

Title: Effect of Palisade on Lodging in Barley - 2016

Objective: To evaluate the effect of Palisade when applied at different rates and timings in barley.

Materials and Methods:

Palisade was applied at 7 oz/A to Goldeneye six row barley at the tillering (June 1) and flag leaf (June 10) growth stages either as single or sequential applications (Table 2). Treatments were applied using a CO<sub>2</sub> backpack sprayer with Teejet XR11002 nozzles in 20 GPA of water and were replicated three times using a randomized complete block design.

Results:

Differences in height were observed on July 1. A single application of Palisade at flag leaf stage resulted in the greatest reduction in plant height. The height of the remaining treatments were not different from the non-treated check. Despite the initial PGR effect, height differences were no longer detectable at the August 9th assessment. Similarly, no differences were observed for lodging, yield or grain quality.

Summary:

Palisade applied at 7 oz/A at flag leaf resulted in an initial reduction in plant height. However, this response was temporary, and treatment differences could not be detected at harvest.

Table 1. Materials and Methods.

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Seeding Date:	4/29/2016	Harvest Date:	9/1/2016
Julian Date:	120	Julian Date:	245
Seeding Rate:	80 lb/A	Soil Type:	Creston SiL
Previous Crop:	Canola	Soil Test:	104-24-652-154
Tillage:	Conventional	Fertilizer:	BC: 125-30-30-20, DR:3-14-0
Herbicide:	Huskie 11 oz/A + Axial 16.4 oz/A + NIS 1 qt/100 gal + UAN 28% 1 qt/A		

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Table 2. Effect of Palisade rate and timing on agronomic performance in barley, Kalispell, MT, 2016

	Rate	Timing	Height (inches)		LOD	YLD <sup>1</sup>	PP	TWT <sup>1</sup>
			7/1	8/9	%	bu/A	%	lb/bu
Check			41.9	42.6	43.3	71.6	91.9	50.4
Palisade	7 fl oz/A	Tillering	40.7	42.3	14.0	96.1	94.9	51.7
Palisade	2 fl oz/A	Tillering +						
Palisade	5 fl oz/A	Flag leaf	40.6	41.9	29.0	83.9	94.3	51.7
Palisade	5 fl oz/A	Tillering +						
Palisade	2 fl oz/A	Flag leaf	40.7	40.4	31.7	79.1	92.1	51.0
Palisade	7 fl oz/A	Flag leaf	37.5	42.8	46.7	98.8	93.2	51.1
Mean			40.3	42.0	32.9	85.9	93.3	51.2
CV			2.9	4.2	83.1	14.5	2.5	1.7
LSD			2.2	ns	ns	ns	ns	ns
Pr>F			0.0174	0.5201	0.6293	0.1209	0.4784	0.3933

LOD: lodging, YLD: yield, PP: percent plump, TWT: test weight, ns: nonsignificant.

<sup>1</sup> adjusted to 13% moisture.