Weed Control with Pyridate and Clethodim in Chickpea

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Cook Agronomy Farm in Pullman, WA

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

Methods

The study was established at the Cook Agronomy Farm near Pullman, WA. Treatments were applied post emergence (POST) at several different crop stages, detailed in Table 1 and Table 2. The study was conducted in a randomized complete block with 4 replications. Plots were 10' by 30' long.

Crop injury was visually rated 28 days after treatment (DAT) of application A (Table 2). Common lambsquarters control was visually assessed 114 DAT of application A (Table 3). Plots were harvested using a plot combine on September 20, 2016. All data was 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

There was no significant crop injury for any of the treatments 28 DAT of application A or 15 DAT of application C.

All treatments provided significant common lambsquarters control compared to the nontreated. Pyridate applied at the highest rate (48 fl oz A⁻¹) without and with NIS applied at 8 to 10" chickpeas provided the best common lambsquarters control at 95% and 94%, respectively.

Pyridate provided significantly higher yield for all treatments compared to the nontreated control except when pyridate and Select Max were applied together at the earliest application timing of 2 to 4" chickpeas (application A). Pyridate with Select Max and COC applied in the same tank mixture at application timing A did not result is yield significantly different from the nontreated control (Table 2).

Table 1. Treatment application details

Study Application	A	В	C
Date	May 24, 2016	June 3, 2016	June 6, 2016
Application volume (GPA)	15	15	15
Crop Stage	2-4"	6"	8-10"
Air temperature (°F)	57	67	80
Soil temperature (°F)	62	60	68
Wind velocity (mph, direction)	3, SE	4, S	4, E
Next rain occurred on	June 8, 2016	June 8, 2016	June 8, 2016

Table 2. Percent crop injury for chickpea, percent common lambsquarters control and yield following applications of pyridate and clethodim at different application timings. Pullman, WA, 2016. Means followed by the same letter are not statistically significantly different (α =0.05).

Treatment	Application Code	Rate		June 21, 2016	September 15, 2016	September 26, 2016
				Crop Injury	Common lambsquarters control	Yield
			lb ai/A	%	%	lb/A
Nontreated	-	-	-	0	0 a	926 a
Pyridate (Tough)	A	24 fl oz/A	0.940			
Select Max	В	16.5 fl oz/A	0.125	10	88 bc	1840 b
Agridex (COC)	В	0.25% v/v				
Pyridate (Tough)	A	48 fl oz/A	1.880			
Select Max	В	16.5 fl oz/A	0.125	13	84 bc	1890 b
Agridex (COC)	В	0.25% v/v				
Pyridate (Tough)	A	24 fl oz/A	0.940			
Induce (NIS)	A	0.25% v/v		20	78 bc	1730 b
Select Max	В	16.5 fl oz/A	0.125	20	78 DC	17300
Agridex (COC)	В	0.25% v/v				
Pyridate (Tough)	A	48 fl oz/A	1.880			
Induce (NIS)	A	0.25% v/v		0	65 bc	1950 b
Select Max	В	16.5 fl oz/A	0.125	0	63 00	1930 0
Agridex (COC)	В	0.25% v/v				
Pyridate (Tough)	A	24 fl oz/A	0.940			
Select Max	A	16.5 fl oz/A	0.125	3	85 bc	1500 ab
Agridex (COC)	A	0.25% v/v				
Pyridate (Tough)	A	24 fl oz/A	1.880			
Select Max	A	16.5 fl oz/A	0.125	5	82 bc	1510 ab
Agridex (COC)	A	0.25% v/v				
Pyridate (Tough)	С	24 fl oz/A	0.940			
Select Max	В	16.5 fl oz/A	0.125	5	58 b	1810 b
Agridex (COC)	В	0.25% v/v				
Pyridate (Tough)	С	48 fl oz/A	1.880			
Select Max	В	16.5 fl oz/A	0.125	15	95 c	2020 b
Agridex (COC)	В	0.25% v/v				
Pyridate (Tough)	С	24 fl oz/A	0.940			
Induce (NIS)	C	0.25% v/v		10	07.1	10001
Select Max	В	16.5 fl oz/A	0.125	18	87 bc	1800 b
Agridex (COC)	В	0.25% v/v				
Pyridate (Tough)	С	48 fl oz/A	1.880			
Induce (NIS)	C	0.25% v/v		8	04.5	2140 h
Select Max	В	16.5 fl oz/A	0.125	8	94 c	2140 b
Agridex (COC)	В	0.25% v/v				
Pyridate (Tough)	С	24 fl oz/A	0.940			
Select Max	C	16.5 fl oz/A	0.125	15	85 bc	1870 b
Agridex (COC)	C	0.25% v/v				
Pyridate (Tough)	С	24 fl oz/A	1.880			
Select Max	C	16.5 fl oz/A	0.125	20	84 bc	1810 b
Agridex (COC)	C	0.25% v/v				

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.