Indazaflam (Alion) Efficacy and Crop Tolerance in Alfalfa

ICB1216

Zuger, R.J. & I.C. Burke

Methods

The study was established at the Washington State University Research Farm near Othello, WA. Treatments were applied pre-bud formation, detailed in Table 1 and Table 2. The study was conducted in a randomized complete block with 4 replications. Plots were 10' by 25' long.

Crop injury was visually rated for 33 and 53 days after treatment (DAT). Plots were harvested using a sickle-bar mower on May 3, 2016, June 28, 2016, and August 9, 2016. Plant heights from two plants in each plot were recorded prior to harvest. Swaths of 2.5' by 30' were cut up the center of the plot, collected into totes and weighed in the field. Grab samples fresh weights were collected from each plot before being dried in an oven set at 60˚C to determine percent moisture at harvest and hay dry matter yields were calculated.

Percent data were arcsine square-root transformed. All data were subjected to an analysis of variance using the statistical package built into the Agricultural Research Manager software system (ARM 8.5.0, Gylling Data Management).

Results

No significant crop injury was observed 33 and 53 days after treatment (DAT) (Table 2).

There was no significant effect of average plant height and yield observed for any treatment at the 1st, 2nd, or 3rd cutting.

Table 1. *Treatment application details*

Study Application	**A**
Date	February 26, 2016
Application volume (GPA)	15
Crop Stage	Pre-budbreak
Air temperature (˚F)	44
Soil temperature (˚F)	41
Wind velocity (mph, direction)	6, W

Table 2. *Percent injury of alfalfa following applications of different herbicides. Othello, WA, 2015 -2016. Means followed by the same letter are not statistically different (α=0.05).*

Treatment	Application Code	Rate		March 30, 2016 Crop Injury	April 19, 2016 Crop Injury
			lb ai/A	%	%
Nontreated				-	-
Alion	A	2.5 fl oz/A	0.033	0	0
Alion	A	4 fl oz/A	0.052	0	0
Chateau	A	4 oz/A	0.127	0	0
Raptor	A	6 fl oz/A	0.047	0	0

Table 3. *Alfalfa plant heights and yield for the 1st, 2nd, and 3rd cuttings applications of different herbicides. Othello, WA, 2015 -2016. Means followed by the same letter are not statistically different (α=0.05).*

Treatment	Application Code	Rate		May 3, 2016 1st Cutting	June 28, 2016 2nd Cutting		August 9, 2016 3rd Cutting	
				Yield	Plant Ht	Yield	Plant Ht	Yield
			lb ai/A	lb DM/A	cm	lb DM/A	cm	lb DM/A
Nontreated				5030	78	6360	52	4260
Alion	A	2.5 fl oz/A	0.033	4930	75	5490	63	3250
Alion	A	4 fl oz/A	0.052	4750	76	5560	58	4050
Chateau	A	4 oz/A	0.127	5510	72	5580	69	4040
Raptor	A	6 fl oz/A	0.047	4750	70	5270	70	3610

Some of the pesticides discussed in this presentation were tested under an experimental use permit granted by WSDA. Application of a pesticide to a crop or site that is not on the label is a violation of pesticide law and may subject the applicator to civil penalties up to $7,500. In addition, such an application may also result in illegal residues that could subject the crop to seizure or embargo action by WSDA and/or the U.S. Food and Drug Administration. It is your responsibility to check the label before using the product to ensure lawful use and obtain all necessary permits in advance.