



COLLEGE OF AGRICULTURE
AND LIFE SCIENCES

COOPERATIVE EXTENSION
Maricopa County

Integrated Weed Management in Nursery Containers

Kelly Murray Young

Worku Burayu

University of Arizona Cooperative Extension

Maricopa County



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Objectives:

1. Identify the problem.
2. Suggest best practices for reducing weeds in nursery containers.
3. Discuss successful strategies.

Why worry about weeds?

1. Weeds compete with nursery crops for light, water, fertilizer, and space.



Cardamine (bittercress) competing with crop.

Photo: Pacific NW Nursery IPM

2. Weeds harbor pests including whiteflies, aphids, thrips, and viruses.



Stellaria (chickweed) infected with tospovirus. Photo by L. Pundt

Best practices for managing weeds in nursery containers.



It's true. An ounce of prevention really is worth a pound of cure.

Start with weed-free planting medium

- Keep media covered until ready for use.
- Pasteurize used media by heating to at least 170°F for at least 30 minutes.
- Some weeds require higher temps – 212°F.



Photo: U.S. Global Resources



Photo: Pacific NW Nursery IPM

Do not tolerate weeds in the greenhouse or field.

- Require staff to regularly scout for and immediately eradicate weeds.
- Pulled weeds should be put in trash – never left on the ground.
- Post-emergence herbicides do not kill seeds.



Dandelion – L. Stack, UMaine Cooperative Extension



Spurge seeds are tiny and easily dispersed.

Use preemergence product according to label directions.



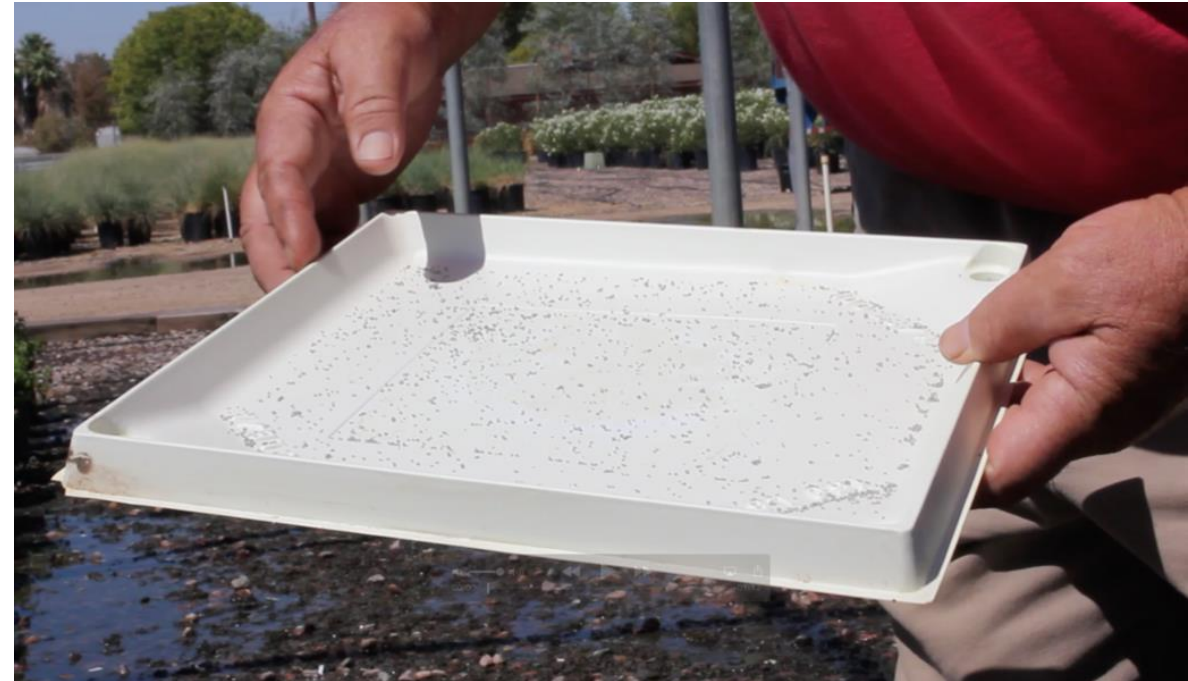
Be aware that herbicides may not be labeled for use in greenhouses because of their tendency to volatilize and damage crops.

Regularly calibrate applicator and equipment.

Under-applications (50% of labeled rate) are common.



Photo: University of California ANR



Train your eye to recognize a good application.



150 lbs/A



200 lbs/A

Incorporate product with irrigation.

- Use a sprinkler (or rain).
Drip emitters do not provide adequate coverage.



