

**DELAYED PRE PENDIMETHALIN AS AN ALTERNATIVE TO BENSULIDE AND DCPA APPLIED AT ONION SEEDING**  
**FALL-SEEDED ONION**

**TREATMENTS:**

- Nontreated control
- Preemergence (PRE) bensulide at 5.9 lb acre<sup>-1</sup> (*Prefar 4e*® at 6 quarts acre<sup>-1</sup>)\*
- Preemergence (PRE) DCPA at 5.9 lb acre<sup>-1</sup> (*Dacthal Flowable*® at 8 pints acre<sup>-1</sup>)\*
- PRE bensulide (5.9 lb acre<sup>-1</sup>) + DCPA (5.9 lb acre<sup>-1</sup>)
- Delayed PRE pendimethalin at 0.98 lb acre<sup>-1</sup> (*Prowl H<sub>2</sub>O*® at 2 pints acre<sup>-1</sup>)\*
- Delayed PRE pendimethalin at 0.47 lb acre<sup>-1</sup> (*Prowl H<sub>2</sub>O*® at 1 pint acre<sup>-1</sup>)\* followed by pendimethalin (0.47 lb acre<sup>-1</sup>) at 2-leaf onion

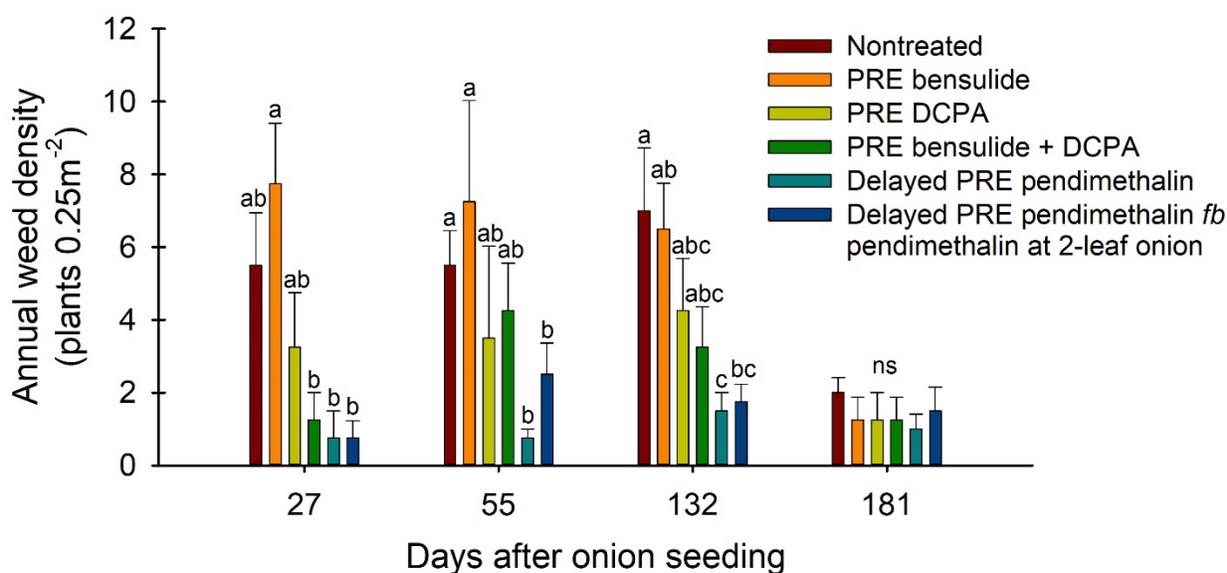
**SOIL TYPE:** sandy loam

**IRRIGATION:** sub-surface drip

\* Mention of trade names is solely for the purpose of supplying information and does not imply recommendation or endorsement by NMSU. Always check the most current label before applying herbicides.

**RESULTS: WEEDS**

- London rocket (*Sisymbrium irio*) was the most abundant weed in fall-seeded onion.
- Delayed PRE pendimethalin reduced annual weeds at 55 and 132 days after onion seeding (**Figure 1**). Weed densities were similar among PRE bensulide, PRE DCPA, PRE bensulide + DCPA, and nontreated control.



**Figure 1.** Densities of annual weeds in fall-seeded onion when grown using different herbicide treatments.

## RESULTS: ONION

- Onion stand: No differences in onion stand among treatments. Onion plant density (average  $\pm$  SE):  $11.9 \pm 0.55$  plants  $0.25\text{m}^{-2}$ .
- Onion yield: No differences in bulb yield among treatments (**Table 1**).
- Pendimethalin residue: Delayed PRE pendimethalin did not result in detectable pendimethalin residues on bulbs (**Table 1**).

**Table 1.** Marketable and larger & jumbo-sized yields of fall-seeded onion when grown using different herbicide treatments.

Treatment	Marketable yield	Percentage marketable	Larger & Jumbo yield	Percentage larger & jumbo	Pendimethalin residue
	kg m <sup>-2</sup>	%	kg m <sup>-2</sup>	%	Yes/No
Nontreated	8.09	98.9	6.49	78.9	No
PRE bensulide	8.72	97.4	6.49	73.0	--
PRE DCPA	8.38	96.4	6.79	78.3	--
PRE bensulide + DCPA	8.66	98.8	6.89	78.4	--
Delayed PRE pendimethalin	8.05	99.5	6.81	83.9	No
Delayed PRE pendimethalin <i>fb</i> pendimethalin at 2-leaf	8.62	98.5	6.58	75.6	No
	ns	ns	ns	ns	

Brian Schutte

Department of Entomology, Plant Pathology and Weed Science

New Mexico State University

[bschutte@nmsu.edu](mailto:bschutte@nmsu.edu)

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