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Wheat and ryegrass response to Osprey and Time of Sidedressing.

Trial ID: Wheat1-05

Study Dir.: Culpepper/Grey

Location: Plains

Investigator: Stanley Culpepper

Reps: 4

Plots: 6 by 25 feet

Spray vol: 14.8 gal/ac

Mix size: 1.5 liters (min .77168)

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Unit | Rate Stg | Grow | Appl Code | Amt to Measure | Product Measure | Plot No. By Rep | | | |
|---------|--|-----------|-----------|------|-------|----------|------|-------------|----------------|-----------------|-----------------|-----|-----|-----|
| | | | | | | | | | | | 1 | 2 | 3 | 4 |
| 1 | No Osprey TopDressing Day 0 | | | | | | | | | | 101 | 205 | 302 | 404 |
| | | | | | | POST 2 | B | | | | | | | |
| 2 | No Osprey TopDressing Day 7 | | | | | | | | | | 102 | 204 | 307 | 405 |
| | | | | | | POST 3 | C | | | | | | | |
| 3 | No Osprey TopDressing Day 14 | | | | | | | | | | 103 | 201 | 304 | 403 |
| | | | | | | POST 4 | D | | | | | | | |
| 4 | No Osprey TopDressing Day 21 | | | | | | | | | | 104 | 210 | 311 | 412 |
| | | | | | | POST 5 | E | | | | | | | |
| 5 | Osprey NIS UAN TopDressing Day 0 | 4.5 | DG | 4.75 | oz/a | POST 1 | A | 3.605 g/mx | | | 105 | 212 | 301 | 410 |
| | | | L | 0.25 | % v/v | POST 1 | A | 3.75 ml/mx | | | | | | |
| | | | L | 2 | qt/a | POST 1 | A | 50.67 ml/mx | | | | | | |
| | | | | | | POST 2 | B | | | | | | | |
| 6 | Osprey NIS UAN TopDressing Day 7 | 4.5 | DG | 4.75 | oz/a | POST 1 | A | 3.605 g/mx | | | 106 | 202 | 308 | 409 |
| | | | L | 0.25 | % v/v | POST 1 | A | 3.75 ml/mx | | | | | | |
| | | | L | 2 | qt/a | POST 1 | A | 50.67 ml/mx | | | | | | |
| | | | | | | POST 3 | C | | | | | | | |
| 7 | Osprey NIS UAN TopDressing Day 14 | 4.5 | DG | 4.75 | oz/a | POST 1 | A | 3.605 g/mx | | | 107 | 211 | 309 | 408 |
| | | | L | 0.25 | % v/v | POST 1 | A | 3.75 ml/mx | | | | | | |
| | | | L | 2 | qt/a | POST 1 | A | 50.67 ml/mx | | | | | | |
| | | | | | | POST 4 | D | | | | | | | |
| 8 | Osprey NIS UAN TopDressing Day 21 | 4.5 | DG | 4.75 | oz/a | POST 1 | A | 3.605 g/mx | | | 108 | 203 | 312 | 402 |
| | | | L | 0.25 | % v/v | POST 1 | A | 3.75 ml/mx | | | | | | |
| | | | L | 2 | qt/a | POST 1 | A | 50.67 ml/mx | | | | | | |
| | | | | | | POST 5 | E | | | | | | | |
| 9 | Osprey NIS UAN TopDressing Day 0 | 4.5 | DG | 9.5 | oz/a | POST 1 | A | 7.211 g/mx | | | 109 | 206 | 303 | 407 |
| | | | L | 0.25 | % v/v | POST 1 | A | 3.75 ml/mx | | | | | | |
| | | | L | 2 | qt/a | POST 1 | A | 50.67 ml/mx | | | | | | |
| | | | | | | POST 2 | B | | | | | | | |
| 10 | Osprey NIS UAN TopDressing Day 7 | 4.5 | DG | 9.5 | oz/a | POST 1 | A | 7.211 g/mx | | | 110 | 208 | 305 | 401 |
| | | | L | 0.25 | % v/v | POST 1 | A | 3.75 ml/mx | | | | | | |
| | | | L | 2 | qt/a | POST 1 | A | 50.67 ml/mx | | | | | | |
| | | | | | | POST 3 | C | | | | | | | |
| 11 | Osprey NIS UAN TopDressing Day 14 | 4.5 | DG | 9.5 | oz/a | POST 1 | A | 7.211 g/mx | | | 111 | 209 | 310 | 406 |
| | | | L | 0.25 | % v/v | POST 1 | A | 3.75 ml/mx | | | | | | |
| | | | L | 2 | qt/a | POST 1 | A | 50.67 ml/mx | | | | | | |
| | | | | | | POST 4 | D | | | | | | | |
| 12 | Osprey NIS UAN TopDressing Day 21 | 4.5 | DG | 9.5 | oz/a | POST 1 | A | 7.211 g/mx | | | 112 | 207 | 306 | 411 |
| | | | L | 0.25 | % v/v | POST 1 | A | 3.75 ml/mx | | | | | | |
| | | | L | 2 | qt/a | POST 1 | A | 50.67 ml/mx | | | | | | |
| | | | | | | POST 5 | E | | | | | | | |

