | | |
| 24/36 | | 0.87 | 9.2 | 2.8 | 0.25 | 0.53 | 12.8 | 15.4 | | 8.0 | | 0 | | 1.02 | | | | |
| 36/48 | | 0.72 | 7.7 | 3.2 | 0.84 | 0.49 | 12.2 | 12.2 | | 8.5 | | 1 | | 0.85 | | | | |
| 48/60 | | 0.59 | 5.6 | 3.7 | 2.66 | 0.37 | 12.3 | 12.3 | | 8.8 | | 6 | | 1.01 | | | | |

Sum of available | 6.80

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₃ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Stmg Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride | |
|--------|-----------------|-------------------|---------|--|--|----------------------------|----------------------------|------------|----------------|------------|---|---|---|-----------|-----------|-----------|-----------|----------|------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm | |
| 0/12 | 3.59 | 0.47 | 0.18 | 8.0 | 29 | 1.4 | 5 | 16 | | 505 | 5 | 18 | 0.2 | 0.3 | 5.2 | 1.4 | 33 | 1 | 1.32 |
| 12/24 | 3.59 | 0.65 | 0.25 | 12.6 | 45 | 1.0 | 4 | 5 | | 299 | 1 | 4 | 0.4 | 0.1 | 1.0 | 1.0 | 10 | 1 | 1.32 |
| 24/36 | 3.59 | 0.57 | 0.22 | 3.2 | 11 | 1.0 | 4 | 4 | | 209 | 3 | 11 | 0.4 | 0.2 | 0.6 | 1.1 | 9 | 1 | 1.32 |
| 36/48 | 3.59 | 0.70 | 0.27 | 2.5 | 9 | 0.9 | 3 | 3 | | 192 | 3 | 11 | 0.3 | 0.1 | 0.5 | 1.3 | 8 | 1 | 1.32 |
| 48/60 | 3.59 | 2.08 | 0.80 | 2.0 | 7 | 0.7 | 3 | 7 | | 146 | 26 | 93 | 0.4 | 0.4 | 0.5 | 1.1 | 6 | 40 | 1.32 |

| | | | |
|-------------------|-----|----|-----|
| Sum of lbs/acre = | 102 | 18 | 136 |
|-------------------|-----|----|-----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 59 |
| Sum of available nitrogen = | 178 |

Comment:

DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|---|-------------------------------|------------------|---|---|----|----|----|----|----|----|----------|------------|------------------|
| lbs/acre | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |

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Best-Test Analytical Services

3394 Bell Rd. NE
 Moses Lake, WA 98837
 Phone: (509) 766-7701
 Fax: (509) 766-7705
 Toll Free: (877) 950-2378

**Grower:** MIKE MILLER**Field ID:** ORCF102**Crop:** Winter Wheat May**Fieldman:****Taken:** 5/20/10**Rec'd:** 5/20/10**Sample Price:** \$0.00**BEST-TEST ANALYTICAL SERVICES**

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: 107141**Total Invoice Price:** \$0.00**Result:** Yellow (Top) — Mean: Blue (Bottom)

| Element | Units | Result | Sufficiency Range | | Mean |
|-------------------------------|--------------|---------------|--------------------------|-----|-------------|
| Total Kjeldahl Nitrogen (TKN) | % | 3.003 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.14 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 2.27 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.29 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.24 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.12 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.009 | | | |
| Zinc (Zn) | ppm | 9 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 20 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 6 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 155 | 10 | 300 | 150 |
| Boron (B) | ppm | 5 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.18 | 0.4 | 0.8 | 0.7 |
| | | | | | |
| | | | | | |
| | | | | | |

Field History

June 16th HEAD Count 1.66 million HEADS / ACRE

| | | |
|--|---|---|
| BEST-TEST ANALYTICAL SERVICES 3394 BELL RD NE MOSES LAKE WA 98837 | Sampler: Sampled: 2/23/2010 Received: 2/23/2010 Reported: 3/1/2010 Dryland?: N | Grower: MIKE MILLER Field ID: MASAMIE Invoice #: 121679 Price: \$0.00 Fax#: (509)766-7705/ |
|--|---|---|

---Soluble and Exchangeable Bases---

| Depth | TKN | OM (Walk.-Blk) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E, SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture |
|--------|-----|-------------------|----------------|----------------|----------------|---------------|----------------|--------------|--------------------|-------|-------------------------|-----------|--------|-----------------------|------|------|------|---------|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | inches/depth | % | % | % | |
| 0/12 | | 1.43 | 5.7 | 2.0 | 0.13 | 1.34 | 9.2 | 12.9 | | 6.2 | | 0 | | 2.31 | | | | |
| 12/24 | | 0.95 | 7.8 | 2.3 | 0.15 | 0.87 | 11.1 | 14.4 | | 7.0 | | 0 | | 1.58 | | | | |
| 24/36 | | 0.85 | 9.1 | 2.9 | 0.24 | 0.61 | 12.8 | 15.6 | | 7.9 | | 0 | | 1.31 | | | | |
| 36/48 | | 0.55 | 8.1 | 3.2 | 0.82 | 0.51 | 12.6 | 12.6 | | 8.4 | | 2 | | 0.82 | | | | |
| 48/60 | | 0.45 | 6.9 | 3.6 | 1.48 | 0.40 | 12.4 | 12.4 | | 8.6 | | 3 | | 0.73 | | | | |