Do not break herbicide seal.



Photo: North Carolina Cooperative Extension

Reapply if necessary, according to the label.

- Check label for product use restrictions – max application for a year. For example:
 - “Do not exceed 400 lbs of XXXG per acre (9.2 lbs/1000 sq ft) for all applications within a 12-month period.”
 - “...no more than 3 applications per year (555 pounds) of this product per acre per year.”



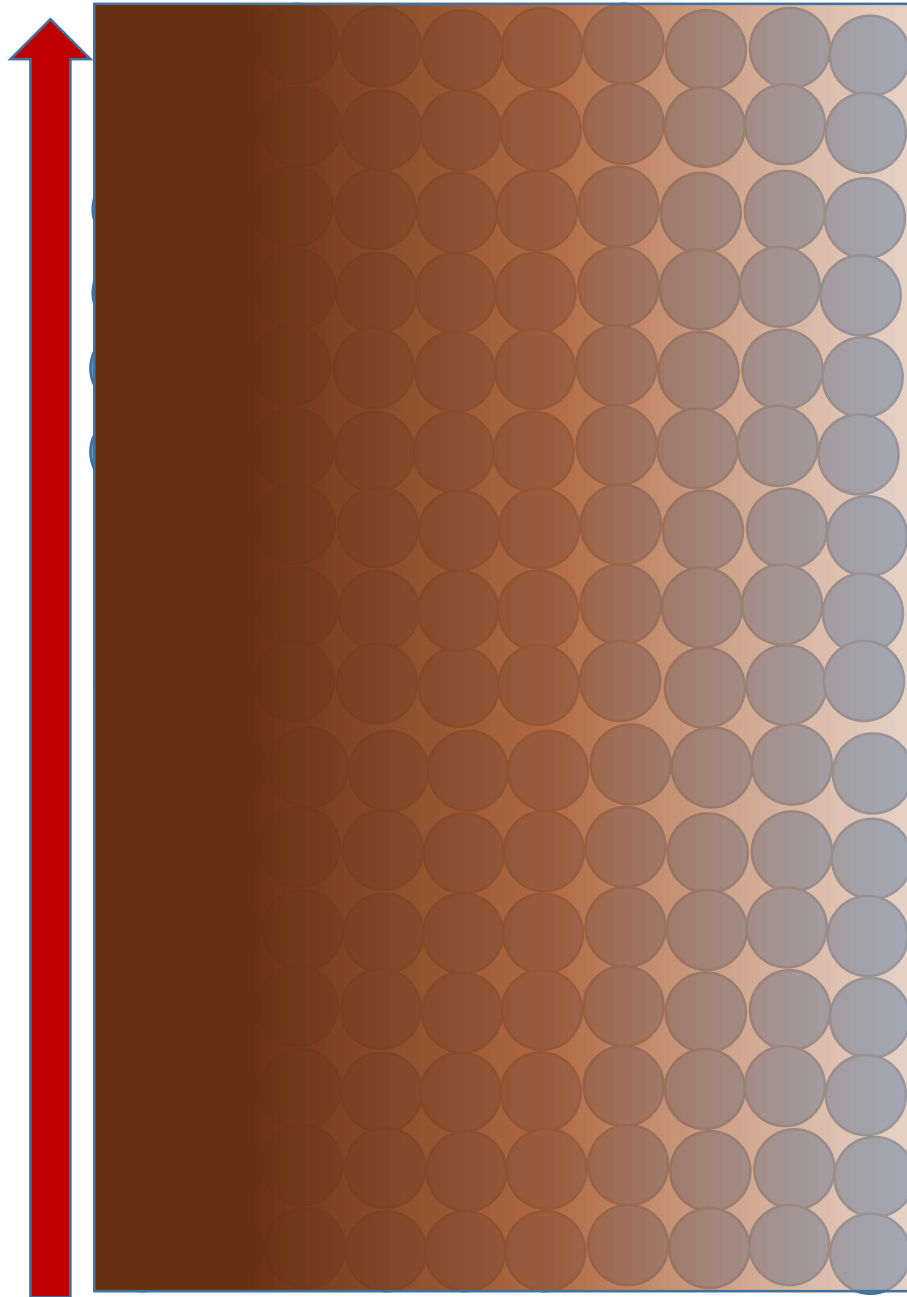
Coarse mulch is an effective preemergence treatment.



