

Evaluation of Axial® Bold plus Huskie® in tank mix combinations for common lambsquarters and mayweed chamomile control in spring wheat

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A field study was conducted at Nelson Farms near Albion, WA to evaluate crop safety and broadleaf and grass weed control with Axial Bold plus Huskie and additional herbicide combinations. The study area followed the planting of 'M-Press' winter wheat. On October 27, 2020, the field was fertilized with 100 lb N:20 lb P:15 lb S and one quart of N-Serve® per acre, which was applied with a McGregor's ripper shooter implement. The soil at this site is a Palouse silt loam



with 5.4% organic matter and a pH of 5.5. 'Ryan' spring wheat was seeded on March 28, 2021 at the rate of 105 lb/A with a JD 455 double-disc drill on a 7.5-inch row spacing. Postemergence treatments were applied on May 14th with a CO₂-powered backpack sprayer set to deliver 10 gpa at 49 psi at 2.3 mph. The applications were made with an air temperature of 66°F and relative humidity of 44% under calm conditions. The majority of the wheat had just begun to joint and plants were 11 inches tall. Mayweed chamomile was uniformly distributed, and its population was moderate across the trial area. Mayweed chamomile was 1.5- inches- tall at the time of application and had a density of 4 plants per square foot in the nontreated check plots. Common lambsquarters were uniformly distributed, and its population was high across the trial area. Common lambsquarters were 2.0-inches-tall at the time of application and had a density of 22 plants per square foot in the nontreated check plots. There were no grassy weeds present in the trial area. The trial area was harvested on July 30th with a Kincaid 8XP plot combine.

From the date of seeding (March 28th) to the day treatments were applied (May 14th), 0.42 of an inch of rain fell on the field. From the day that treatments were applied (May 14th) to the day the trial was harvested (July 30th), 0.78 of an inch of rain fell. For nearly the entire duration of the trial, the crop was under drought stress. Axial Bold (15 fl oz/a) and Huskie (12.8 fl oz/a) were each applied as individual treatments to evaluate if crop injury occurred with the Axial Bold + Huskie tank mix (data not shown). There was no crop injury observed with any of the treatments in this study. All treatments, except Starane Flex + Rhonox MCPA, provided excellent control of common lambsquarters 28 DAT (Table). On the final rating date, July 22nd, 9 days prior to harvest, all treatments provided near complete control of common lambsquarters. Talinor provided excellent control of mayweed chamomile; Huskie, Huskie + Rhonox MCPA and Huskie FX provided good control; and Starane Flex + Rhonox MCPA provided poor control of mayweed chamomile 28 DAT (Table). On the final rating date, July 22nd, 9 days prior to harvest, treatments were performing similar to their 28 DAT rating in regard to mayweed chamomile control. The poor performance of the Starane Flex + Rhonox MCPA treatment suggests a Group 2 resistant population of mayweed chamomile. There were no significant differences for yield or test weight among nontreated and herbicide treated plots. The average yield and test weight among all plots was 67 bu/a and 56.5 lb/bu, respectively.

		6/11	7/22	6/11	7/22
		28 DAT	69 DAT	28 DAT	69 DAT
		Common lambsquarters		Mayweed chamomile	
Treatment ¹	Rate	control		control	
	fl oz/A	-----%-----		-----%-----	
Huskie + AMS	12.8 + 0.5 lb/a	96 a ³	100 a	79 b	83 b
Huskie + AMS + Rhonox MCPA	12.8 + 0.5 lb/a + 8.0	99 a	99 a	73 b	74 b
Huskie FX + AMS	15.5 + 0.5 lb/a	100 a	100 a	68 c	81 b
Talinor + CoAct + ²	13.7 + 2.75	98 a	99 a	96 a	99 a
Starane Flex + Rhonox MCPA ²	13.5 + 8.0	63 b	99 a	55 d	57 c

¹All treatments were tank mixed with Axial Bold at 15 fl oz/a.

²Treatments were tank mixed with NIS at 0.25% v/v

³Means, based on four replicates, within a column, followed by the same letter are not significantly different at P = 0.05 as determined by Fisher's protected LSD test, which means that we are not confident that the difference is the result of treatment rather than experimental error or random variation associated with the experiment.