Sum of available 6.75

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₂ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Strmg Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride |
|--------|-----------------|----------------------|---------|---|---|-------------------------------|-------------------------------|---------------|--------------------|---------------|--|--|--|-----------|--------------|--------------|--------------|----------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm |
| 0/12 | 3.48 | 0.49 | 0.19 | 10.9 | 38 | 1.6 | 6 | 14 | | 524 | 3 | 10 | 0.2 | 0.3 | 4.7 | 1.3 | 31 | 1 |
| 12/24 | 3.59 | 0.70 | 0.27 | 20.0 | 72 | 1.3 | 5 | 5 | | 341 | 3 | 11 | 0.3 | 0.1 | 1.2 | 1.1 | 11 | 1 |
| 24/36 | 3.65 | 0.68 | 0.26 | 5.5 | 20 | 1.3 | 5 | 3 | | 237 | 3 | 11 | 0.4 | 0.1 | 0.5 | 1.2 | 9 | 1 |
| 36/48 | 3.59 | 0.83 | 0.32 | 2.7 | 10 | 0.8 | 3 | 4 | | 199 | 4 | 14 | 0.4 | 0.1 | 0.4 | 1.4 | 8 | 10 |
| 48/60 | 3.59 | 1.33 | 0.51 | 1.8 | 6 | 0.7 | 3 | 4 | | 156 | 17 | 61 | 0.3 | 0.1 | 0.4 | 1.3 | 7 | 22 |

| | | | |
|-------------------|-----|----|-----|
| Sum of lbs/acre = | 146 | 20 | 108 |
|-------------------|-----|----|-----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 57 |
| Sum of available nitrogen = | 224 |

Comment:

DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|---|-------------------------------|------------------|---|---|----|----|----|----|----|----|-------------|---------------|------------------------|
| lbs/acre | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |

Best-test Analytical Services will make every effort to provide an accurate analysis of the sample as received, with liability limited to the cost of the analysis. For reasonable cause tests will be repeated. No other warranties, expressed or implied are given. Recommendations serve only as a general guide and should be adjusted to specific situations and conditions.

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3394 Bell Rd. NE
 Moses Lake, WA 98837
 Phone: (509) 766-7701
 Fax: (509) 766-7705
 Toll Free: (877) 950-2378



Grower: MIKE MILLER

Field ID: MASAMI

Crop: Winter Wheat May

Fieldman:

Taken: 5/20/10

Rec'd: 5/20/10

Sample Price: \$0.00

BEST-TEST ANALYTICAL SERVICES

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: 107141

Total Invoice Price: \$0.00

Result: Yellow (Top) — Mean: Blue (Bottom)

| <u>Element</u> | <u>Units</u> | <u>Result</u> | <u>Sufficiency Range</u> | | <u>Mean</u> |
|-------------------------------|--------------|---------------|--------------------------|-----|-------------|
| Total Kjeldahl Nitrogen (TKN) | % | 3.158 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.19 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 2.54 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.28 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.2 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.1 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.008 | | | |
| Zinc (Zn) | ppm | 11 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 23 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 6 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 150 | 10 | 300 | 150 |
| Boron (B) | ppm | 6 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.19 | 0.4 | 0.8 | 0.7 |
| | | | | | |
| | | | | | |
| | | | | | |

Field History

JUNE 16th HEAD COUNT 2.15 million HEADS / ACRE

| | | |
|--------------------------------------|----------------------------|-----------------------------|
| BEST-TEST ANALYTICAL SERVICES | Sampler: | Grower: MIKE MILLER |
| 3394 BELL RD NE | Sampled: 2/23/2010 | Field ID: FARNUM |
| MOSES LAKE WA 98837 | Received: 2/23/2010 | Invoice #: 121677 |
| | Reported: 3/1/2010 | Price: \$0.00 |
| | Dryland?: N | Fax#: (509)766-7705/ |

---Soluble and Exchangeable Bases---

| Depth | TKN | OM (Walk.-Blk) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E, SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture |
|--------|-----|----------------|-------------|-------------|-------------|------------|-------------|-----------|-----------------|-------|----------------------|-----------|--------|--------------------|------|------|------|---------|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | inches/depth | % | % | % | |
| 0/12 | | 1.44 | 6.9 | 2.0 | 0.13 | 1.39 | 10.4 | 13.6 | | 6.9 | | 0 | | 2.07 | | | | |
| 12/24 | | 1.11 | 8.1 | 2.6 | 0.20 | 0.88 | 11.8 | 14.9 | | 7.3 | | 0 | | 1.46 | | | | |
| 24/36 | | 0.85 | 9.5 | 3.2 | 0.40 | 0.77 | 13.9 | 16.9 | | 8.0 | | 0 | | 1.20 | | | | |
| 36/48 | | 0.68 | 7.3 | 3.5 | 1.26 | 0.62 | 12.7 | 12.7 | | 8.5 | | 4 | | 0.73 | | | | |
| 48/60 | | 6.60 | 5.8 | 4.0 | 3.19 | 0.52 | 13.5 | 13.5 | | 8.7 | | 6 | | 0.98 | | | | |

Sum of available : 6.44

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₃ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Strng Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride |
|--------|-----------------|-------------------|---------|--|--|----------------------------|----------------------------|------------|-----------------|------------|---|---|---|-----------|-----------|-----------|-----------|----------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm |
| 0/12 | 3.40 | 0.96 | 0.37 | 7.0 | 24 | 1.1 | 4 | 14 | | 543 | 3 | 10 | 0.3 | 0.3 | 3.6 | 1.3 | 25 | 1 |
| 12/24 | 3.37 | 0.52 | 0.20 | 9.8 | 33 | 1.1 | 4 | 5 | | 346 | 2 | 7 | 0.4 | 0.1 | 1.4 | 1.2 | 10 | 1 |
| 24/36 | 3.48 | 0.70 | 0.27 | 6.5 | 23 | 1.1 | 4 | 4 | | 300 | 4 | 14 | 0.5 | 0.2 | 0.8 | 1.2 | 8 | 1 |
| 36/48 | 3.54 | 1.17 | 0.45 | 2.1 | 7 | 1.2 | 4 | 4 | | 241 | 8 | 28 | 0.5 | 0.2 | 1.0 | 1.3 | 8 | 18 |
| 48/60 | 3.65 | 2.81 | 1.08 | 1.9 | 7 | 1.0 | 4 | 6 | | 204 | 64 | 233 | 0.7 | 0.4 | 1.1 | 1.2 | 6 | 64 |

| | | | |
|-------------------|-----------|-----------|------------|
| Sum of lbs/acre = | 94 | 19 | 292 |
|-------------------|-----------|-----------|------------|

| | |
|---|------------|
| Estimated release from Organic Matter = | 58 |
| Sum of available nitrogen = | 171 |

