



**Plot2  
Farm**

# W002 - Chlormequat chloride (Manipulator) application on spring wheat

**Objective:** Compare the standability, yield and quality of the plant growth regulator (PGR) chlormequat chloride (Manipulator) on spring wheat.

## Research support

Research conducted by Dr. Sheri Strydhorst (formerly Alberta Agriculture and Forestry), Laurel Thompson of Lakeland College, and Dr. Linda Hall of the University of Alberta has shown that spring wheat varieties treated with the PGR 'Manipulator' (Belchim) varied in their responses across the variety, year and location. The use of PGRs in high yielding and high moisture areas can provide benefit by reducing lodging risk. PGR application can also impact yield, quality and protein.

This on-farm research protocol will help determine whether Manipulator application adds value on your farm under typical management.

## Field Layout and Selection

Field layout will depend on the number of treatments selected. Review the Research Guide for the best practices on treatment design, choosing your trial and how it should be laid out.

## Treatments

To follow good experimental protocol, treatments should be both replicated and randomized. For example, if you are testing 2 treatments, the order of those treatments change in each replication. For example, in replication 1, treatment 1 precedes treatment 2, but in the second replication, treatment 2 precedes treatment 1. This reduces the effects of field variability on results. Take detailed notes to remember the order of treatment applications.

**Treatment 1:**

Check Treatment: No Manipulator application.

**Treatment 2:**

Manipulator Treatment: Apply 1.8L/ha of Manipulator at growth stage BBCH 31-32 with at least 10 Gal/ac of spray solution

**Treatment 3:**

Split Manipulator Treatment: Apply 0.8L/ha of Manipulator at growth stage BBCH 22-23 with at least 10 Gal/ac of spray solution. Follow up with a second application of 1L/ha at GS 31-32.

|               |             |
|---------------|-------------|
| Replication 1 | Treatment 1 |
|               | Treatment 2 |
|               | Treatment 3 |
| Replication 2 | Treatment 2 |
|               | Treatment 3 |
|               | Treatment 1 |
| Replication 3 | Treatment 3 |
|               | Treatment 1 |
|               | Treatment 2 |
| Replication 4 | Treatment 2 |
|               | Treatment 3 |
|               | Treatment 1 |

**Additional Notes:**

1. All treatments will receive the same cultivar, fertilizer, seed treatments, herbicide, fungicide, pre-seed and harvest treatment.
2. Always read and follow label directions.

