

Quack grass and perhaps other grasses grow in Herrington Daylily Garden prior to implementing a weed irradiating herbicide treatment plan.

— Tim Herrington photo

Those pesky weeds:

And the herbicides to control them in *daylilies*

chances of rot and tends to reduce the blooming capacity of some cultivars. A third option, although not generally practicable for daylilies, is the use of weed control barriers such as landscape fabrics and plastic barriers. These work great for a short while, but soon become covered with material that allows new weeds to germinate. Thus, we arrive at the next step in an integrated weed control program, the use of herbicides.

Cautionary statements

1. READ THE LABEL. To avoid possible severe injury to yourself, your daylilies and other plants, always read the entire label of any herbicide before applying to your plants to determine the suitability of the product to your individual situation. If you have not used a product before, it is a good idea to perform a small test on some extra plants to determine the safety and efficacy of any product.

2. AVOID INJURY TO OTHER PLANTS. Spray drift management is of utmost importance. Do not apply any herbicide when conditions are favorable for drift, including when winds are gusty or greater than ten mpg, high temperatures (generally above 85 degrees F), and low humidity. Drift can be further reduced by using larger droplet sprays and applying as close to target plants as possible.

HERBICIDES

There are two main categories of herbicides, the pre-emergent and the post-emergent herbicides. The pre-emergent herbicides prevent weed seeds from germinating and the post-emergent herbicides are used to kill weeds that have already germinated. A few of the herbicides exhibit some activity in both categories.

Pre-emergent herbicides:

The pre-emergent herbicides, as the name states, are used before the weeds emerge from the ground. They generally have little effect on weeds that are already growing. Hence, they must be applied prior to weed growth. They usually work by providing a barrier to germination or inhibiting root formation and growth. If the ground is disturbed after the herbicide is applied through tilling or other means, the effectiveness of most of these products is reduced or eliminated. Products in this category should not be used prior to planting your daylily seeds and often have restrictions requiring a waiting period of two to three weeks after planting new daylilies before application. Additionally, applying too often can inhibit the root growth even of labeled plants. Most pre-emergent herbicides require watering-in to be effective.

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This article is meant to discuss a few of the many herbicides that can be used for the elimination and prevention of weed growth in established daylily and ornamental flower beds and to give the reader a place to start in their own herbicide program.

The overall objective for managing weeds in daylilies is to limit weed development and reduce the time, effort and costs associated with weed removal and prevention. The most basic and often least enjoyable method for weed control is the physical removal of the weeds through pulling, or tilling/hoeing. However, the reason you are reading this article, most likely, is to avoid this option. Physical removal is effective, but can become overwhelming when large numbers of weeds exist. The second option is to mulch around the desired plants heavily with pine bark, pine straw or other material that smothers the weeds and helps prevent germination and growth of weeds. This effective option also offers the advantage of helping your desired plants to grow by reducing water loss by evaporation, insulating the plants during difficult weather conditions and, depending on the mulch used, increasing soil fertility and water holding capacity. However mulching too close to the base of a daylily can increase the



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Applying before a rain event or irrigation will enhance the effectiveness of these products.

Barricade®. Barricade (Prodiamine 65 percent) is a pre-emergent herbicide that offers season-long control of the majority of weeds in turfgrass and ornamentals. It is labeled for use on daylilies. It can be applied to daylily seedlings more than four inches tall and new transplants after two weeks. We find that we get very good weed control applying Prodiamine twice per year in our area which has very sandy soil, and rainfall and irrigation is in excess of 100 inches per year. You will need to determine the frequency of application for your individual area.

The generic form of Barricade®, called Prodiamine 65 WDG, is just as effective and costs about 48 percent less per pound than the name brand. Barricade® is around \$169 for three pounds vs. Prodiamine at around \$149 for five pounds. A five-pound container is enough to treat about five acres.

Treflan®. Treflan (trifluralin five grams) is a commonly used pre-emergent herbicide that can be found at most farm supply stores and home improvement and garden centers in the United States. It is effective against a wide range of annual grass and broadleaf weed species.

It does not have quite the broad-spectrum effectiveness of Barricade®, but it might be easier to find locally and can be purchased in quantities more suitable for smaller gardens under the Preen® label. This is an old-time pre-emergent herbicide for daylilies that was used more extensively before Barricade became widely available.

Post-emergent herbicides:

The post-emergent herbicides, as the name states, are effective against plants that have already emerged from the ground. Most of the post-emergent herbicides must be applied to the leaves of actively growing plants to have an effect and leave little residual action in the soil. This can make some of the post-emergent herbicides a safer choice around germinating seeds and very young plants. However, there are exceptions. To avoid serious injury and plant loss always read the entire label before using any herbicide. Pay particular attention to notices when injury may occur to a “safe” or “labeled” plant when it is immature or not well-established.

