

## **Wheat Plant Growth Regulator**

Trial ID: 2020-WPGR05 — R.M. of Woodlands

**Objective:** The purpose of this project is to quantify the impact of the plant growth regulator Manipulator™ 620 (chlormequat chloride) and Omex on plant height, lodging, yield and quality of spring wheat

| TRIAL INFORMATION    |  |  |  |  |  |  |  |
|----------------------|--|--|--|--|--|--|--|
| Treatment            | Manipulator™ 620 vs. Omex EZ-GRO K vs. Untreated |  |  |  |  |  |  |
| Location             | Marquette  |  |  |  |  |  |  |
| <b>Previous Crop</b> | Canola   |  |  |  |  |  |  |
| Soil Texture         | Clay Loam  |  |  |  |  |  |  |
| Tillage              | Minimal Tillage                                  |  |  |  |  |  |  |
| Planting Date        | May 21, 2020                                     |  |  |  |  |  |  |
| Variety              | Faller   |  |  |  |  |  |  |
| Row Spacing          | 10"  |  |  |  |  |  |  |
| Seeding Rate         | 130 lbs/ac                                       |  |  |  |  |  |  |
| Residual N           |  |  |  |  |  |  |  |
| Fertilizer (N-P-K-S) | 140N   |  |  |  |  |  |  |
| Application Date     | June 13 & 18, 2020                               |  |  |  |  |  |  |
| Application Timing   | 3L (Omex), 5L Manipulator                        |  |  |  |  |  |  |
| Application Rate     | 0.7 L/ac , 40 ac/jug (Omex)                      |  |  |  |  |  |  |
| Harvest Date         | September 05, 2020                               |  |  |  |  |  |  |

| WHEAT RESPONSE   |                |                  |                    |              |  |  |  |
|------------------|----------------|------------------|--------------------|--------------|--|--|--|
|                  | Plant          | Lodg             | Lodging            |              |  |  |  |
|                  | Height<br>(cm) | Incidence<br>(%) | Severity<br>(1-10) | Protein<br>% |  |  |  |
| Manipulator™ 620 | 82             | 0                | 1                  | 12.6         |  |  |  |
| Omex             | 85             | 0                | 1                  | 12.0         |  |  |  |
| Untreated        | 86             | 0                | 1                  | 12.8         |  |  |  |

| OVERALL YIELD    |                   |  |  |  |  |
|------------------|-------------------|--|--|--|--|
|                  | Mean (bu/ac)      |  |  |  |  |
| Manipulator™ 620 | 61.8 <sup>B</sup> |  |  |  |  |
| Omex             | 66.5 <sup>A</sup> |  |  |  |  |
| Untreated        | 63.3 <sup>B</sup> |  |  |  |  |
| P-Value          | 0.0361            |  |  |  |  |
| cv               | 4.38%             |  |  |  |  |
| Significance     | Yes               |  |  |  |  |

## Omex EZ-GRO K 12 Check 10. PGR 10. PGR 9. Omex EZ-GRO K 8 Check 7 Check 6 Omex EZ-GRO K 5 PGR 3 Check 2 Omex EZ-GRO K 1

| PRECIPITATION† |     |      |      |     |       |  |  |  |
|----------------|-----|------|------|-----|-------|--|--|--|
|                | May | June | July | Aug | Total |  |  |  |
| Rainfall       | 75  | 43   | 54   | 92  | 264   |  |  |  |
| Normal         | 58  | 83   | 60   | 72  | 274   |  |  |  |

<sup>†</sup>Growing season precipitation (mm)



Summary: There was a significant yield difference between the Omex plant growth regulator application and the Manipulator™ 620 and untreated check. There was no significant reduction in plant height due to the plant growth regulator applications. There was no lodging observed within the trial. Rainfall was above normal in May and August and below normal in June and July.