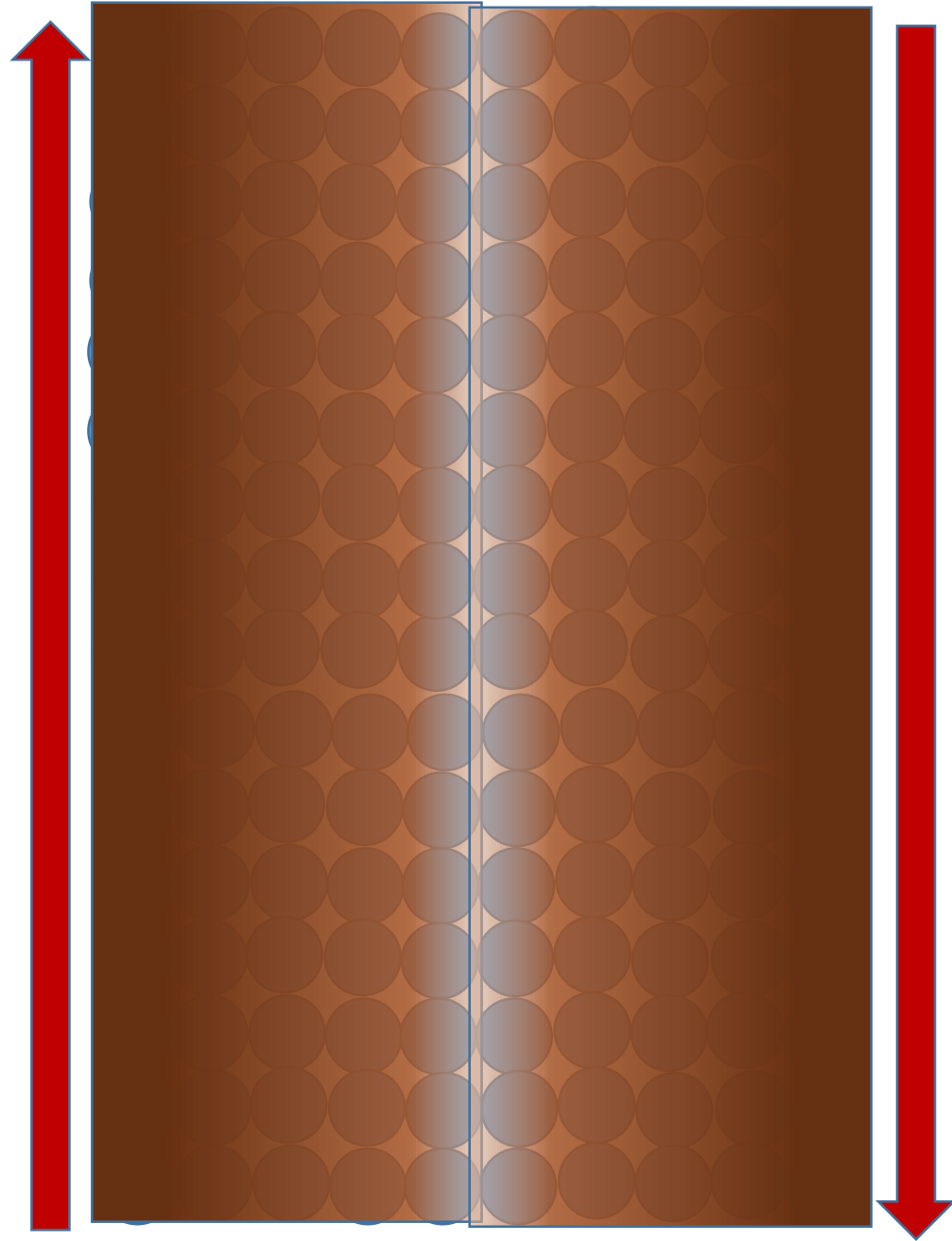
Table 1. *Chamaesyce prostrata* emergence in nursery containers under various weed management systems at two locations in Phoenix, AZ

		% Nursery Containers With Spurge Present									
		Weeks After Treatment (WAT)									
		4		6		8		10		12	
Treatment	Rate	Loc I	Loc II	Loc I	Loc II	Loc I	Loc II	Loc I	Loc II	Loc I	Loc II
Indaziflam	0.0377 kg ai ha ⁻¹	0.63 ^{zb}	3.79 ^{xa}	1.25b ^y	3.79ab ^y	1.25b	3.79ab	5.63c	5.11b	7.81c	5.68b
Indaziflam	0.0502 kg ai ha ⁻¹	0.25b	3.60a	0.94b	3.60ab	0.94b	3.60ab	4.69c	4.17b	5.94c	4.73b
Dimethenamid + pendimethalin	2.241 + 0.840 kg ai ha ⁻¹	0.00b	0.00a	0.00b	0.00b	0.00b	0.00b	9.06bc	5.11b	16.25c	30.11b
Oxyfluorfen + prodiamine	1.260 + 1.680 kg ai ha ⁻¹	0.00b	3.98a	0.31b	5.11ab	1.88b	7.39ab	5.63c	9.47b	9.38c	17.41b
Coarse mulch topdress	5.08 cm in depth	0.25b	3.22a	0.94b	5.49ab	19.06b	9.85ab	49.69a	13.45b	57.19b	19.88b
Untreated Control	-	6.75a	13.64a	25.31a	18.75a	44.38a	19.51a	82.81a	41.48a	97.81a	77.27a

