

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.

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		

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> bu/A	PP %	TWT <sup>1</sup> lb/bu
			7/1	8/9				
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.