

Resistance management for Pythium diseases

Best uses

All Pythium diseases.

Key strengths

Banol® is an effective solution for controlling Pythium diseases in turfgrass. Reliable Pythium control is essential for successful turfgrass management. Pythium can cause foliar blight, seedling damping-off, and root diseases. Pythium foliar blight can kill turfgrass overnight under ideal environmental conditions for disease development. Banol provides effective control of Pythium diseases without any documented cases of resistance development in the field.

Attributes of Banol

- Controls Pythium diseases in turf, ornamentals and landscape
- No documented field resistance development for over 20 years of commercial use

Solutions for tough diseases

- Apply preventively in the spring and summer to control Pythium root diseases
- Use in the summer for Pythium foliar blight control
- · Apply during overseeding to control Pythium damping-off on seedlings
- Controls Pythium resistant to mefenoxam
- Use as a rotation partner to delay resistance development for other fungicides including mefenoxam, cyazofamid and Qols

How to use Banol

Apply Banol as part of an integrated management program on greens, tees or fairways. Apply when conditions are favourable for disease on a 7-21 day interval. Apply Banol in 8-20 litres of water per 100 m² for both preventive and curative applications. Lightly water-in Banol applications to increase fungicide and root contact for optimal Pythium root disease control. North Carolina State University suggests that Banol and Signature® XTRA Stressgard® should be part of a rotation program to control Pythium root dysfunction.



Active ingredients propamocarb hydrochloride (66.5%);

equivalent to 722 g propamocarb HCl per litre



FRAC code 28 (carbamate)



Systemicity acropetal penetrant







Signal word danger



Key diseases controlled

Key diseases controlled	Rates mL/100 m²	Application interval (days)	
Pythium blight	Preventive: 64 mL Curative: 64 mL	7–21	
Pythium damping-off	apply in 8–20 L of water for both preventive and		
Pythium root rot	curative applications		

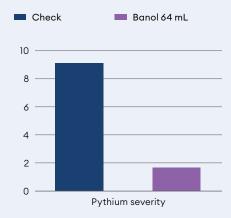
^{*}See the Banol label for complete details. Refer to the Banol label for application information. Always read and carefully follow label instructions.

Banol rate chart

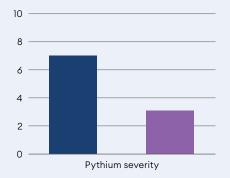
Use rate	Coverage per	Coverage per	Grams Propamocarb
(mL/100 m²)	container (100 m²)	container (acres)	(per acre)
64	58	1.4	1869

Banol performance data

Pennsylvania State University Pythium Foliar Blight Control on Perennial Ryegrass, Dr. Wakar Uddin



Treatments applied July 10 and 17, and plots infested July 12. Disease severity is shown for disease development on July 21. Plant Disease Management Reports 4:T048.



Treatments applied July 21, and plots infested July 22. Disease severity is shown for disease development on August 7. Plant Disease Management Reports 6:T039.

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