Comment: DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|---|-------------------------------|------------------|---|---|----|----|----|----|----|----|----------|------------|------------------|
| lbs/acre | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |

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 Moses Lake, WA 98837
 Phone: (509) 766-7701
 Fax: (509) 766-7705
 Toll Free: (877) 950-2378

Grower: **MIKE MILLER**Field ID: **FARNUM**Crop: **Winter Wheat May**

Fieldman:

Taken: **5/20/10**Rec'd: **5/20/10**Sample Price: **\$0.00****BEST-TEST ANALYTICAL SERVICES**

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: **107141**Total Invoice Price: **\$0.00**Result: **Yellow (Top) — Mean: Blue (Bottom)**

| Element | Units | Result | Sufficiency Range | | Mean |
|-------------------------------|--------------|---------------|--------------------------|-----|-------------|
| Total Kjeldahl Nitrogen (TKN) | % | 3.144 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.15 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 2.4 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.26 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.15 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.09 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.01 | | | |
| Zinc (Zn) | ppm | 8 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 21 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 7 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 144 | 10 | 300 | 150 |
| Boron (B) | ppm | 7 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.29 | 0.4 | 0.8 | 0.7 |
| | | | | | |
| | | | | | |
| | | | | | |

Field History

June 16th HEAD Count 2.34 million HEADS / ACRE

BEST-TEST ANALYTICAL SERVICES, LLC

| | | |
|--|---|---|
| BEST-TEST ANALYTICAL SERVICES 3394 BELL RD NE MOSES LAKE WA 98837 | Sampler: Sampled: 2/23/2010 Received: 2/23/2010 Reported: 3/1/2010 Dryland?: N | Grower: MIKE MILLER Field ID: ELTAN Invoice #: 121683 Price: \$0.00 Fax#: (509)766-7705/ |
|--|---|---|

---Soluble and Exchangeable Bases---

| Depth | TKN | OM (Walk.-Blk) % | Ca (1N KCl) meq/100g | Mg (1N KCl) meq/100g | Na (1N KCl) meq/100g | K (1N KCl) meq/100g | Total Bases meq/100g | CEC (Est) meq/100g | Base Saturation meq/100g | pH | Buffer pH (A/E, SMP) | Efferves. 1-7 Scale | % Lime | Available Moisture inches/depth | Sand % | Silt % | Clay % | Texture |
|-------|-----|------------------------|----------------------------|----------------------------|----------------------------|---------------------------|----------------------------|--------------------------|--------------------------------|-----|-------------------------|------------------------|--------|---------------------------------------|-----------|-----------|-----------|---------|
| 0/12 | | 1.32 | 6.5 | 2.0 | 0.11 | 1.17 | 9.8 | 13.3 | | 6.5 | | 0 | | 1.89 | | | | |
| 12/24 | | 0.87 | 9.7 | 2.1 | 0.19 | 0.60 | 12.6 | 15.8 | | 7.5 | | 0 | | 1.19 | | | | |
| 24/36 | | 0.66 | 10.8 | 2.6 | 0.24 | 0.40 | 14.0 | 14.0 | | 7.9 | | 2 | | 1.05 | | | | |
| 36/48 | | 0.55 | 8.3 | 2.9 | 0.46 | 0.33 | 12.0 | 12.0 | | 8.1 | | 7 | | 0.87 | | | | |
| 48/60 | | 0.57 | 6.6 | 4.2 | 1.40 | 0.34 | 12.5 | 12.5 | | 8.4 | | 7 | | 0.93 | | | | |

Sum of available : 5.93

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) ppm | NO ₃ N (CaSO ₄) lbs/acre | NH ₄ N (1N KCl) ppm | NH ₄ N (1N KCl) lbs/acre | P (Bicarb) ppm | P2 (Strmg Bray) ppm | K (Bicarb) ppm | SO ₄ S (Ca(H ₂ PO ₄) ₂) ppm | SO ₄ S (Ca(H ₂ PO ₄) ₂) lbs/acre | Boron (Ca(H ₂ PO ₄) ₂) ppm | Zn (DTPA) ppm | Mn (DTPA) ppm | Cu (DTPA) ppm | Fe (DTPA) ppm | Chloride ppm |
|-------|-----------------|----------------------|---------|--|---|--------------------------------------|---|----------------------|---------------------------|----------------------|---|--|---|---------------------|---------------------|---------------------|---------------------|-----------------|
| 0/12 | 3.43 | 0.44 | 0.17 | 5.2 | 18 | 1.5 | 5 | 12 | | 458 | 1 | 3 | 0.3 | 0.3 | 3.4 | 1.5 | 25 | 1 |
| 12/24 | 3.26 | 0.78 | 0.30 | 8.3 | 27 | 1.0 | 3 | 3 | | 233 | 3 | 10 | 0.3 | 0.1 | 0.9 | 1.2 | 9 | 1 |
| 24/36 | 3.43 | 0.70 | 0.27 | 4.6 | 16 | 0.8 | 3 | 2 | | 158 | 1 | 3 | 0.3 | 0.2 | 0.9 | 1.4 | 8 | 1 |
| 36/48 | 3.43 | 1.04 | 0.40 | 2.1 | 7 | 0.6 | 2 | 2 | | 128 | 11 | 38 | 0.4 | 0.2 | 0.7 | 1.5 | 4 | 30 |
| 48/60 | 3.59 | 1.72 | 0.66 | 1.5 | 5 | 0.7 | 3 | 2 | | 131 | 33 | 118 | 0.3 | 0.3 | 1.1 | 1.4 | 4 | 60 |

| | | | |
|-------------------|----|----|-----|
| Sum of lbs/acre = | 73 | 16 | 173 |
|-------------------|----|----|-----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 53 |
| Sum of available nitrogen = | 142 |

