

Evaluation of post-plant preemergence herbicides for the control of mustard species in 'Blaze' fall-sown peas

Henry Wetzel and Drew Lyon

A field study was conducted at the Lind Dryland Research Station near Lind, WA to evaluate crop safety and broadleaf weed control in fall-sown peas with various herbicides. The study area followed a fallow period. 'Blaze' fall-sown peas were seeded on September 7, 2018 at the rate of 120 lb/A with a Valmar air seeder, deep furrow configuration, on a 17-inch row spacing. Seeds were placed 2 inches into moist soil with 5 to 7 inches of dry soil over top. Soil at this site is a silt loam with 1.1% organic matter and a pH of 6.4. On September 12, 2018, treatments were applied with a CO₂-powered backpack sprayer set to deliver 15 gpa at 25 psi at 3 mph. The air temperature was 61°F, relative humidity was 49% and the wind was out of the southwest at 4 mph. At the time of application, the peas had germinated, and the cotyledons were approximately 2 inches from emerging through the soil surface.



Winter annual broadleaf weeds have been the most problematic weeds in fall-sown winter peas. They can emerge with the crop, and they compete with the crop longer than warm season weeds that emerge in the spring. Flixweed, tansy mustard, and tumble mustard were present in this study, with tansy mustard being the predominate species. Weed densities were light to moderate. Mustard control was averaged across all three mustard species.

Dry fall conditions delayed weed emergence and herbicide activation. It is assumed that the majority of the mustard plants germinated in the late winter or early spring. The majority of the treatments in this study provided good to excellent control of the mustard species. The exceptions were Prowl H₂O + TriCor DF and Authority Supreme, which provided fair and unacceptable control, respectively. Crop injury was not observed with any of the treatments in this study.

		5/24/19
	Rate	Mustard control
Treatment	fl oz/A	0 to 100%
Nontreated check	--	--
Spartan Charge	7.75	88 ab ¹
Authority Supreme	11.6	25 c
BroadAxe XC	32	96 a
Pursuit	3.0	96 a
Pursuit + Lorox	3.0 + 20 oz	99 a
Sharpen + TriCor DF	2.0 + 8.0 oz	86 ab
Sharpen + TriCor DF + Lorox	2.0 + 8.0 oz + 20.0 oz	98 a
Valor + Dual Magnum	2.0 oz + 21.0	100 a
Prowl H ₂ O + TriCor DF	32 + 8.0 oz	79 b

¹ Means, based on three 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.

Disclaimer

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.