

# Postemergence Mayweed Chamomile Control in Winter Wheat without Clopyralid

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

## Methods

The study was established at the Cook Agronomy Farm near Pullman, WA. Treatments were applied to mayweed chamomile at 3 inches or greater in diameter post emergence (POST) in winter wheat, detailed in Table 1 and Table 2. Widematch was included as an industry standard. The study was conducted in a randomized complete block with 4 replications. Plots were 10' by 30' long. Winter wheat, variety Puma, was planted on October 8, 2016. The trial site had been treated with 1.75 oz A<sup>-1</sup> of Zidua as a delayed preemergence (PRE) on October 12, 2016 for Italian ryegrass and mayweed chamomile control. Axial XL at a rate of 16.4 fl oz A<sup>-1</sup> was applied POST on June 2, 2017 for Italian ryegrass control.



Mayweed chamomile control was visually assessed 16 and 42 days after treatment (DAT). Crop stunting and injury was visually assessed 16 DAT (Table 2). Plots were hand harvested by taking two meter-squared quadrats per plot on August 1, 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).

## Results

There was no significant crop injury for any of the treatments 16 DAT. All treatments provided mayweed chamomile control compared to the nontreated 16 DAT. Huskie with MCPA ester (68%), Brox-M with Affinity Broadspec and MCPA ester (64%) and Widematch (83%) provided the greatest amount of mayweed chamomile control 16 DAT (Table 2). Mayweed chamomile control increased 42 DAT with all treatments providing mayweed chamomile control compared to the nontreated control. Mayweed chamomile control was greatest for Huskie with MCPA ester (76%), Peak with Brox-M and Starane Ultra (76%), and Widematch (99%) 42 DAT (Table 2). No significant differences in winter wheat yield were observed (Table 2).

**Table 1.** Treatment application details

Study Application	
Date	May 9, 2017
Application volume (GPA)	15
Crop Stage	8 tillers
Air temperature (°F)	66
Soil temperature (°F)	54
Wind velocity (mph, direction)	6, W
Cloud Cover	0%
Next rain occurred on	May 11, 2017

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

Treatment	Field Rate	Active Ingredients	lb ai/A	May 25, 2017	June 20, 2017	August 1, 2017	Yield bu/A
				Crop Injury	Mayweed Control	Mayweed Control	
				%	%	%	
Nontreated			-	-	-	-	79
Huskie MCPA ester NIS	13.5 fl oz/A 1 pt/A 0.5% v/v	pyrasulfotole & bromoxynil MCPA ester	0.033 0.185 0.462	0	68	76	88
Talinor CoAct+ COC	18.2 fl oz/A 3.6 fl oz/A 1% v/v	bicycloprone & bromoxynil	0.044 0.208	0	35	50	82
Starane Flex MCPA ester NIS	14 fl oz/A 1 pt/A 0.5% v/v	florasulam & fluroxypyr MCPA ester	0.005 0.091 0.462	0	36	50	94
Starane Ultra Affinity Broadspec MCPA ester NIS	5.7 fl oz/A 1 oz/A 1 pt/A 0.5% v/v	fluroxypyr thifensulfuron & tribenuron MCPA ester	0.125 0.014 0.007 0.462	0	46	72	86
Starane Ultra Harmony Extra XP MCPA ester NIS	5.7 fl oz/A 0.45 oz/A 1 pt/A 0.5% v/v	fluroxypyr thifensulfuron & tribenuron MCPA ester	0.125 0.014 0.007 0.462	0	49	61	87
Orion Starane Ultra NIS	17 fl oz/A 5.7 fl oz/A 0.5% v/v	florasulam & MCPA ester fluroxypyr	0.004 0.310 0.125	0	38	41	97
Peak Starane Ultra NIS	0.5 oz/A 5.7 fl oz/A 0.5% v/v	prosulfuron fluroxypyr	0.018 0.125	0	35	65	91
Brox-M Starane Flex NIS	14 fl oz/A 14 fl oz/A 0.5% v/v	bromoxynil & MCPA ester florasulam & fluroxypyr	0.219 0.219 0.005 0.091	0	44	53	93
Brox-M Harmony Extra XP NIS	14 fl oz/A 0.45 oz/A 0.5% v/v	bromoxynil & MCPA ester thifensulfuron & tribenuron	0.219 0.219 0.014 0.007	0	34	61	91
Brox-M Affinity Broadspec MCPA ester NIS	14 fl oz/A 1 oz/A 1 pt/A 0.5% v/v	bromoxynil & MCPA ester thifensulfuron & tribenuron MCPA ester	0.219 0.219 0.016 0.016 0.462	0	64	70	95
Peak Brox-M Starane Ultra NIS	0.5 oz/A 14 fl oz/A 5.7 fl oz/A 0.5% v/v	prosulfuron bromoxynil MCPA ester fluroxypyr	0.018 0.219 0.219 0.125	0	48	76	86
Widematch NIS	1.33 pt/A 0.5% v/v	clopyralid & fluroxypyr	0.125 0.125	0	83	99	90
<i>LSD</i>				<i>NS</i>	<i>NS</i>	<i>NS</i>	<i>NS</i>