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Selecting and using preemergent herbicides

Which sounds easier, spreading some granules on your lawn twice yearly to prevent weeds or repeatedly using several liquid herbicides as a spray for weeds, after they develop? Prevention is much easier, likely cheaper and is associated with less risk to you, your ornamental plants and the environment.

Prevention actually begins, not with a herbicide, but with a healthy well maintained lawn. A dense lawn, mowed at the proper height, shades weed seeds and makes for a poor weed habitat. However, many people do not have the dense, perfectly maintained lawn and may need to employ a herbicide for weed control.

When selecting a herbicide, the abundance of brands and types of chemicals available to the homeowner can be confusing. The intelligent approach to the selection process is to have a clear understanding of what type of herbicide you need and what it will be used for. Don't simply buy the first "herbicide" you see on the shelf.

In general, there are two classes of herbicides available: Preemergents, prevent weeds from germinating and post emergents, kill the growing weed.

An additional consideration is the type of weed you wish to prevent. Annual turfgrass weeds in our area are of two varieties. There are those which germinate in the spring, called summer weeds and those sprouting in the fall, the winter weeds. It follows, then, that a twice yearly application of herbicide is needed for best prevention of weed growth.

Examples of summer grassy weeds are crabgrass, foxtails, goose grass and sand burr. Broad leaved weeds of summer are asters, carpetweed, knotweed, purslane and spurge. They typically begin to germinate in the last half of March and a preventative herbicide should be applied in February.

The chief winter annual grassy weed is annual blue grass or *Poa annua*. There are several others. The winter broad leaved weeds of concern are henbit, chickweed and fleabane. Winter weeds germinate in late September and October. Prevention of this group should be done in the second half of August and the first half of September.

Crabgrass is the object of most homeowner's preventative efforts. In fact, most of the brands of preemergents are marketed for crabgrass control. They do have herbicidal effects on other grassy and broad-leaved weeds but this may not be evident from looking at the advertising on the container. Even more confusing is that weeds prevented vary

according to the chemical and is another reason to always read the labels of all chemical products. All susceptible weeds will be identified.

A recent survey of preemergents available to the homeowners in Tulsa follows, along with comments about their weed coverage. The products listed are representative, but by no means inclusive. A single brand name is given as an example, although there may be several brands available using the same chemical. Shop for a product using the chemical name.

Available preemergent herbicides-August 2008

Chemical name	Example Brand name	Comments
Benefin	Balan	Good crabgrass and bluegrass control, fair broad-leaf effect. Short duration of activity, second application needed after 2 months.
Benefin + oryzalin	Amaze	Good crabgrass, goosegrass and annual bluegrass control, only fair coverage of broad-leaved weeds. Short duration, second application may be needed in 2 months, according to label.
Benefin + trifluralin	Hi-Yield crabgrass control	Same as above
Isoxaben	Portrait	Excellent coverage of a wide range of broad-leaved weeds. Does not prevent crabgrass and other grassy weeds well. Do not re-seed for 2 months.
Dithiopyr	Green light crabgrass preventer	Excellent crabgrass control. Not only prevents germination but will kill small crabgrass plants. May have the best broad-leaf weed coverage of the "crabgrass" herbicides. No reseeding for 3 months.
Pendimethilin	Halts Crabgrass preventer	Excellent crabgrass, goose grass and annual bluegrass control. Good broad-leaf prevention. No reseeding for 4 months.
Prodiamine	Barricade	Similar to above. No reseeding for 4-6 months. Goosegrass prevention may require a second application 2 months after the first.

Preemergent herbicides for special use		
Siduron	Tupersan	Unique preemergent for grassy weeds, including crabgrass. Can be applied at the time of seeding of cool season grasses. Cannot be used on Bermuda grass. Does not prevent broad-leaved weeds.
Trifluralin	Preen garden weed preventer	Product for prevention of weeds in garden beds. Not for lawns. Wide range of activity against grassy and broad-leaf weeds.

Further information

Most of these chemicals are supplied in a granular form, mixed with either fertilizer or some inert compound. They must receive at least ½ inch of rain or irrigation to leach the chemical from the particle onto the soil. The chemicals are very poorly soluble in water, so that with irrigation they form a chemical barrier on the top of the soil. When weed roots germinate, they take up the chemical and are killed.

If the herbicide is not irrigated it will have no effect. If it is irrigated onto the soil and the soil surface is then disturbed, such as in dethatching, it loses its effect.

The chemical is broken down by bacteria, an activity which is temperature dependent. Therefore, these compounds last much longer after the February application than they do in August.

All of the compounds listed above are labeled for use on both our warm and cool season grasses, although the recommended amounts to apply may be different. It is very important to read and follow the labeled directions. Failure to do so could damage your turfgrass.

The reason these herbicides are used is to prevent seed germination. It stands to reason that one should not attempt to reseed a lawn while there is still a herbicide effect. The duration of this effect is widely different amongst the products available. The one exception to this concept is Siduron. This herbicide prevents crabgrass and foxtail seeds from germinating but has no effect on fescue seeds. It may be applied at the same time fescue is seeded to prevent crabgrass and other grassy weeds.