

# Parkland Industrial Hemp Growers Plant Growth Regulator Evaluation

**Project duration** May 2018 – August 2018  
**Objectives** To evaluate wheat varieties for the Parkland Coop  
**Collaborators** Keith Watson

## Results

The results are shown below in Figures 1 and 2. Although PGR application appears to have reduced the overall height of the plants compared to the control, there were no significant differences between treatments. This suggests that application of PGR does not reliably reduce the height of the hemp variety (Canda) for the application stages used in this trial.

Figure 1: Difference in Height by PGR Application Timing

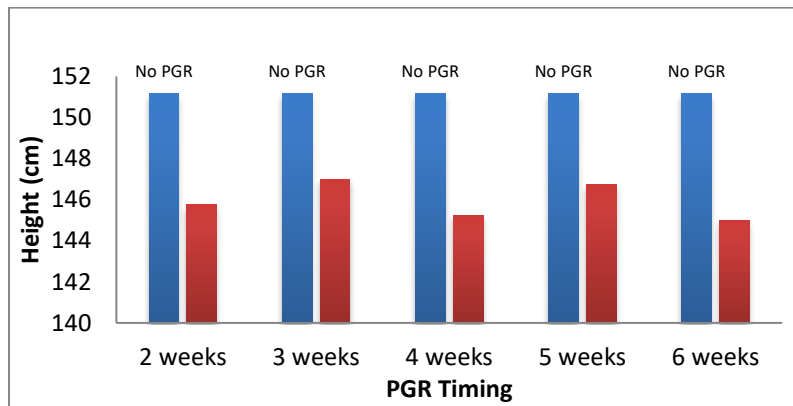
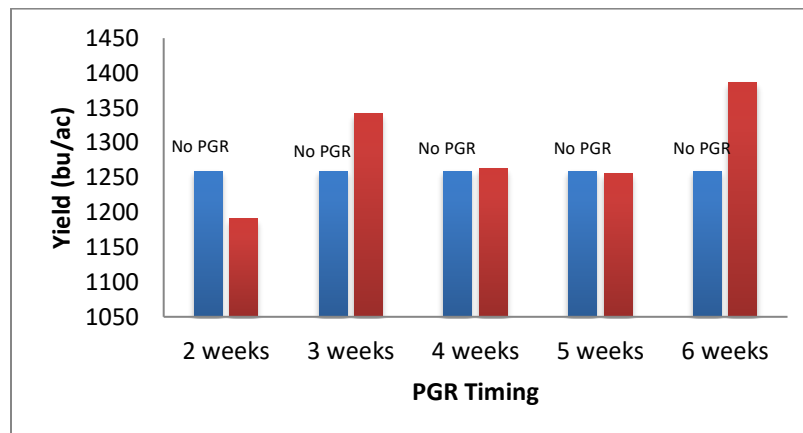


Figure 2: Difference in Yield by PGR Application



## Background

Field management of hemp continues to be a concern to hemp growers. In particular, hemp growers who are not looking for a fibre harvest but who are rather growing for the grain harvest, are looking for ways to manage the height of the hemp plant in order to make it easier to get off the field.

PCDF and PIHG co-developed a trial looking at the effect of differently timed applications of PGRs on height and on yield.

**Materials & Methods**

Experimental Design    Random Complete Block Design  
 Entries                    6 treatments x 4 replications  
 Seeding                    May 28  
 Harvest                    August 22

Table 1: PGR Application Timing

Treatment	PGR Timing
1	PGR two weeks after seeding
2	PGR three weeks after seeding
3	PGR four weeks after seeding
4	PGR five weeks after seeding
5	PGR six weeks after seeding
6	No PGR

*PGR Manipulator applied to selected plots according to this schedule*

<b>Data collected</b>	<b>Date collected</b>
Emergence	Jun 4-9
Plant Counts	Jun 11
Flowering	Jul 18-20
Disease rating	Aug 3
Height	Aug 2
Lodging	Aug 22
Yield	Sept 3
Moisture	Sept 3

**Agronomic info**

Previous year's crop    Oat barley silage  
 Soil Type                Erickson Loam Clay  
 Landscape               Rolling with trees to the east  
 Seedbed preparation    No-till due to moisture concerns; direct-seeded into stubble

Table 2: Spring 2018 Soil Test

	Available	Needed
N	54 lb/ac	76 lb/ac

P	13 ppm	10 lb/ac
K	228 ppm	0 lb/ac
S	118 lb/ac	0 lb/ac

Table 3: Added N and P Fertilizer

Blend	Blend (actual lbs/ac)	Actual lbs N	Actual lbs P
46-0-0	160.62	76	0
11-52-0-0	19.23	2.12	10
Total	-	78.12	10

*N side-banded; P Banded with seed*

Table 4: Herbicide Application

Crop stage	Date	Product	Rate
Pre-emerge	May 19	Heat	28.4g/ac
		Round-up	0.67L/ac
In-crop	Jun 20	Brotex 240	0.5 L/ac
		Centurion	0.15 L/ac