

## Wheat Plant Growth Regulator

## Trial ID: 2019-WPGR07 — R.M. of St. Andrews

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

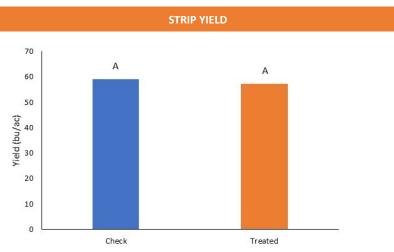
| TRIAL INFORMATION          |                                  |  |  |  |
|----------------------------|----------------------------------|--|--|--|
| Treatment                  | Manipulator™ 620 vs. Untreated   |  |  |  |
| Location                   | St. Andrews                      |  |  |  |
| Previous Crop              | Soybeans                         |  |  |  |
| Soil Texture               | Clay                             |  |  |  |
| Tillage                    | Conventional                     |  |  |  |
| Planting Date              | May 02, 2019                     |  |  |  |
| Variety                    | AAC Brandon<br>10"<br>110 lbs/ac |  |  |  |
| Row Spacing                |                                  |  |  |  |
| Seeding Rate               |                                  |  |  |  |
| Residual N                 |                                  |  |  |  |
| Fertilizer (N-P-K-S)       | 105N 28P 10S                     |  |  |  |
| Application Date           | June 12, 2019                    |  |  |  |
| Application Timing         | 5L                               |  |  |  |
| Application Rate           | 0.7 L/ac                         |  |  |  |
| Harvest Date               | August 21, 2019                  |  |  |  |
| PRECIPITATION <sup>+</sup> |                                  |  |  |  |

| PRECIPITATION <sup>+</sup>                     |     |      |      |     |       |  |  |
|--|-----|------|------|-----|-------|--|--|
|  | May | June | July | Aug | Total |  |  |
| Rainfall                                       | 20  | 24   | 61   | 7   | 113   |  |  |
| Normal   | 59  | 85   | 71   | 52  | 268   |  |  |
| <sup>†</sup> Growing season precipitation (mm) |     |      |      |     |       |  |  |

| WHEAT RESPONSE   |                 |           |          |         |
|------------------|-----------------|-----------|----------|---------|
|                  | Plant<br>Height | Lodging   |          |         |
|                  | (inches)        | Incidence | Severity | Protein |
| Manipulator™ 620 | 27              | 0         | 1        | 13.7    |
| Untreated        | 29              | 0         | 1        | 13.4    |

OVERALL YIELDMean (bu/ac)Manipulator™ 62057.3Untreated59.2Yield Difference-1.9P-Value0.0548CV3.7%SignificanceNo

|   |   |  | FIELD IMAGE |                                       |
|---|---|--|-------------|---------------------------------------|
|   |   |  |             | Constant                              |
|   |   |  | 8 - Check   | · · · · · · · · · · · · · · · · · · · |
|   |   |  | 7 - PGR     | k                                     |
|   |   |  | 6 - PGR     |                                       |
| 1 |   |  | 5 - Check   |                                       |
|   |   |  | 4 - PGR     |                                       |
|   |   |  | 3 - Check   |                                       |
|   |   |  | 2 - Check   |                                       |
|   | 1 |  | 1 - PGR     |                                       |
|   |   |  |             |                                       |



Summary: There was no significant yield difference between the Manipulator<sup>™</sup> 620 plant growth regulator application and the untreated check. There was a significant reduction in plant height of 2" with plant growth regulator application. There was no lodging observed within the trial. Rainfall was below normal through May, June and August; July was near normal.



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