



What's UP?

Banol Fungicide

News from Environmental Science, a business unit of Bayer CropScience LP

Banol® Fungicide for Management of Pythium Diseases of Turfgrass

Pythium turf diseases cause real problems for golf course superintendents. Three different diseases are caused by various Pythium species. Banol is an effective fungicide for all Pythium diseases. Rates and application guidelines differ for each of these Pythium diseases.

Pythium Blight

- Banol provides excellent preventative and curative control of Pythium Blight
- Pythium Blight is normally caused by *P. aphanidermatum* and *P. graminicola*

Rates and intervals

Preventative: 1 1/3-2 fluid oz per 1,000
in 2-5 gallons of water per 1,000

Curative: 3-4 fluid oz per 1,000
in 2-5 gallons of water per 1,000

Apply as a preventative treatment during periods of high temperature and humidity favorable to the development of Pythium Blight. Re-treat at 7-21 day intervals if conditions remain favorable for disease development. Use the lower rate for the shorter interval and the higher rate for the longer interval within the application rate range. Under severe

Banol® disease pressure conditions, use the highest recommended rate and shortest interval. On shorter cut turf (greens) the lower volume of gallonage should be used. On higher cut fairway turf a higher gallonage (3-5 gallons/1,000) should be used for best coverage.



Left untreated, Pythium turf diseases can kill large areas of turf within a matter of days. Image courtesy of Dr. Bruce Martin, Clemson University.

Do I water it in? It is not necessary to water in Banol for Pythium blight as the pathogen is infecting the leaf tissue.

Pythium Root Rot

- Banol provides excellent preventative and curative control of Pythium Root Rot
- Pythium root rot is caused by several species of Pythium

Rates and intervals

Preventative: 1 1/3-2 fluid oz per 1,000
in 2-5 gallons of water per 1,000

Curative: 3-4 fluid oz per 1,000
in 2-5 gallons of water per 1,000

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For best results, apply preventively to areas with poor soil drainage, especially when extended wet weather is expected. On shorter cut turf (greens) the lower gallonage can be used. On higher cut fairway turf a higher gallonage (3-5 gallons/1,000) should be used for best movement of the product into the soil.

Do I water it in? Because Pythium Root Rot is infecting roots, it is critical to get as much fungicide to the plant roots as possible. This can be done with high volumes of water while spraying, or irrigating immediately after the application to push the Banol into the soil. Care should be taken not to irrigate excessively and move the Banol too far into the soil profile. The Banol needs to be where the roots are for maximum control.

Pythium Root Dysfunction

- Pythium root dysfunction is a stress-induced disease that has recently become a common problem on creeping bentgrass greens throughout the southeastern U.S.
- Pythium Root Dysfunction is normally caused by *Pythium volutum*
- Banol and Chipco® Signature™ should be incorporated into a Pythium Root Dysfunction program as described by NC State University

From North Carolina State University's website: www.turffiles.ncsu.edu/diseases/Pythium_Root_Dysfunction.aspx

Fungicides may be used on either a curative or

preventative basis for Pythium root dysfunction control. Both strategies employ the same fungicide rotation:

1. **Chipco Signature + Banol (4 oz + 2 oz/1,000) applied in 2 gal water/1,000 and left on the foliage. DO NOT WATER IN**
2. Insignia® (0.9 oz/1,000, watered-in with 1/8" of irrigation)
3. Segway™ (0.9 fl oz/1,000, watered-in with 1/8" of irrigation)

For preventative control, **Signature + Banol** should be applied every 21 to 28 days in the fall and spring when mean daily soil temperatures at two inch depth are between 50°F and 75°F. The other recommended treatments can be rotated with the Signature + Banol treatment if desired.

Curative applications should be made every 14 to 28 days based on the appearance of symptoms. Effective curative control also requires increased mowing heights and nitrogen inputs to relieve stress and allow the affected plants to heal.

In over 20 years there has never been a documented case of resistance to Banol or Signature. Insignia and Segway have a higher risk of resistance development, so it's important to follow the suggested fungicide rotation outlined above.

For over 20 years Banol has helped superintendents as an effective tool in the fight against Pythium diseases of turfgrasses. It's strong knockdown effect, long residual activity, safety to turfgrass & young seedlings and lack of resistance development make Banol a smart choice for Pythium Control.



BACKED
by **BAYER™**

Environmental Science, a business unit of Bayer CropScience LP

Bayer CropScience LP, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709.

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