Comment: DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

- 1
- 2
- 3

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|---|-------------------------------|------------------|---|---|----|----|----|----|----|----|-------------|---------------|------------------------|
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

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3394 Bell Rd. NE
 Moses Lake, WA 98837
 Phone: (509) 766-7701
 Fax: (509) 766-7705
 Toll Free: (877) 950-2378

Grower: **MIKE MILLER**Field ID: **ELTAN**Crop: **Winter Wheat May**

Fieldman:

Taken: **5/20/10**Rec'd: **5/20/10**Sample Price: **\$0.00****BEST-TEST ANALYTICAL SERVICES**

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: **107141**Total Invoice Price: **\$0.00**Result: **Yellow (Top) — Mean: Blue (Bottom)**

| Element | Units | Result | Sufficiency Range | | Mean |
|-------------------------------|-------|--------|-------------------|-----|------|
| Total Kjeldahl Nitrogen (TKN) | % | 3.341 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.18 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 2.48 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.27 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.26 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.12 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.01 | | | |
| Zinc (Zn) | ppm | 12 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 20 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 7 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 135 | 10 | 300 | 150 |
| Boron (B) | ppm | 8 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.45 | 0.4 | 0.8 | 0.7 |
| | | | | | |
| | | | | | |
| | | | | | |

Field History

June 16th Head Count 2.03 million HEADS / ACRE

| | | |
|--|---|--|
| BEST-TEST ANALYTICAL SERVICES 3394 BELL RD NE MOSES LAKE WA 98837 | Sampler: Sampled: 2/23/2010 Received: 2/23/2010 Reported: 3/1/2010 Dryland?: N | Grower: MIKE MILLER Field ID: CARA Invoice #: 121685 Price: \$0.00 Fax#: (509)766-7705/ |
|--|---|--|

--Soluble and Exchangeable Bases--

| Depth | TKN | OM (Walk.-Blk) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E, SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture | |
|--------|-----|----------------|-------------|-------------|-------------|------------|-------------|-----------|-----------------|-------|----------------------|-----------|--------|--------------------|------|------|------|---------|--|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | inches/depth | % | % | % | | |
| 0/12 | | 1.26 | 6.4 | 2.2 | 0.12 | 1.21 | 9.9 | 13.4 | | 6.6 | | 0 | | 2.01 | | | | | |
| 12/24 | | 0.94 | 8.2 | 2.5 | 0.16 | 0.76 | 11.6 | 15.0 | | 7.1 | | 0 | | 1.41 | | | | | |
| 24/36 | | 0.77 | 9.4 | 3.2 | 0.26 | 0.54 | 13.4 | 16.5 | | 7.8 | | 0 | | 0.90 | | | | | |
| 36/48 | | 0.57 | 7.4 | 3.7 | 1.34 | 0.44 | 12.9 | 12.9 | | 8.4 | | 4 | | 0.82 | | | | | |
| 48/60 | | 0.53 | 6.7 | 3.4 | 1.91 | 0.46 | 12.5 | 12.5 | | 8.7 | | 6 | | 0.78 | | | | | |

Sum of available: 5.92

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₃ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Strmg Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride |
|--------|-----------------|-------------------|---------|--|--|----------------------------|----------------------------|------------|-----------------|------------|---|---|---|-----------|-----------|-----------|-----------|----------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm |
| 0/12 | 3.26 | 0.57 | 0.22 | 10.5 | 34 | 1.3 | 4 | 13 | | 474 | 2 | 7 | 0.2 | 0.4 | 3.3 | 1.4 | 28 | 1 |
| 12/24 | 3.56 | 0.62 | 0.24 | 12.9 | 46 | 1.6 | 6 | 6 | | 299 | 3 | 11 | 0.3 | 0.3 | 2.0 | 1.2 | 12 | 1 |
| 24/36 | 3.56 | 0.65 | 0.25 | 3.1 | 11 | 1.6 | 6 | 4 | | 211 | 1 | 4 | 0.3 | 0.2 | 1.1 | 1.4 | 9 | 1 |
| 36/48 | 3.59 | 1.14 | 0.44 | 3.0 | 11 | 1.3 | 5 | 4 | | 171 | 14 | 50 | 0.4 | 0.2 | 1.0 | 1.4 | 7 | 8 |
| 48/60 | 3.56 | 1.43 | 0.55 | 1.6 | 6 | 0.9 | 3 | 3 | | 179 | 25 | 89 | 0.3 | 0.2 | 1.8 | 1.3 | 6 | 16 |

| | | | |
|-------------------|-----|----|-----|
| Sum of lbs/acre = | 108 | 24 | 160 |
|-------------------|-----|----|-----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 50 |
| Sum of available nitrogen = | 182 |

Comment:

DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|----------|-------------------------------|------------------|---|---|----|----|----|----|----|----|----------|------------|------------------|
| | | lbs/acre | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |

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 Moses Lake, WA 98837
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 Toll Free: (877) 950-2378



Grower: MIKE MILLER

Field ID: CARA

Crop: Winter Wheat May

Fieldman:

Taken: 5/20/10

Rec'd: 5/20/10

Sample Price: \$0.00

BEST-TEST ANALYTICAL SERVICES

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: 107141

Total Invoice Price: \$0.00

Result: Yellow (Top) — Mean: Blue (Bottom)

| <u>Element</u> | <u>Units</u> | <u>Result</u> | <u>Sufficiency Range</u> | | <u>Mean</u> |
|-------------------------------|--------------|---------------|--------------------------|-----|-------------|
| Total Kjeldahl Nitrogen (TKN) | % | 4.269 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.26 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 2.54 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.35 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.3 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.18 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.01 | | | |
| Zinc (Zn) | ppm | 11 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 31 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 7 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 154 | 10 | 300 | 150 |
| Boron (B) | ppm | 6 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.53 | 0.4 | 0.8 | 0.7 |
| | | | | | |
| | | | | | |
| | | | | | |