Sort Order: Treatment

Product quantities required for listed treatments and applications in one trial:

| Amount* | Unit | Treatment Name | Lot Code |
|---------|------|----------------|----------|
| 54.081 | g | Osprey 4.5 DG | |
| 37.496 | ml | NIS L | |
| 506.703 | ml | UAN L | |

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Reps: 4 Plots: 6 by 25 feet
 Spray vol: 14.8 gal/ac Mix size: 1.5 liters (min .77168)

| | | | | |
|---------|--------|-----------|-----------|-----------------|
| Trt No. | Tr> N> | Form Conc | Form Type | Plot No. By Rep |
|---------|--------|-----------|-----------|-----------------|

Product quantities required for listed treatments and applications in one trial:

| Amount* | Unit | Treatment Name | Lot Code |
|---------|------|----------------|----------|
|---------|------|----------------|----------|

- * 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1.5 liters (mix size basis).
- * Product amount calculations increased 25 % for overage adjustment.
- * 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 1.5 liters.

Trial Comments

OBJECTIVE: Evaluate wheat response to Osprey when sidedressing is applied at various timings.

Visual Wheat Response:

- 1) At 8 days after the Osprey and Nitrogen were applied on the same day, wheat injury when treated with Osprey and Nitrogen ranged from 8 to 12%. Injury was minor and quickly recovered.
- 2) The nitrogen application made on January 20 injured wheat 14% by itself. Nitrogen at this application timing in combination with Osprey at the 1X rate was no more injurious than the nitrogen applied alone. However, injury was increased by 6% when nitrogen sidedressing 7 d after applying Osprey at the 2X rate. Again, injury was short lived.
- 3) Visual wheat injury was minor overall.

Ryegrass Response:

- 1) Excellent control was noted with all treatments receiving an application of Osprey except when the 1X rate of Osprey was applied 21 days prior to sidedressing (does nitrogen actually impact the activity of Osprey on large ryegrass or was this just a fluke???)

Wheat Yields:

- 1) No treatment impacted wheat yields.

GENERAL COMMENTS:

- 1) On November 11, Axiom at 8 oz/A was applied over the trial except the last 4 foot of each plot to remove ryegrass. Prior to harvest the last 4 foot of the plot not treated with Axiom was mowed to harvest the weed free portion of each plot.
- 2) Osprey was applied on Jan. 12 at 14.8 GPA. Nitrogen was then applied 1 hour after the herbicide for the POST2 timing. All nitrogen was applied at 30 gallons per acre
- 3) Injury was a response in leaf burn. Little stunting was noted.

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Wheat and ryegrass response to Osprey and Time of Sidedressing.