Most post-emergent herbicides are affected by rain or irrigation. Care needs to be taken to ensure that the product is not washed off before the recommended waiting period for each herbicide. Applying on rainy days or right before overhead irrigation takes place will greatly reduce or eliminate the effectiveness of these products. The use of a spreader sticker can help to alleviate this problem. There are numerous brands of spreader stickers available for a nominal cost.

Broad-spectrum, non-selective herbicides:

Glyphosate. Most commonly known as Roundup®, glyphosate is a broad-spectrum (non-specific) systemic herbicide. Its mode of action is to inhibit the plant’s ability to synthesize certain amino acids it must have to survive. It is only effective when sprayed on the leaves of actively growing plants. Glyphosate has no soil activity due to the fact that it is almost immediately bound to soil particles and inactivated. Thus it has no pre-emergent effects. The use of glyphosate on daylilies should be carefully regulated. Glyphosate is toxic to daylilies. Glyphosate should never be applied on windy days. Likewise, glyphosate should not be applied when temperatures are above 85 degrees F. Spot treating only, without allowing any spray or drift to land on the daylilies is an acceptable practice. If any product lands on the plant, immediately remove the contaminated leaves or wash the plant with sufficient water to remove all of the glyphosate. Glyphosate is

marketed under dozens of different trade names. A little searching can save a lot of money, often more than 50 percent, over buying the brand-name Roundup®.

Herbicides for grass:

Sethoxydim. Sold under numerous labels (13-18 percent sethoxydim). Sethoxydim is a selective post-emergent herbicide used to control many annual and perennial grasses in turf and ornamental plantings. It is labeled as safe for over-the-top application on daylilies without any damage. Sethoxydim works best on actively growing grasses. Mowing or hand weeding of treated grasses is not recommended seven days before and after treatment. Do not apply a post emergence

broadleaf herbicide within one day following application of sethoxydim or reduced grass control may result. Sethoxydim prices vary widely depending on manufacturer and concentration starting at around \$35 for a 16-ounce container. Generally, sethoxydim will cost between about .75 cents and \$1.50 per 1,000 square feet to use.

Herbicides for broadleaf weeds and sedges:

Basagran® and Basagran® T/O. Basagran® (42-44 percent bentazon salt) (sometimes sold as SedgeHammer® with Basagran®, not to be confused with the product below) is used as a selective

post-emergent herbicide to control tough broadleaf weeds, yellow nutsedge and annual sedges; it does not control grasses. It works by inhibiting photosynthesis, and thus inhibiting the ability of the plant to make food. It is especially effective against young, immature weeds. It is not labeled for over-the-top application in daylilies. Therefore, it should be used as a directed spray only. Care should be taken to avoid any application to desirable plant foliage. Basagran® T/O costs about \$23 for eight ounces. Use at the rate of .75 oz/1,000 square foot. This is enough to treat about a half acre.

SedgeHammer® Turf Herbicide (75 percent Halosulfuron-methyl) (do not confuse with the product above) is a very effective selective herbicide for the control of nutsedge and certain broadleaf weeds in turfgrass and landscaped areas that works by inhibiting an enzyme the plant needs to survive. This product can be mixed with glyphosate to increase its effectiveness and increase the range of weeds affected. Because of residual activity, seeds should not be planted in an area treated with SedgeHammer® Turf Herbicide for two weeks. Likewise, SedgeHammer® Turf Herbicide should not be used around seedlings less than three weeks old or newly planted daylilies. Do not apply this product as an over-the-top spray. Spot treat only. Follow the same safety guidelines as for glyphosate, above. SedgeHammer® Turf Herbicide is sold in a tiny 1 1/3 ounce container for around \$100. However, this is enough to treat about one to 1 1/2 acres. ■

Please feel free to contact me for further information:

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Other sources of information:

Herbicide Options for Daylily Production and Landscape Care <http://plantsciences.utk.edu/pdf/DAYLILYTABLES03.pdf>

Daylily Production and Landscape Care: A Planned Approach to Weed Management <http://plantsciences.utk.edu/pdf/DAYLILYPUBLICATION03WP.pdf>



Various broadleaf weeds and sedges including nutsedge, spurge, purslane, chickweed, black nightshade, lambsquarter, pigweed, knotweed and henbit (among many others) grow at Herrington Daylily Garden prior to implementing a treatment plan.

— Tim Herrington photo

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