Field History

JUNE 16th HEAD COUNT 1.57 million HEADS / ACRE

Best-Test Analytical Services

3394 Bell Rd. NE
 Moses Lake, WA 98837
 Phone: (509) 766-7701
 Fax: (509) 766-7705
 Toll Free: (877) 950-2378



Grower: **MIKE MILLER**

Field ID: **BRUEHL**

Crop: **Winter Wheat May**

Fieldman:

Taken: **5/20/10**

Rec'd: **5/20/10**

Sample Price: **\$0.00**

BEST-TEST ANALYTICAL SERVICES

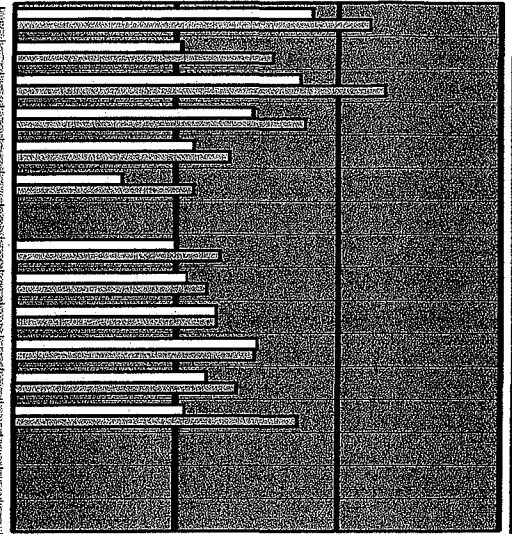
3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: **107141**

Total Invoice Price: **\$0.00**

Result: **Yellow (Top) — Mean: Blue (Bottom)**

| <u>Element</u> | <u>Units</u> | <u>Result</u> | <u>Sufficiency Range</u> | | <u>Mean</u> |
|-------------------------------|--------------|---------------|--------------------------|-----|-------------|
| Total Kjeldahl Nitrogen (TKN) | % | 3.73 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.21 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 2.83 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.27 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.27 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.1 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.012 | | | |
| Zinc (Zn) | ppm | 15 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 27 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 8 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 155 | 10 | 300 | 150 |
| Boron (B) | ppm | 7 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.42 | 0.4 | 0.8 | 0.7 |
| | | | | | |
| | | | | | |
| | | | | | |

**Field History**

JUNE 16th HEAD COUNT 1.73 million HEADS / ACRE

BEST-TEST ANALYTICAL SERVICES, LLC

| | | |
|--|---|--|
| BEST-TEST ANALYTICAL SERVICES 3394 BELL RD NE MOSES LAKE WA 98837 | Sampler: Sampled: 2/23/2010 Received: 2/23/2010 Reported: 3/1/2010 Dryland?: N | Grower: MIKE MILLER Field ID: BRUEHE Invoice #: 121675 Price: \$0.00 Fax#: (509)766-7705/ |
|--|---|--|

--Soluble and Exchangeable Bases--

| Depth | TKN | OM (Walk.-Blk) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E ,SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture |
|--------|-----|-------------------|----------------|----------------|----------------|---------------|----------------|--------------|--------------------|-------|-------------------------|-----------|--------|-----------------------|------|------|------|---------|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | inches/depth | % | % | % | |
| 0/12 | | 1.41 | 5.9 | 2.0 | 0.08 | 1.32 | 9.3 | 13.0 | | 6.2 | | 0 | | 2.23 | | | | |
| 12/24 | | 1.08 | 9.0 | 2.4 | 0.14 | 0.87 | 12.4 | 16.1 | | 7.1 | | 0 | | 1.36 | | | | |
| 24/36 | | 0.81 | 10.5 | 2.8 | 0.23 | 0.61 | 14.1 | 14.1 | | 7.8 | | 3 | | 1.09 | | | | |
| 36/48 | | 0.73 | 8.0 | 3.4 | 0.77 | 0.47 | 12.6 | 12.6 | | 8.1 | | 6 | | 0.89 | | | | |
| 48/60 | | 0.77 | 7.8 | 4.1 | 1.08 | 0.48 | 13.5 | 13.5 | | 8.0 | | 7 | | 0.70 | | | | |

Sum of available: 6.27

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₃ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Sing Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride |
|--------|-----------------|----------------------|---------|---|---|-------------------------------|-------------------------------|---------------|-------------------|---------------|--|--|--|--------------|--------------|--------------|--------------|----------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm |
| 0/12 | 3.35 | 0.34 | 0.13 | 5.4 | 18 | 1.6 | 5 | 14 | | 516 | 2 | 7 | 0.2 | 0.3 | 3.5 | 1.4 | 30 | 1 |
| 12/24 | 3.40 | 0.83 | 0.32 | 15.2 | 52 | 0.8 | 3 | 8 | | 340 | 1 | 3 | 0.4 | 0.1 | 1.1 | 1.2 | 17 | 1 |
| 24/36 | 3.48 | 0.70 | 0.27 | 2.4 | 8 | 0.9 | 3 | 5 | | 238 | 1 | 3 | 0.4 | 0.1 | 0.6 | 1.2 | 11 | 1 |
| 36/48 | 3.56 | 1.07 | 0.41 | 1.0 | 4 | 0.7 | 2 | 5 | | 185 | 12 | 43 | 0.4 | 0.2 | 0.6 | 1.4 | 12 | 4 |
| 48/60 | 3.43 | 1.43 | 0.55 | 1.6 | 5 | 0.9 | 3 | 10 | | 187 | 25 | 86 | 0.3 | 0.3 | 0.9 | 1.3 | 15 | 10 |

| | | | |
|-------------------|----|----|-----|
| Sum of lbs/acre = | 87 | 17 | 142 |
|-------------------|----|----|-----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 56 |
| Sum of available nitrogen = | 160 |