Trial ID: Wheat1-05

Study Dir.: Culpepper/Grey

Location: Plains

Investigator: Stanley Culpepper

| Weed Code | | | | | LOLMU | LOLMU | Yield | | | |
|--------------------|--|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-------|-------|------|
| Crop Code | wheat | wheat | wheat | wheat | | | wheat | | | |
| Rating Data Type | injury | injury | injury | injury | control | control | 26ft/plot | | | |
| Rating Unit | percent | percent | percent | percent | percent | percent | lb | | | |
| Rating Date | Jan-21-05 | Jan-27-05 | Feb-21-05 | May-26-05 | Feb-21-05 | May-27-05 | May-27-05 | | | |
| Trt-Eval Interval | 71 DA-A | 77 DA-A | 102 DA-A | 196 DA-A | 102 DA-A | 196 DA-A | 197 DA-A | | | |
| Trt No. | Treatment Name | Rate | Unit | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | No Osprey TopDressing Day 0 | | | 1 | 0 | 0 | 0 | 0 | 0 | 16 |
| 2 | No Osprey TopDressing Day 7 | | | 0 | 14 | 0 | 0 | 0 | 8 | 16 |
| 3 | No Osprey TopDressing Day 14 | | | 0 | 0 | 0 | 0 | 0 | 5 | 16 |
| 4 | No Osprey TopDressing Day 21 | | | 0 | 0 | 0 | 0 | 0 | 8 | 16 |
| 5 | Osprey NIS UAN TopDressing Day 0 | 4.75 oz/a 0.25 % v/v 2 qt/a | | 8 | 4 | 0 | 0 | 69 | 88 | 16 |
| 6 | Osprey NIS UAN TopDressing Day 7 | 4.75 oz/a 0.25 % v/v 2 qt/a | | 0 | 14 | 0 | 0 | 76 | 93 | 17 |
| 7 | Osprey NIS UAN TopDressing Day 14 | 4.75 oz/a 0.25 % v/v 2 qt/a | | 0 | 0 | 0 | 0 | 70 | 91 | 17 |
| 8 | Osprey NIS UAN TopDressing Day 21 | 4.75 oz/a 0.25 % v/v 2 qt/a | | 0 | 0 | 3 | 0 | 70 | 80 | 16 |
| 9 | Osprey NIS UAN TopDressing Day 0 | 9.5 oz/a 0.25 % v/v 2 qt/a | | 12 | 7 | 3 | 0 | 79 | 96 | 16 |
| 10 | Osprey NIS UAN TopDressing Day 7 | 9.5 oz/a 0.25 % v/v 2 qt/a | | 0 | 20 | 0 | 0 | 78 | 96 | 16 |
| 11 | Osprey NIS UAN TopDressing Day 14 | 9.5 oz/a 0.25 % v/v 2 qt/a | | 0 | 0 | 1 | 0 | 78 | 97 | 17 |
| 12 | Osprey NIS UAN TopDressing Day 21 | 9.5 oz/a 0.25 % v/v 2 qt/a | | 0 | 0 | 0 | 0 | 73 | 93 | 16 |
| LSD (P=.05) | | | | 2.8 | 2.8 | 2.9 | 0.0 | 7.6 | 9.9 | 1.0 |
| Standard Deviation | | | | 2.0 | 1.9 | 2.0 | 0.0 | 5.3 | 6.9 | 0.7 |
| CV | | | | 121.24 | 39.76 | 380.62 | 0.0 | 10.68 | 10.93 | 4.38 |

Means followed by same letter do not significantly differ (P=.05, LSD)

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| No. | Date | Maintenance Treatment Name | Form Conc | Form Unit | Form Type | Rate | Rate Unit |
|-----|------|----------------------------|-----------|-----------|-----------|------|-----------|
| 1. | | | | | | | |

SOIL DESCRIPTION

% Sand: 80 % OM: 1.6 Texture: loamy sand
 % Silt: 10 pH: 5.9 Soil Name: _____
 % Clay: 10 CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

| Element | Quantity | Unit |
|---------|----------|------|
| | | |

MOISTURE CONDITIONS

| No. | Date | Time | Amount | Unit | Type | Interval | Unit |
|-----|------|------|--------|------|------|----------|------|
| 1. | | | | | | | |

Overall Moisture Conditions: .

