

- during summer, small tan to brown or bronze patches similar to dollar spot patches;

- severe development may mean large yellow areas and a general weakened condition; and

- as season progresses, large areas may wilt, turn yellow to brown, and die.

**Control:**

1) Maintain extensive and vigorous plant root system.

2) Use management practices to reduce plant stress.

3) Eliminate prolonged wet periods.

4) Use broad-spectrum fungicides sparingly.

5) If necessary, use pythium-labelled fungicides and thoroughly water in. Areas

**FUNGICIDES FOR ROOT-ROTTING PYTHIUM DISEASES**

Fungicide	Trade Name	Formulation	Rate/1000 sq.ft.
ethazole	Koban	30W	7-9 oz.
		1.3G	8 lb.
metalaxyl	Terrazole	35W	8 oz.
		Subdue	2E
	Scott's Pythium Control	2G	1.5 lb.
		5G	10 oz.
phosetyl-al	Aliette	1.2G	2.5 lb.
		80W	4-8 oz.
proamocarb	Banol	65	2.4 oz

Source: Cornell University Turfgrass Times

with PPR history should be treated between October and November, followed

up by another application in the spring. See chart for effective fungicides.

**Recognizing herbicide injuries to ornamentals**

**Lawn/landscape herbicides can cause damage to non-target ornamentals.**

■ Are the leaves of ornamentals under your care turning yellow and dying? Have you already ruled out disease and insects, and don't have another answer?

Perhaps you should consider herbicide injury as the culprit.

"A lot of other problems can mimic these herbicide injury symptoms," notes Dr. Jeff Derr of VPI-SU's Hampton Roads Ag Experiment Station. "However, there is no cure for herbicide injury. In most cases, the plant will outgrow it."

Some herbicide injury symptoms include chlorosis, bleaching, spotting and distorted growth. Each herbicide has a specific set of injury symptoms that it causes.

Chlorosis is a yellowing effect that can be either veinal, interveinal, marginal or general (see illustration). It is caused primarily by root-absorbed herbicides.

Bleaching occurs when some herbicides are taken up through the plant's roots or leaves. The plant's leaves turn white.

Spotting is a browning of leaves, while distorted growing patterns are generally the result of plant growth regulator injury.

The 2,4-D group of growth regulators produces a distorted appearance, twisting and downward bending. The Roundup group (Roundup, imidazolinone herbicides, sulfonyleurea herbicides) of growth regulators produces tip chlorosis and distorted growth, but no twisting.

"Using Roundup in the fall, you may not see symptoms until budbreak next spring," Derr notes.

The dinitroanilines produce root inhibition and occasionally swelling and brittleness of the stem at the soil line.

Amides, anilides and thiocarbamates inhibit roots and shoots.

If you suspect herbicide damage, consult a reference text such as "Herbicide Injury to Trees and Shrubs: A Pictorial Guide to Symptom Diagnosis."

**Injuries produced by common herbicides**

Here are some common herbicides and the types of injury they can produce:

**CHLOROSIS:** triazines (Atrazine, Simazine), ureas (Karmex, Spike), uracils (Hyvar, Sinbar), Casoron, Norosac, Basagran

**BLEACHING:** amitrole, Amazine

**SPOTTING:** diquat, paraquat (Gramoxone Extra), Goal, Ornamental Herbicide 2 (OH2), Rout, Ronstar

**DISTORTION:** 2,4-D group: 2,4-D, dicamba (Banvel), triclopyr (Garlon), picloram (Tordon), Weedone DPC, Trimec, Turflon  
Roundup group: glyphosate (Roundup), Oust, Classic, Escort, Arsenal, Sceptor, Image

**ROOT INHIBITION:** dinitroanilines (Surflan, Treflan, Balan, XL, Team, Southern Weedgrass Control)

**ROOT & SHOOT INHIBITION:** amides (Devrinol), anilides (Lasso, Dual, Pennant), thiocarbamates (Eptam)

— Dr. Derr

**CHLOROSIS PATTERNS OF ORNAMENTALS**



Source: Dr. Jeffrey Derr

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