

This is Google's cache of <http://www.extensionplantclinics.msstate.edu/diag.keys/turf/se.turf.strategic.plan/summarized.comments.on.html>. It is a snapshot of the page as it appeared on 11 Jul 2008 00:21:11 GMT. The [current page](#) could have changed in the meantime. [Learn more »](#)

These search terms are highlighted: **algae greens** These terms only appear in links pointing to this page: **golf** [Text-only version](#)

# Comments on Management Products

## Fungicides, Single a.i. formulations

### Aluminum tris (O-ethyl phosphanate)

Beneficial effect on summer quality of creeping bentgrass when applied on regular intervals. Good to excellent preventative control of foliar Pythium diseases, but not effective on curative basis. Some activity against anthracnose basal rot in creeping bentgrass has been observed in field trials. Preventative efficacy against Pythium root diseases requires more research.

### Azoxystrobin

A fairly low environmental impact fungicide with a large spectrum of pest activity, but a high risk of fungicide resistance. Resistance to azoxystrobin has been noted in some anthracnose (*Colletotrichum graminicola*) populations.

### *Bacillus licheniformis* SB3086

EcoGuard: good control, needs more research. Formulation contains significant amount of nitrogen, which amounts to approximately 1/8 lb N per 1000 ft<sup>2</sup> at 20 fl oz rate. Control of dollar spot may be a result of additional nitrogen. Ecoguard has been shown to enhance brown patch development, also likely due to nitrogen effect.

### Boscalid

Excellent control of dollar spot on preventative and curative basis. Residual control of up to 14 days at low label rate and 21 days at high label rate. Also one of few fungicides labeled for control of bentgrass dead spot.

### Chloroneb

Good in one Pythium blight study. Not commonly used.

### Chlorothalonil

Broad spectrum disease control and useful tool for managing fungicide resistance due to low resistance risk. Also one of few products that provides excellent control of **algae** invasions in putting green turf.

### **Etridiazole**

Very effective for curative control of Pythium root rot in bentgrass, annual bluegrass, and bermudagrass putting **greens**.

### **Fenarimol**

Rubigan – used most frequently for preemergence control of annual bluegrass. Also is the most effective product for control of spring dead spot in bermudagrass. Not applied to cool-season grasses due to severe growth regulating effect.

### **Fludioxonil**

Short-lived contact fungicide. Good for control of brown patch and yellow patch (cool-season brown patch). Excellent control of pink snow mold and Microdochium patch. One of few fungicides with demonstrated activity against bentgrass dead spot. Also some **algae** activity, Syngenta considering addition to label needs more research for gray leaf spot shows good efficacy

### **Flutolanil**

Prostar – excellent control of basidiomycete fungi, including fairy rings, brown patch, and large patch

### **Fosetyl Al**

### **Iprodione**

Chipco 26019 – Good to excellent preventative control of dollar spot and Helminthosporium leaf spots. Moderate to good brown patch activity.

### **Mancozeb**

One of few products that provide excellent suppression of **algae** invasion in putting green turf. Also excellent for preventative control of Helminthosporium leaf spot diseases. Like chlorothalonil a useful tool for managing fungicide resistance due to its low resistance risk.

### **Metalaxyl/ Mefenoxam**

Excellent preventative control of Pythium diseases. Best for curative control of Pythium diseases. Often used in combination with ethazole products for curative control of Pythium root rot.

### **Myclobutanil**

May be phytotoxic on bermudagrass under high temperature when applied for control of leaf spot. Used primarily in spring and fall for control of dollar spot. Should not be applied to putting green turf during summer when high temperatures consistently exceed 90F due to growth regulating effects. Applied by some turf managers for control of spring dead spot, although little research data is available to demonstrate that this product is effective.

### **Phosphorus acid**

Needs much more research. Potential for foliar burn in creeping bentgrass when applied during very hot and/or dry weather. (sold under names such as Alude, Resyst, Magellan, and Vital.)

### **PCNB / Quintozene**

Phytotoxic to cool-season grasses when temperatures exceed 70F. Should be applied only in late fall or early winter for preventative control of snow molds. May prove phytotoxic to warm season grasses when temperatures exceed about 85F.

### **Polyoxin D**

Needs more research on Bipolaris leaf spot, melting-out and the crown and root rot stage but promises to be effective. Short-lived contact fungicide with translaminar movement. Good control of brown patch. Excellent preventative control of anthracnose basal rot, but very poor curative activity, according to trials conducted on annual bluegrass in New Jersey. Excellent control of pink snow mold and *Microdochium* patch.

### **Propamocarb hydrochloride**

Excellent preventative control of Pythium foliar diseases. Curative activity against Pythium foliar diseases more slow than mefanoaxam. Activity against Pythium root rot, on either preventative or curative basis, unknown.

### **Propiconazole**

Phytotoxic when applied at high temperatures rown patch/large patch: not used when temperatures are above 90 F;

Dollar spot: Used primarily on creeping bentgrass in spring, fall, winter. Moderately effective for control of spring dead spot in bermudagrass, but may increase sensitivity to frost injury in fall and

delay spring greenup.

## **Pyraclostrobin**

A fairly low environmental impact fungicide with a large spectrum of pest activity, but a high risk of fungicide resistance. Shows excellent efficacy for *Rhizoctonia solani*, but needs more research for warm season grasses needs more research in perennial ryegrass, some in St. Augustinegrass for gray leaf spot.

## **Thiram**

Spotrete

## **Thiophanate-methyl**

Good control of brown patch caused by *Rhizoctonia solani* but ineffective against leaf and sheath spot caused by *Rhizoctonia zeae*, which becomes more common on creeping bentgrass during hot weather. Excellent control of anthracnose diseases, dollar spot, and gray leaf spot. However, this chemistry is very prone to fungicide resistance development. Resistance in dollar spot populations is already widespread across the southeast, and resistance in anthracnose populations is developing rapidly. Resistance in gray leaf spot populations has not been documented but is expected due to the genetic variability within *P. grisea*.

## **Triadimefon**

should not be applied to putting green turf when temperatures are expected to exceed 90F due to severe growth regulating properties.

## **Trifloxystrobin**

A fairly low environmental impact fungicide with a large spectrum of pest activity, but a high risk of fungicide resistance. Needs more research for gray leaf spot.

## **Vinclozolin**

A fairly low environmental impact fungicide with a large spectrum of pest activity, but a high risk of fungicide resistance. Needs more research for gray leaf spot.

## **multiple a.i. Formulations**

### **Junction: Mancozeb+copper hydroxide**

Excellent control of **algae** in putting green turf. May injure turf due to short term effects (direct foliar burn) or long-term effects (accumulation of copper to toxic levels). Recommended only for curative control of severe **algae** infestations for this reason. Needs more research gray leaf spot

## **Nematicides**

### **Fenamiphos**

Efficacy is declining in many locations, possibly due to enhanced microbial degradation following regular use. Set to be removed from market in 2008 due to environmental toxicity.

### **1, 3-Dichloropropene**

Good to excellent control of ectoparasitic nematodes. Not as effective as Nematicur for control of endoparasites. Fast-acting soil fumigant with very short soil residual. Must be injected directly into soil using a knife or disk injection system. Rapid and severe phytotoxicity occurs if active ingredient contacts turf foliage. 24 hour re-entry.