Comment:

DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|---|-------------------------------|------------------|---|---|----|----|----|----|----|----|-------------|---------------|------------------------|
| | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |

Best-test Analytical Services will make every effort to provide an accurate analysis of the sample as received, with liability limited to the cost of the analysis. For reasonable cause tests will be repeated. No other warranties, expressed or implied are given. Recommendations serve only as a general guide and should be adjusted to specific situations and conditions.

| | | | |
|--------------------------------------|--|----------------------------|-----------------------------|
| BEST-TEST ANALYTICAL SERVICES | | Sampler: | Grower: MIKE MILLER |
| 3394 BELL RD NE | | Sampled: 2/23/2010 | Field ID: XERPHA |
| MOSES LAKE WA 98837 | | Received: 2/23/2010 | Invoice #: 121681 |
| | | Reported: 3/1/2010 | Price: \$0.00 |
| | | Dryland?: N | Fax#: (509)766-7705/ |

---Soluble and Exchangeable Bases---

| Depth | TKN | OM (Walk.-Blk) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E, SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture |
|--------|-----|----------------|-------------|-------------|-------------|------------|-------------|-----------|-----------------|-------|----------------------|-----------|--------|--------------------|------|------|------|---------|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | Inches/depth | % | % | % | |
| 0/12 | | 1.42 | 5.9 | 2.0 | 0.19 | 1.33 | 9.4 | 13.0 | | 6.3 | | 0 | | 2.33 | | | | |
| 12/24 | | 1.00 | 7.4 | 2.4 | 0.15 | 0.93 | 10.9 | 14.2 | | 7.0 | | 0 | | 1.44 | | | | |
| 24/36 | | 0.83 | 8.4 | 3.0 | 0.47 | 0.59 | 12.5 | 15.0 | | 7.9 | | 0 | | 1.08 | | | | |
| 36/48 | | 0.58 | 7.5 | 3.1 | 1.78 | 0.56 | 12.9 | 12.9 | | 8.4 | | 1 | | 0.82 | | | | |
| 48/60 | | 0.44 | 8.1 | 3.9 | 2.60 | 0.51 | 15.1 | 15.1 | | 8.1 | | 6 | | 0.88 | | | | |

Sum of available : 6.55

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₃ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Stmg Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride |
|--------|-----------------|-------------------|---------|--|--|----------------------------|----------------------------|------------|----------------|------------|---|---|---|-----------|-----------|-----------|-----------|----------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm |
| 0/12 | 3.29 | 0.44 | 0.17 | 8.4 | 28 | 1.8 | 6 | 16 | | 520 | 4 | 13 | 0.2 | 0.4 | 4.1 | 1.4 | 32 | 1 |
| 12/24 | 3.43 | 0.47 | 0.18 | 14.2 | 49 | 1.1 | 4 | 8 | | 364 | 3 | 10 | 0.3 | 0.1 | 1.5 | 1.2 | 14 | 1 |
| 24/36 | 3.40 | 0.44 | 0.17 | 3.0 | 10 | 1.1 | 4 | 6 | | 230 | 3 | 10 | 0.4 | 0.1 | 0.6 | 1.3 | 11 | 2 |
| 36/48 | 3.43 | 1.74 | 0.67 | 2.3 | 8 | 1.0 | 3 | 6 | | 218 | 44 | 151 | 0.5 | 0.1 | 0.4 | 1.3 | 9 | 40 |
| 48/60 | 3.65 | 6.06 | 2.33 | 1.4 | 5 | 0.9 | 3 | 5 | | 199 | 143 | 521 | 0.4 | 0.1 | 0.3 | 1.1 | 4 | 78 |

| | | | |
|-------------------|----|----|-----|
| Sum of lbs/acre = | 99 | 20 | 706 |
|-------------------|----|----|-----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 57 |
| Sum of available nitrogen = | 176 |

Comment:

DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

- 1
- 2
- 3

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|----------|-------------------------------|------------------|---|---|----|----|----|----|----|----|----------|------------|------------------|
| | | lbs/acre | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

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Best-Test Analytical Services

3394 Bell Rd. NE
 Moses Lake, WA 98837
 Phone: (509) 766-7701
 Fax: (509) 766-7705
 Toll Free: (877) 950-2378



Grower: **MIKE MILLER**

Field ID: **XERPHA**

Crop: **Winter Wheat May**

Fieldman:

Taken: **5/20/10**

Rec'd: **5/20/10**

Sample Price: **\$0.00**

BEST-TEST ANALYTICAL SERVICES

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: 107141

Total Invoice Price: \$0.00

Result: Yellow (Top) — Mean: Blue (Bottom)

| Element | Units | Result | Sufficiency Range | | Mean |
|-------------------------------|-------|--------|-------------------|-----|------|
| Total Kjeldahl Nitrogen (TKN) | % | 2.954 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.15 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 1.97 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.26 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.19 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.12 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.005 | | | |
| Zinc (Zn) | ppm | 9 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 19 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 7 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 136 | 10 | 300 | 150 |
| Boron (B) | ppm | 8 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.21 | 0.4 | 0.8 | 0.7 |
| | | | | | |
| | | | | | |
| | | | | | |

Field History

June 16th HEADS COUNT 1.77 million HEADS/ACRE

Best-Test Analytical Services

3394 Bell Rd. NE
 Moses Lake, WA 98837
 Phone: (509) 766-7701
 Fax: (509) 766-7705
 Toll Free: (877) 950-2378



Grower: MIKE MILLER
Field ID: WHETSTONE
Crop: Winter Wheat May
Fieldman:
Taken: 5/20/10
Rec'd: 5/20/10

