

Postemergence Mayweed Chamomile Control in Spring Wheat without Clopyralid

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The objective of the following study was to evaluate mayweed chamomile (*Anthemis cotula* L.) control in spring wheat without the active ingredient clopyralid, a synthetic auxin commonly used for mayweed chamomile control.

The study was established at the Cook Agronomy Farm near Pullman, WA. Treatments were applied to mayweed chamomile at 4 inches or greater in diameter postemergence (POST) in spring wheat, detailed in Table 1 and Table 2. Widematch (clopyralid and fluroxypyr) was included as an industry standard. The study was conducted in a randomized complete block with 4 replications with 10' by 30' long plots. Spring wheat 'Seahawk' was planted on April 22, 2017. Axial XL at 16.4 fl oz A⁻¹ was applied on June 7, 2017 for Italian ryegrass control.

Mayweed chamomile control was visually assessed 48 days after treatment (DAT) (Table 2). Plots were harvested using a 5' plot combine on August 18, 2017. 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).

Huskie with MCPA ester, Talinor, Brox-M with Harmony Extra SP, Peak with Starane Ultra, Brox-M with Affinity Broadspec, and Peak with Brox-M and Starane Ultra provided the greatest mayweed chamomile control at 48 DAT with 83, 99, 89, 95, 99, and 99% control, respectively (Table 2). Active ingredients bromoxynil, an photosystem II inhibitor, or prosulfuron, an acetolactate synthase inhibitor, were present in all treatments with the greatest percent control of mayweed chamomile.

At harvest, no significant differences in percent moisture, test weight, and yield between any of the treatments and the nontreated control.

Table 1. Treatment application details

Study Application	
Date	June 2, 2017
Application volume (GPA)	15
Crop Stage	5 tillers
Air temperature (°F)	67
Soil temperature (°F)	68
Wind velocity (mph, direction)	3.9, NW
Cloud Cover	5%
Next rain occurred on	June 4, 2017

Table 2. Percent mayweed chamomile control and spring wheat yield. Pullman, WA, 2017. DAT = days after treatment. Means followed by the same letter are not statistically significantly different ($\alpha=0.05$).

Treatment	Field Rate	Active Ingredients	lb ai/A	July 20, 2017	August 18, 2017		
				48 DAT	Moisture	Test Weight	Yield
				Mayweed Control	%	lb/bu	bu/A
Nontreated	-	-	-	-	15	62	32
Huskie	13.5 fl oz/A	pyrasulfotole &	0.033				
MCPA ester	1 pt/A	bromoxynil	0.185	83 a	15	62	49
NIS	0.5% v/v	MCPA ester	0.462				
Talinor	18.2 fl oz/A	bicycloprone &	0.044				
CoAct+	3.6 fl oz/A	bromoxynil	0.208	99 a	14	63	48
COC	1% v/v						
Starane Flex	14 fl oz/A	florasulam &	0.005				
MCPA ester	1 pt/A	fluroxypyr	0.091	50 ab	15	61	59
NIS	0.5% v/v	MCPA ester	0.462				
Starane Ultra	5.7 fl oz/A	fluroxypyr	0.125				
Affinity Broadspec	1 oz/A	thifensulfuron &	0.014				
MCPA ester	1 pt/A	tribenuron	0.007	54 ab	14	62	41
NIS	0.5% v/v	MCPA ester	0.462				
Starane Ultra	5.7 fl oz/A	fluroxypyr	0.125				
Harmony Extra XP	0.45 oz/A	thifensulfuron &	0.014				
MCPA ester	1 pt/A	tribenuron	0.007	63 ab	13	62	65
NIS	0.5% v/v	MCPA ester	0.462				
Orion	17 fl oz/A	florasulam &	0.004				
Starane Ultra	5.7 fl oz/A	MCPA ester	0.310	69 ab	13	62	44
NIS	0.5% v/v	fluroxypyr	0.125				
Peak	0.5 oz/A	prosulfuron	0.018				
Starane Ultra	5.7 fl oz/A	fluroxypyr	0.125	89 a	12	58	53
NIS	0.5% v/v						
Brox-M	14 fl oz/A	bromoxynil &	0.219				
Starane Flex	14 fl oz/A	MCPA ester	0.219	60 ab	13	62	42
NIS	0.5% v/v	florasulam &	0.005				
		fluroxypyr	0.091				
Brox-M	14 fl oz/A	bromoxynil &	0.219				
Harmony Extra XP	0.45 oz/A	MCPA ester	0.219	95 a	15	61	57
NIS	0.5% v/v	thifensulfuron &	0.014				
		tribenuron	0.007				
Brox-M	14 fl oz/A	bromoxynil &	0.219				
Affinity Broadspec	1 oz/A	MCPA ester	0.219				
MCPA ester	1 pt/A	thifensulfuron &	0.016	99 a	14	62	55
NIS	0.5% v/v	tribenuron	0.016				
		MCPA ester	0.462				
Peak	0.5 oz/A	prosulfuron	0.018				
Brox-M	14 fl oz/A	bromoxynil &	0.219				
Starane Ultra	5.7 fl oz/A	MCPA ester	0.219	99 a	10	46	55
NIS	0.5% v/v	fluroxypyr	0.125				
Widematch	1.33 pt/A	clopyralid &	0.125				
NIS	0.5% v/v	fluroxypyr	0.125	19 b	14	62	41
				<i>LSD</i>	34	<i>NS</i>	<i>NS</i>
						<i>NS</i>	<i>NS</i>