DELAYED PRE PENDIMETHALIN AS AN ALTERNATIVE TO BENSULIDE AND DCPA APPLIED AT ONION SEEDING

SPRING-SEEDED ONION

TREATMENTS:

- Nontreated control
- Preemergence (PRE) bensulide at 5.9 lb acre^{-1} (*Prefar 4e® at 6 quarts acre^{-1}*)*
- PRE DCPA at 5.9 lb acre^{-1} (*Dacthal Flowable® at 8 pints acre^{-1}*)*
- PRE bensulide (5.9 lb acre^{-1}) + DCPA (5.9 lb acre^{-1})
- Delayed PRE pendimethalin at 0.98 lb acre^{-1} (*Prowl H_2O® at 2 pints acre^{-1}*)*
- Delayed PRE pendimethalin at 0.47 lb acre^{-1} (*Prowl H_2O® at 1 pint acre^{-1}*)* followed by pendimethalin (0.47 lb acre^{-1}) 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

- Yellow nutsedge (*Cyperus esculentus*) was the most abundant weed in spring-seeded onion.
- No herbicide treatment reduced annual weeds (**Figure 2**).

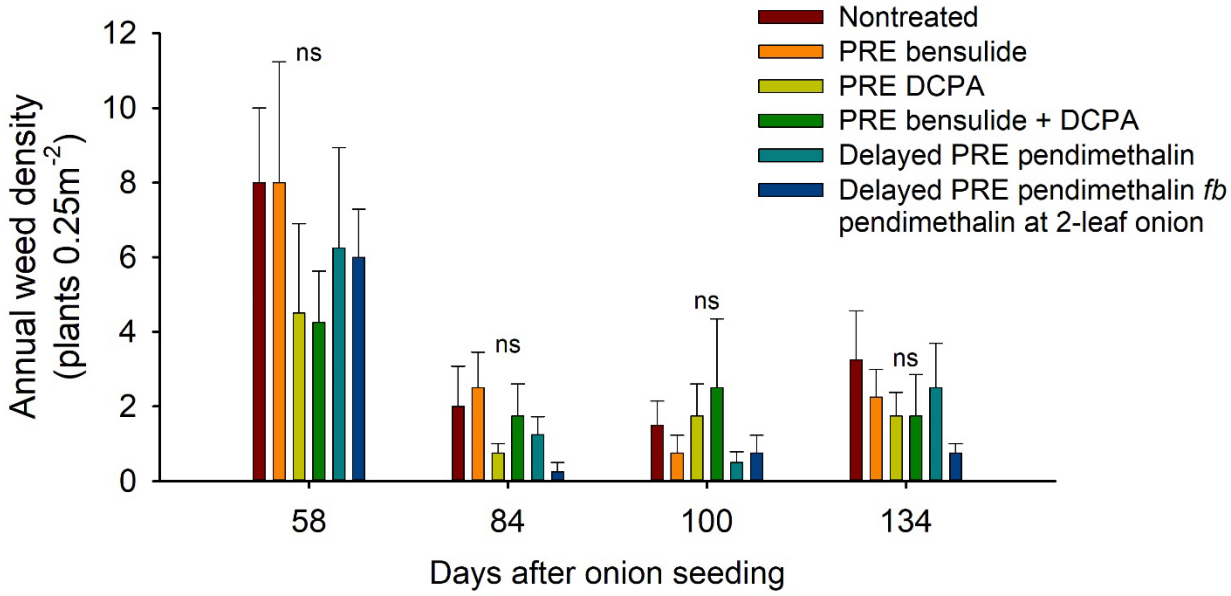

Figure 2. Densities of annual weeds in spring-seeded onion when grown using different herbicide treatments.

RESULTS: ONION

- Onion stand: No differences in onion stand among treatments. Onion plant density (average ± SE): 11.8 ± 0.41 plants 0.25m^{-2}.
- Onion yield: No differences in bulb yield among treatments (**Table 2**).
- Pendimethalin residue: Delayed PRE pendimethalin did not result in detectable pendimethalin residues on bulbs (**Table 2**).

Table 2. Marketable and larger & jumbo-sized yields of spring-seeded onion when grown using different herbicide treatments.

Treatment	Marketable yield	Percentage marketable	Larger & Jumbo yield	Percentage larger & jumbo	Pendimethalin residue
	kg m^{-2}	%	kg m^{-2}	%	Yes/No
Nontreated	4.04	97.8	0.97	22.8	No
PRE bensulide	3.52	95.9	0.98	25.1	--
PRE DCPA	3.85	97.5	1.22	31.2	--
PRE bensulide + DCPA	4.16	97.9	1.16	26.5	--
Delayed PRE pendimethalin	4.20	97.0	1.19	26.8	No
Delayed PRE pendimethalin *fb* pendimethalin at 2-leaf	4.31	97.3	1.27	28.6	No
	ns	ns	ns	ns	

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