

WEED CONTROL IN ORNAMENTALS

Many methods—from hand-weeding to herbicide use—are available to control weeds in shrubs and flower beds. But a combination of methods is best, according to this extension weed scientist.

by Jerry Roche, editor-in-chief

Landscape fabric installed beneath mulch is often used as an effective method of ornamental weed control.

Sometimes, the only way you can maintain attractive ornamental beds in the landscape is by getting out there on your hands and knees and hand-weeding. But that is not the only answer, according to Dr. Jeffrey F. Derr of Virginia's Hampton Roads Agricultural Experiment Station.

"I'm a big proponent of mulching," says Derr, who spoke on the subject at the Virginia Turfgrass Conference earlier this spring.

"Hand-weeding is quite a bit of work that mulching can help alleviate."

Derr says that mulch in ornamental beds should be about two to four inches deep. "Too much could mean root rot due to excess moisture retention. Too little will allow the weeds to establish," he notes. "You should also be sure the mulch isn't infested with weed seed, and may see better weed control with mulches containing larger particle sizes."

Hand-weeding and mulching, of course, are just two of many ways to keep weeds out of ornamental beds. The others, according to Derr:

- using black plastic (polyethylene) layers over the soil base;
- using geotextiles (polypropylene and polyester) over the soil;
- applications of herbicides; and
- combinations of the above techniques.

Plastic, fabrics

Derr and his wife Bonnie Lee Appleton have numerous test plots incorporating various weed control techniques at Hampton Roads.

"Geotextiles work better than black plastic," Derr says. Geotextiles are being studied as replacements for black plastic because the latter has the following problems:

- it has a non-porous composition;
- it lacks material strength;
- it has a slick surface that does not hold mulch well;

- it can cause development of surface roots; and

- it can cause build-up of carbon dioxide under its surface.

"To avoid photodegradation, however, the geotextiles should be covered with an inch or two of mulch," he adds.

Landscape fabrics—either woven or spunbound—are being tested for weed control at Hampton Roads.

"In our experience, black fabrics have worked better than white fabrics," notes Derr. He says the problems with fabrics, however, include:

- intense site preparation prior to their installation;
- they won't control perennial weeds;
- because certain materials are lighter, installation can be more difficult;
- although it varies by material, photodegradation does occur to some extent;
- weeds can grow through or into



Jeff Derr: More research needed on post-emergence herbicide use in wildflowers.

fabrics, especially less dense materials ("Weeds seem to be able to find seams, too," Derr notes); and

- fabrics cost more than other methods of weed control.

"Fabrics have some uses, but managing the mulch layer is important with the fabrics because they generally allow root penetration by weeds.

"Where we see a potential problem," he continues, "is in landscapes that are periodically re-worked or replanted, where sections of fabric might need to be lifted and/or removed and there has been ornamental root development into and through the fabric. This could severely damage portions of landscape plant root systems if this phenomena proves common."

Derr is pleased with the weed control offered by combining mulch with geotextiles. If you are using this method, here are helpful hints:

- Use shallow mulch layers—one inch is best.
- Keep the geotextiles totally covered.
- Remove and/or kill weeds when they are small.
- Consider using a pre-emergence herbicide atop the geotextile.
- Consider using more inorganic mulches.

Chemical control

"Anything with 2,4-D in it is damaging to most ornamentals," Derr notes.

For weed control in annual and perennial flower beds, Derr says Dacthal and Treflan are available as pre-emergents; and Acclaim, Ornamec (Fusilade) and Poast as post-emergents.

"We don't have any materials for broad-leaves, though," he says. "We have to fall back to hand-weeding."

Derr says that, in all cases, herbicide labels should be consulted to



A field fabric trial at the Hampton Roads Agricultural Experiment Station, Virginia Polytechnic Institute and State University, tests fabric weed control properties.

determine which plant materials they can be used on.

Products like Devrinol, Surflan, Pennant, Casoron, Ronstar and Gallery are available as pre-emergents for woody ornamentals. Rout, Ornamental Herbicide 2 (OH2) and Snapshot (a Gallery/Surflan combination) are available herbicide combinations for woody ornamentals. For post-emergence control of grasses in woody ornamentals, Acclaim, Poast and Ornamec can be used. Basagran is labeled for yellow nutsedge control, and Roundup is a non-selective herbicide for woody ornamentals.

Control of the true grasses—johnsongrass, crabgrass, bermudagrass (wiregrass)—can be obtained with Acclaim, Poast and Ornamec, but they will not control wild onion, nutsedge or any broadleaf weed, Derr notes.

"Under high-temperature conditions, you might want to use a non-ionic surfactant instead of a crop oil concentrate with certain post-emergence herbicides," Derr says. "Also, under those conditions, you might want to hold off over-the-top applications."

Herbicides that can be used for special weed problems in woody ornamentals:

- yellow nutsedge:** Pennant, Basagran, Roundup
- mugwort:** Casoron, Roundup
- wild onion, wild garlic:** Roundup
- bamboo:** Roundup
- bermudagrass:** Ornamec, Poast, Roundup

"I lean toward wiping on the herbicide if there is a height differential between the weeds and ornamentals," Derr adds. "Try to get some Roundup to stick to the weed's leaves."

Weeds in wildflower plots are also sometimes problems. Derr says:

"We think some of the post-emergence grass herbicides have a place in weed control in wildflowers, but we've got a lot more work to do in that area."

For additional information on weed control in ornamentals, contact Derr and Appleton through the Virginia Cooperative Extension Service. Write them at: Hampton Roads Agricultural Experiment Station, 1444 Diamond Springs Rd., Virginia Beach, VA 23455. **LM**

HERBICIDES FOR GROUND COVERS

	English Ivy	Liriope	Periwinkle
GALLERY	✓	✓	
SURFLAN	✓	✓	✓
PENNANT	✓	✓	
POAST	✓		✓
ORNAMEC	✓	✓	✓

Source: Dr. Jeffrey F. Derr