Sample Price: \$0.00

BEST-TEST ANALYTICAL SERVICES

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: 107141
Total Invoice Price: \$0.00

Result: Yellow (Top) — Mean: Blue (Bottom)

| <u>Element</u> | <u>Units</u> | <u>Result</u> | <u>Sufficiency Range</u> | | <u>Mean</u> |
|-------------------------------|--------------|---------------|--------------------------|-----|-------------|
| Total Kjeldahl Nitrogen (TKN) | % | 3.536 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.17 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 1.62 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.25 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.34 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.15 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.008 | | | |
| Zinc (Zn) | ppm | 11 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 24 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 7 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 113 | 10 | 300 | 150 |
| Boron (B) | ppm | 10 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.19 | 0.4 | 0.8 | 0.7 |
| | | | | | |
| | | | | | |
| | | | | | |

Field History

JUNE 16th HEAD COUNT 1.75 million HEADS / ACRE

BEST-TEST ANALYTICAL SERVICES, LLC

| | | |
|--|---|---|
| BEST-TEST ANALYTICAL SERVICES 3394 BELL RD NE MOSES LAKE WA 98837 | Sampler: Sampled: 2/23/2010 Received: 2/23/2010 Reported: 3/1/2010 Dryland?: N | Grower: MIKE MILLER Field ID: WHETSTONE Invoice #: 121684 Price: \$0.00 Fax#: (509)766-7705/ |
|--|---|---|

--Soluble and Exchangeable Bases--

| Depth | TKN | OM (Walk.-Blk) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E, SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture |
|--------|-----|-------------------|----------------|----------------|----------------|---------------|----------------|--------------|--------------------|-------|-------------------------|-----------|--------|-----------------------|------|------|------|---------|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | inches/depth | % | % | % | |
| 0/12 | | 1.41 | 6.9 | 2.2 | 0.11 | 1.20 | 10.4 | 13.8 | | 6.8 | | 0 | | 1.95 | | | | |
| 12/24 | | 0.89 | 8.8 | 2.6 | 0.14 | 0.84 | 12.4 | 15.5 | | 7.5 | | 0 | | 1.21 | | | | |
| 24/36 | | 0.75 | 9.0 | 2.6 | 0.21 | 0.63 | 12.4 | 15.2 | | 7.8 | | 0 | | 1.02 | | | | |
| 36/48 | | 0.67 | 8.0 | 3.1 | 0.94 | 0.51 | 12.5 | 12.5 | | 8.4 | | 6 | | 0.95 | | | | |
| 48/60 | | 0.55 | 5.8 | 3.5 | 2.48 | 0.48 | 12.3 | 12.3 | | 8.9 | | 7 | | 0.90 | | | | |

Sum of available | 6.03

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₃ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Stmg Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride |
|--------|-----------------|----------------------|---------|---|---|-------------------------------|-------------------------------|---------------|-------------------|---------------|--|--|--|-----------|--------------|--------------|--------------|----------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm |
| 0/12 | 3.43 | 0.68 | 0.26 | 5.2 | 18 | 1.1 | 4 | 11 | | 471 | 3 | 10 | 0.3 | 0.2 | 2.7 | 1.4 | 29 | 1 |
| 12/24 | 3.29 | 0.70 | 0.27 | 3.9 | 13 | 1.2 | 4 | 4 | | 328 | 1 | 3 | 0.4 | 0.1 | 1.1 | 1.3 | 10 | 1 |
| 24/36 | 3.62 | 0.55 | 0.21 | 4.0 | 14 | 0.9 | 3 | 2 | | 248 | 1 | 4 | 0.4 | 0.3 | 1.0 | 1.4 | 8 | 1 |
| 36/48 | 3.56 | 0.86 | 0.33 | 2.5 | 9 | 1.0 | 4 | 2 | | 199 | 5 | 18 | 0.4 | 0.3 | 0.8 | 1.5 | 6 | 2 |
| 48/60 | 3.56 | 1.25 | 0.48 | 1.7 | 6 | 0.6 | 2 | 3 | | 186 | 6 | 21 | 0.6 | 0.4 | 1.1 | 1.5 | 4 | 2 |

| | | | |
|-------------------|----|----|----|
| Sum of lbs/acre = | 60 | 17 | 56 |
|-------------------|----|----|----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 56 |
| Sum of available nitrogen = | 133 |

Comment:

DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|----------|-------------------------------|------------------|---|---|----|----|----|----|----|----|-------------|---------------|------------------------|
| | | lbs/acre | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |

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| | | |
|--|---|--|
| BEST-TEST ANALYTICAL SERVICES 3394 BELL RD NE MOSES LAKE WA 98837 | Sampler: Sampled: 2/23/2010 Received: 2/23/2010 Reported: 3/1/2010 Dryland?: N | Grower: MIKE MILLER Field ID: NUDAKOTA Invoice #: 121680 Price: \$0.00 Fax#: (509)766-7705/ |
|--|---|--|

