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# CHEMICAL LOG

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## What's in a Name? Important Changes in Turf Fungicides

By Dr. Gail L. Schumann

**I**ntelligent use of turfgrass fungicides today requires more detailed knowledge of the commercial products than in the past. The most important piece of information in choosing a fungicide is the chemical name of the active ingredient or ingredients — especially if it is one of the growing number of combination products.

Since the chemical structure names are difficult to remember and pronounce, manufacturers apply for an approved common name from the American National Standards Institute. In this case, the common chemical name for Chipco 26019 is iprodione. If the manufacturer uses the common chemical name on the label, one knows the active ingredient. These are the names used in the fungicide chart of the *Professional Turfgrass Management Guide for Massachusetts*. The chemical structure names are more difficult to remember and usually even scientists have to look them up.

There are two reasons to know what active ingredients are in the fungicides you use. First, although many diseases are listed on most fungicide labels, certain products are more effective for certain diseases. If you have used a fungicide for a particular problem, and it has not given satisfactory results, there is not much of a point applying the same product with a different trade name.

The second reason to know the active ingredient in a fungicide product is for intelligent planning to prevent or delay fungicide resistance. Fungicide resistance means that the fungus population has become immune to the fungicide, so control is reduced or nonexistent. Even though you are using different trade-name products, you may not be using different ingredients. Also, several

of the newer products are combinations of fungicides that have been available for some time.

### Fungicide Resistance

To manage fungicide resistance, it is necessary to know the fungicide chemical groups. For broad-spectrum systematic fungicides, there are three chemical groups: the benzimidazoles, the dicarboximides and the sterol inhibitors (often called DMI or SBI fungicides).

If a fungus becomes resistant to one fungicide in a group, it will automatically be resistant to the other members of the group even if you have never used those products. To prevent or delay fungicide resistance, it is necessary to rotate or mix active ingredients from different fungicide groups. Contact or protectant fungicides are important alternative products because they are not subject to resistance problems.

All turfgrass managers should have an up-to-date listing of turf fungicides with both their trade and chemical names. These lists are no substitute for reading pesticide labels, but they can be very useful in planning your purchases after you read the fungicide advertising, which, of course, stresses the trade names of the product. These lists are especially helpful in identifying the active ingredients in the growing number of combination products. If you have trouble finding or understanding the name of the active ingredient in any product, be sure to ask for more information from the chemical-sales representatives or a cooperative extension specialist.

### New Trade Names

In recent years, some important changes have occurred in the availability and trade names of turfgrass fungicides. For example, vinclozolin is an active ingredient that belongs to the

dicarboximide chemical group. This fungicide is now sold under at least three different trade names: Curalan, Touche and Vorlan. Chlorothalonil was previously available under the trade name Daconil 2787. It is an important product in fungicide-resistance rotations and mixtures because it has not been demonstrated to be subject to resistance problems. It is now available under several other trade names, including Echo, Manicure and Thalonil.

Anilazine (Dyrene), benomyl (Tersan 1991) and mercury products will no longer be available for turfgrass use after current supplies are gone. However, two new fungicides are available under federal labels. Flutolanil (ProStar) is a systematic fungicide. It is labeled for diseases caused by fungi in the Basidiomycete group, including brown patch, fairy ring, gray snow mold, red thread and yellow patch (cool-weather brown patch). Cyproconazole (Sentinel) is a fungicide with a label for many important turfgrass diseases. It belongs to the sterol inhibitor (DMI) chemical group and should be considered the same as other members of that group when planning strategies to delay fungicide resistance. Some new trade-name fungicides actually contain active ingredients. New combinations of those ingredients have been available for some time.

Remember that the best way to reduce the chance of fungicide resistance and get the best results from a fungicide application is to use fungicides only when necessary and as part of a well-planned program of cultural practices. Good cultural practices will reduce the amount of damage and improve turf recovery when disease does occur. □

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