

Implementing herbicide layering techniques to improve weed control in peas

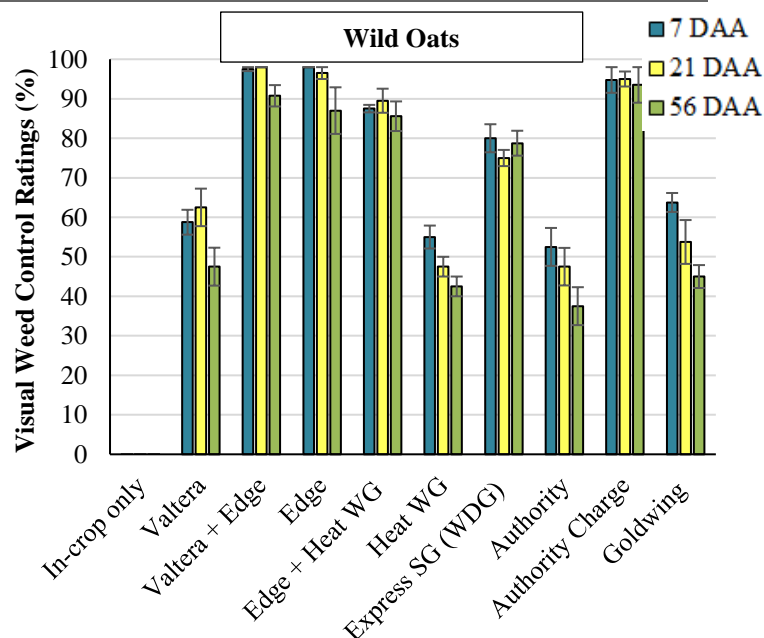
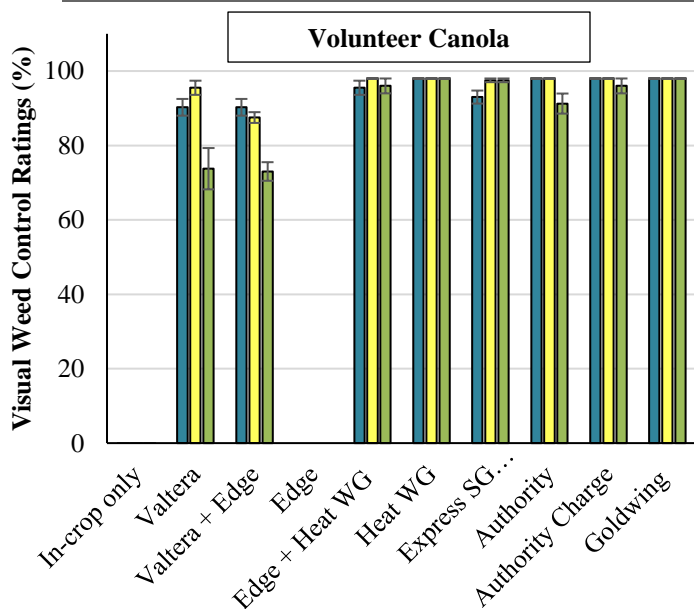
A main concern identified for producers is limited weed control in field peas. Weed control in field peas rely strongly on in-crop applications of Group 2 herbicides. However, many problematic weeds are Group 2 resistant. Therefore, the objective of this study was to demonstrate effective weed control strategies by utilizing herbicide layering techniques.

The demonstration was arranged as a RCBD with four replicates at Scott in 2018. The treatments consisted of nine PRE-seed herbicides and one check. All treatments had a single in-crop herbicide application.

The results indicated that multiple mode of action PRE- seed herbicide layering resulted in the most comprehensive broadleaf and grass weed control. PRE-seed applications of Edge + Heat WG, Valtera + Heat WG and Authority Charge demonstrated prolonged weed control of both volunteer canola and wild oats (>85%).

A yield increase of 4 and 3.6 bu per ac from PRE-seed applications of Authority Charge and Edge + Heat WG compared to the in-crop herbicide check were also recorded. In most cases except for Valtera applied alone, PRE-seed herbicide applications resulted in an increased yield and reduced dockage compared to the check. It should be noted that overall yield differences were minimal and were not significantly different. Furthermore, as weed populations were sparse and variable within the plots, interpretation of results should be taken with caution.

Herbicide Applications	Plant density (plants/m ²)	Yield (bu/ac)	Protein (%)	Dockage (%)
None	49	31.6	23.25	6.1
Valtera	48	31.6	23.275	4.0
Valtera + Edge	47	34.3	23.125	3.5
Edge	48	32.4	23.05	3.9
Edge + Heat WG	51	35.2	23.25	3.6
Heat WG	54	34.1	22.95	3.9
Express SG (WDG)	54	34.7	23.375	3.7
Authority	54	33.0	23.15	4.0
Authority Charge	55	35.6	22.775	3.3
Goldwing	55	33.8	23.35	3.8



Full report at www.warc.ca

Project was supported by the Agricultural Demonstration of Practices and Technologies (ADOPT) initiative under the Canada-Saskatchewan Growing Forward 2 bi-lateral agreement