

**Grass and broadleaf weed control in spring wheat, Carrington, 2019.**

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The field experiment was conducted at the NDSU Carrington Research Extension Center in cooperation with Bayer CropScience to examine weed efficacy and crop tolerance with Luxxur and broadleaf herbicide tank mixtures. Experimental design was a randomized complete block with three replicates. 'Glenn' HRS wheat was seeded on May 14 in conventionally tilled soil grown to corn in 2018. Herbicide treatments were applied with a CO<sub>2</sub>-hand-boom plot sprayer delivering 10 gal/A at 35 psi through 80015 flat fan nozzles to the center 6.7 ft of 10- by 25-ft plots. Treatments were applied on June 10 with 71 F, 31% RH and 6 mph wind to 3.5- to 4.5-leaf wheat, 2- to 4-leaf yellow and green foxtail, and 0.5- to 1-inch tall common lambsquarters.

Minor wheat plant response (foliage chlorosis/necrosis or biomass reduction) was noted seven days after treatment (DAT) and was absent 25 DAT (July 5). Foxtail control visually evaluated 25 DAT ranged from 70-79% with all herbicide treatments. Evaluation at 52 DAT (Aug 1) indicated foxtail control at 79-81% with Luxxur A plus B and tank mixtures with Starane Ultra, MCPA ester, or WideMatch; and Huskie Complete. Common lambsquarters control 25 and 52 DAT was excellent, ranging from 92-99% with all herbicide treatments.

| Table.   |   |                                     |                           |      |       |      |       |      |                       |
|--|---|-------------------------------------|---------------------------|------|-------|------|-------|------|-----------------------|
|  |   |                                     | Weed control <sup>1</sup> |      |       |      |       |      | Wheat plant chlorosis |
| Herbicide  |   |                                     | 21-Jun                    |      | 5-Jul |      | 1-Aug |      | 17-Jun                |
| No.  | Treatment                                     | Rate                                | fota                      | colq | fota  | colq | fota  | colq | 0-9 <sup>2</sup>      |
|  |   | fl oz product/A                     | %                         |      |       |      |       |      |                       |
| 1  | Untreated check                               | x                                   | 0                         | 0    | 0     | 0    | 0     | 0    | 0                     |
| 2  | Luxxur B + Luxxur A                           | 6.85 + 0.21 oz wt                   | 72                        | 75   | 70    | 92   | 73    | 98   | 0                     |
| 3  | Luxxur B + Luxxur A + Starane Ultra           | 6.85 + 0.21 oz wt + 4.8             | 71                        | 75   | 73    | 94   | 79    | 95   | 1                     |
| 4  | Luxxur B + Luxxur A + Sword                   | 6.85 + 0.21 oz wt + 6.15            | 74                        | 80   | 77    | 97   | 80    | 97   | 1                     |
| 5  | Luxxur B + Luxxur A + WideMatch               | 6.85 + 0.21 oz wt + 16              | 73                        | 78   | 79    | 97   | 81    | 99   | 2                     |
| 6  | Luxxur B + Luxxur A + Bromac                  | 6.85 + 0.21 oz wt +16               | 68                        | 92   | 73    | 98   | 69    | 99   | 2                     |
| 7  | Luxxur B + Luxxur A + Supremacy               | 6.85 + 0.21 oz wt + 4.5 oz wt       | 70                        | 75   | 77    | 99   | 74    | 99   | 1                     |
| 8  | Luxxur B + Luxxur A + Olympus + Starane Ultra | 6.85 + 0.21 oz wt + 0.2 oz wt + 4.8 | 72                        | 75   | 78    | 96   | 76    | 98   | 2                     |
| 9  | Huskie Complete                               | 27.4                                | 72                        | 90   | 77    | 96   | 81    | 99   | 3                     |
| C.V. (%)   |   |                                     | 6.6                       | 9.0  | 8.4   | 3.1  | 13.8  | 2.6  | 66.2                  |
| LSD (0.05)   |   |                                     | 6                         | 9    | 8     | 4    | 13    | 3    | 1                     |
| <sup>1</sup> fota=yellow and green foxtail; colq=common lambsquarters. |   |                                     |                           |      |       |      |       |      |                       |
| <sup>2</sup> 0=green; 9=yellow.  |   |                                     |                           |      |       |      |       |      |                       |