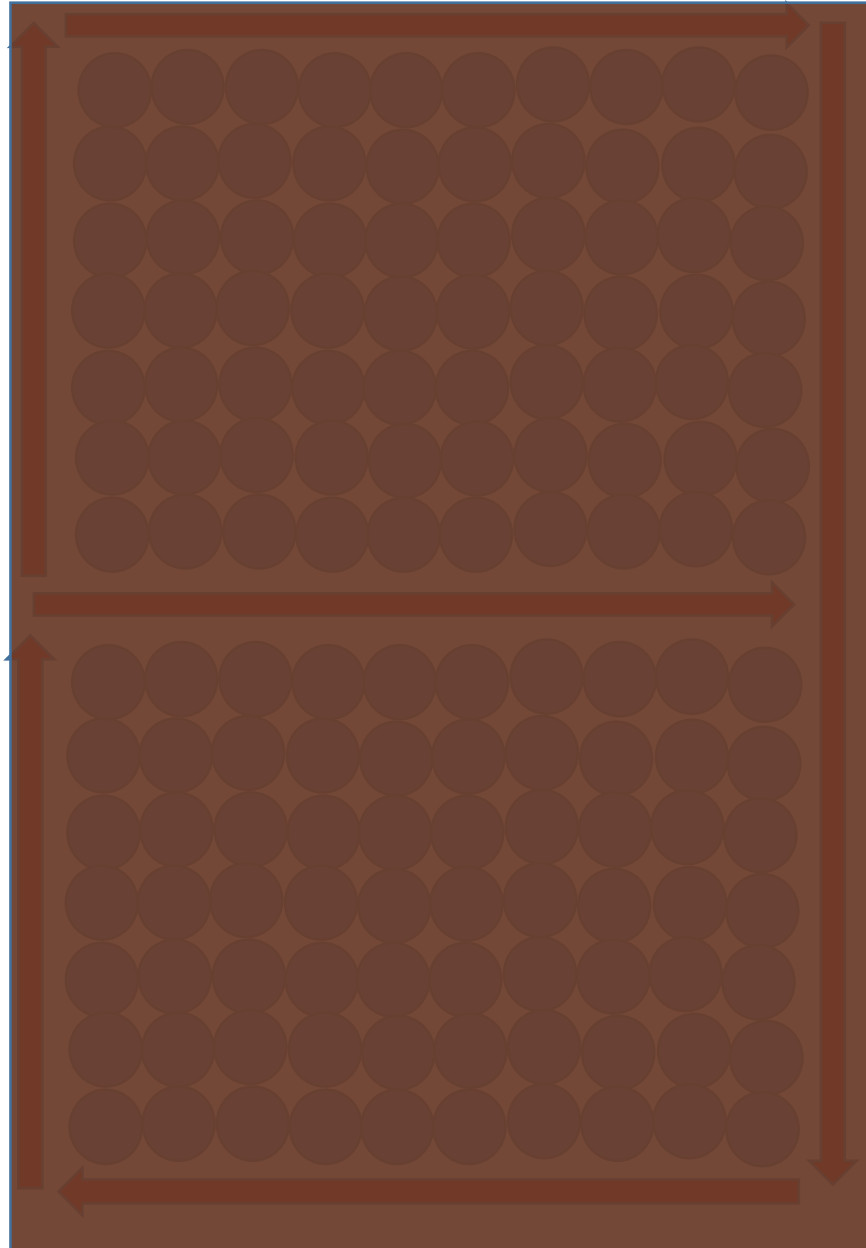
^z Transformed data used for analysis, but actual means are reported; ^y column followed by the same letter are not significantly different according to Tukey-Kramer HSD, all pairs test ($P \leq 0.05$), ^xlocations were analyzed separately.



Single pass
application:
least
uniform.



Two passes are better.



4 passes are best.



Stay vigilant,
scout, remove,
prevent.

“The three great essentials to achieve anything worthwhile are, first, hard work; second, stick-to-itiveness; third, common sense.” - Thomas Edison

Questions?



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Kelly Murray Young

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kyoung@arizona.edu

602-390-0651

 Twitter: @kmyoungaz