---Soluble and Exchangeable Bases---

| Depth | TKN | OM (Walk.-Blk) | Ca (1N KCl) | Mg (1N KCl) | Na (1N KCl) | K (1N KCl) | Total Bases | CEC (Est) | Base Saturation | pH | Buffer pH (A/E, SMP) | Efferves. | % Lime | Available Moisture | Sand | Silt | Clay | Texture |
|--------|-----|-------------------|----------------|----------------|----------------|---------------|----------------|--------------|--------------------|-------|-------------------------|-----------|--------|-----------------------|------|------|------|---------|
| inches | ppm | % | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | meq/100g | (1:1) | | 1-7 Scale | % | inches/depth | % | % | % | |
| 0/12 | | 1.56 | 6.3 | 2.0 | 0.17 | 1.35 | 9.8 | 12.7 | | 6.9 | | 0 | | 2.27 | | | | |
| 12/24 | | 1.01 | 7.7 | 2.1 | 0.13 | 1.03 | 11.0 | 14.1 | | 7.1 | | 0 | | 1.40 | | | | |
| 24/36 | | 0.78 | 8.9 | 3.2 | 0.19 | 0.75 | 13.0 | 16.0 | | 7.8 | | 0 | | 1.14 | | | | |
| 36/48 | | 0.66 | 8.1 | 3.1 | 0.43 | 0.66 | 12.3 | 14.4 | | 8.2 | | 0 | | 0.84 | | | | |
| 48/60 | | 0.44 | 6.0 | 3.4 | 2.12 | 0.56 | 12.1 | 12.1 | | 8.9 | | 3 | | 0.74 | | | | |

Sum of available : 6.39

| Depth | Bulk Density | Est Soluble Salts | EC(1:1) | NO ₃ N (CaSO ₄) | NO ₃ N (CaSO ₄) | NH ₄ N (1N KCl) | NH ₄ N (1N KCl) | P (Bicarb) | P2 (Stmg Bray) | K (Bicarb) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | SO ₄ S (Ca(H ₂ PO ₄) ₂) | Boron (Ca(H ₂ PO ₄) ₂) | Zn (DTPA) | Mn (DTPA) | Cu (DTPA) | Fe (DTPA) | Chloride |
|--------|-----------------|----------------------|---------|---|---|-------------------------------|-------------------------------|---------------|-------------------|---------------|--|--|--|-----------|--------------|--------------|--------------|----------|
| inches | mill #/ac-depth | dS/m | dS/m | ppm | lbs/acre | ppm | lbs/acre | ppm | ppm | ppm | ppm | lbs/acre | ppm | ppm | ppm | ppm | ppm | ppm |
| 0/12 | 3.43 | 1.01 | 0.39 | 4.6 | 16 | 1.4 | 5 | 15 | | 529 | 4 | 14 | 0.2 | 0.3 | 3.5 | 1.3 | 28 | 1 |
| 12/24 | 3.18 | 0.49 | 0.19 | 10.5 | 33 | 0.9 | 3 | 7 | | 403 | 4 | 13 | 0.4 | 0.1 | 1.4 | 1.2 | 11 | 1 |
| 24/36 | 3.43 | 0.60 | 0.23 | 6.1 | 21 | 1.2 | 4 | 4 | | 293 | 2 | 7 | 0.5 | 0.4 | 1.0 | 1.3 | 9 | 1 |
| 36/48 | 3.56 | 0.62 | 0.24 | 1.7 | 6 | 0.9 | 3 | 4 | | 257 | 2 | 7 | 0.4 | 0.7 | 1.1 | 1.4 | 8 | 1 |
| 48/60 | 3.43 | 1.04 | 0.40 | 2.0 | 7 | 1.2 | 4 | 3 | | 218 | 3 | 10 | 0.5 | 0.5 | 1.3 | 1.4 | 6 | 1 |

| | | | |
|-------------------|----|----|----|
| Sum of lbs/acre = | 83 | 19 | 51 |
|-------------------|----|----|----|

| | |
|---|-----|
| Estimated release from Organic Matter = | 62 |
| Sum of available nitrogen = | 164 |

Comment:

DON SANGER - MIKE RESEARCH PLOT

RECOMMENDATIONS

Previous Crop:

- 1
- 2
- 3

| Recommendation Crop | Yield Goal | N | P ₂ O ₅ | K ₂ O | S | B | Zn | Mn | Cu | Fe | Mg | Cl | Lime Req | Gypsum Req | Elem. Sulfur Req |
|---------------------|------------|---|-------------------------------|------------------|---|---|----|----|----|----|----|----|-------------|---------------|------------------------|
| lbs/acre | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

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Best-Test Analytical Services

3394 Bell Rd. NE
 Moses Lake, WA 98837
 Phone: (509) 766-7701
 Fax: (509) 766-7705
 Toll Free: (877) 950-2378



Grower: **MIKE MILLER**
 Field ID: **NU DAKOTA**
 Crop: **Winter Wheat May**
 Fieldman:
 Taken: **5/20/10**
 Rec'd: **5/20/10**
 Sample Price: **\$0.00**

BEST-TEST ANALYTICAL SERVICES

3394 BELL RD NE
 MOSES LAKE WA 98837

Report/Invoice #: 107141
 Total Invoice Price: \$0.00

Result: Yellow (Top) — Mean: Blue (Bottom)

| Element | Units | Result | Sufficiency Range | | Mean |
|-------------------------------|-------|--------|-------------------|-----|------|
| Total Kjeldahl Nitrogen (TKN) | % | 3.466 | 2.3 | 4 | 4.4 |
| Phosphorus (P) | % | 0.18 | 0.2 | 0.5 | 0.38 |
| Potassium (K) | % | 1.15 | 1.6 | 3.2 | 3.4 |
| Sulfur (S) | % | 0.27 | 0.15 | 0.4 | 0.35 |
| Calcium (Ca) | % | 0.35 | 0.2 | 0.8 | 0.4 |
| Magnesium (Mg) | % | 0.14 | 0.15 | 0.6 | 0.2 |
| Sodium (Na) | % | 0.013 | | | |
| Zinc (Zn) | ppm | 12 | 15 | 70 | 30 |
| Manganese (Mn) | ppm | 28 | 15 | 200 | 50 |
| Copper (Cu) | ppm | 6 | 4 | 20 | 8 |
| Iron (Fe) | ppm | 143 | 10 | 300 | 150 |
| Boron (B) | ppm | 6 | 4 | 20 | 10 |
| Chloride (Cl) | % | 0.18 | 0.4 | 0.8 | 0.7 |
| | | | | | |
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Field History

June 16th Head Count 1.52 million HEADS / ACRE