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

| | A | B | C | D | E |
|----------------------|-----------|-----------|-----------|-----------|-----------|
| Application Date: | Jan-12-05 | Jan-12-05 | Jan-20-05 | Jan-27-05 | Feb-03-05 |
| Time of Day: | 4 pm | 5 pm | 3 pm | 10 am | 11 am |
| Application Method: | broadcast | broadcast | broadcast | broadcast | broadcast |
| Application Timing: | POST 1 | POST 2 | POST 3 | POST 4 | POST 5 |
| Applic. Placement: | overtop | overtop | overtop | overtop | overtop |
| Air Temp., Unit: | 76 F | 76 F | 72 F | 56 F | 60 F |
| % Relative Humidity: | 48 | 48 | 67 | 37 | 42 |
| Wind Velocity, Unit: | 3 mph | 3 mph | 3 mph | 3 mph | 2 mph |
| Dew Presence (Y/N): | n | n | n | n | n |
| Water Hardness: | | | | | |
| Soil Temp., Unit: | 67 F | 67 F | 67 F | 64 F | 65 F |
| Soil Moisture: | moist | moist | moist | moist | moist |
| % Cloud Cover: | 70 | 70 | 0 | 85 | 75 |

CROP STAGE AT EACH APPLICATION

| | A | B | C | D | E |
|---------------------|--------------|--------------|--------------|--------------|--------------|
| Crop 1 Code, Stage: | TRZAW POST 1 | TRZAW POST 2 | TRZAW POST 3 | TRZAW POST 4 | TRZAW POST 5 |
| Stage Scale: | 4-5 tille | 4-5 tille | 5 tiller | 5-6 tille | 6 tiller |
| Height, Unit: | 5 inch | 5 inch | 6 inch | 7 inch | 7 inch |

WEED STAGE AT EACH APPLICATION

| | A | B | C | D | E |
|---------------------|--------------|--------------|--------------|--------------|--------------|
| Weed 1 Code, Stage: | LOLMU POST 1 | LOLMU POST 2 | LOLMU POST 3 | LOLMU POST 4 | LOLMU POST 5 |
| Stage Scale: | 2-3 tille | 2-3 tille | 3-4 tille | 3-4 tille | 4 tiller |
| Density, Unit: | . . | . . | . . | . . | . . |

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APPLICATION EQUIPMENT

| | A | B | C | D | E |
|------------------------------|----------|----------|----------|----------|----------|
| Appl. Equipment: | backpack | backpack | backpack | backpack | backpack |
| Operating Pressure: | 23 | | | | |
| Nozzle Type: | flat fan | flat fan | flat fan | flat fan | flat fan |
| Nozzle Size: | 11002 | 11004 | 11004 | 11004 | 11004 |
| Nozzle Spacing, Unit: | 18 inch | 18 inch | 18 inch | 18 inch | 18 inch |
| Nozzles/Row: | | | | | |
| Band Width, Unit: | | | | | |
| Boom Length, Unit: | 4.5 feet | 4.5 feet | 4.5 feet | 4.5 feet | 4.5 feet |
| Boom Height, Unit: | 15 inch | 15 inch | 15 inch | 15 inch | 15 inch |
| Ground Speed, Unit: | 3 mph | 3 mph | 3 mph | 3 mph | 3 mph |
| Incorporation Equip.: | | | | | |
| Hours to Incorp.: | | | | | |
| Incorp. Depth, Unit: | | | | | |
| Carrier: | water | 30%N | 30%N | 30%N | 30%N |
| Spray Volume, Unit: | 14.8 GPA | 30 GPA | 30 GPA | 30 GPA | 30 GPA |
| Spray pH: | | | | | |
| Propellant: | CO2 | CO2 | CO2 | CO2 | CO2 |
| Tank Mix (Y/N): | Y | N | N | N | N |

| Trt No | Treatment Application Comment |
|--------|-------------------------------|
| | |