Effective Control Strategies For Snow Mold

BASF
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Snow mold diseases occur during the winter through early spring on many northern golf courses. There are three primary fungi that result in the damage that we observe in the spring of the year: *Typhula incarnata* and *Typhula ishikariensis* (gray snow mold) and *Microdochium nivale* (pink snow mold). Without effective control, these fungi can damage turf, causing poor playing conditions. However, properly timed fungicide applications in the fall can effectively control snow mold, allowing for top-quality turf at the end of winter. While superintendents have many options when controlling this disease, several things need to be examined to determine the best possible solution to the problem, including the area to be treated (greens, tees or fairways), anticipated snow mold pressure, species and economics.

Studies Prove BASF Solutions Provide Excellent Snow Mold Control.

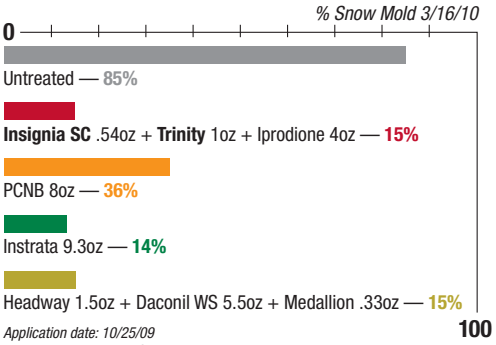
Insignia® fungicide has proven to be an excellent foundational product when used as part of a program approach to the control of both pink and gray snow mold. Tank mixtures that control both *Typhula* sp. and *Microdochium* sp. are increasingly important to provide superintendents with a broad-spectrum solution. BASF has recently introduced two new fungicides to the market that are excellent partners in providing season-long snow mold control: **Honor® Intrinsic™ brand fungicide** and **Insignia® SC Intrinsic™ brand fungicide**. **Honor** is a combination of pyraclostrobin (**Insignia**) and boscalid (**Emerald® fungicide**) which allows superintendents to achieve unsurpassed control of late-season dollar spot in addition to the snow mold control they have come to rely on. **Insignia SC** is a new liquid formulation of **Insignia** that is easier to use. **Insignia SC** and **Honor** have also been shown to provide plant health benefits to treated turfgrass by providing increased stress tolerance, in addition to the long list of diseases controlled. In 2009-2010, snow mold trials were performed at Michigan State, the University of Wisconsin, the University of Massachusetts and Colorado State University.

Snow Mold Application Recommendations

Superintendents have numerous fungicide choices for snow mold control. On greens where the highest level of control is desired (see recommendation chart on back), a tank mix containing two or three products will likely be required.

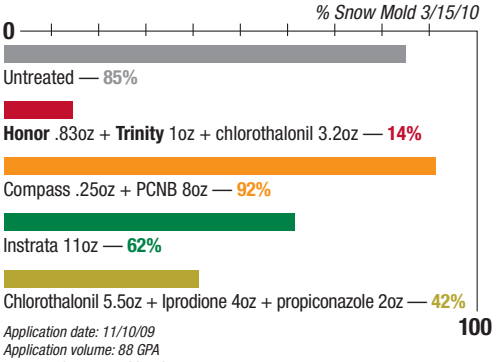
A strong tank-mix choice with excellent performance is **Insignia** + chlorothalonil + PCNB. For superintendents concerned about possible turf discoloration from PCNB, an excellent choice is **Insignia** + **Trinity® fungicide** + chlorothalonil or Iprodione or **Honor** + **Trinity** + chlorothalonil or Iprodione. On fairways, PCNB can be substituted for chlorothalonil or Iprodione. In areas where disease pressure is lower, a two-product tank mix, such as **Insignia** + PCNB, **Honor** + PCNB or **Insignia** + chlorothalonil or **Honor** + chlorothalonil, is a good choice.

FIGURE 1. CONTROL OF SNOW MOLD ON A CREEPING BENTGRASS/ANNUAL BLUEGRASS FAIRWAY



Application date: 10/25/09
Application volume: 96 GPA
Location: Treetops/Sylvan Resort in Gaylord, MI
Michigan State University, 2009-2010
Species include: T. incarnata, T. ishikariensis and M. nivale
Partial data shown

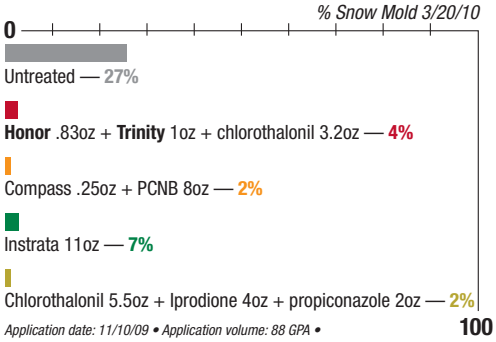
FIGURE 2. CONTROL OF SNOW MOLD ON A CREEPING BENTGRASS/ANNUAL BLUEGRASS FAIRWAY



Application date: 11/10/09
Application volume: 88 GPA
Location: Glenn Falls CC in Queensbury, NY
University of Massachusetts, 2009-2010
Species include: M. nivale
Partial data shown

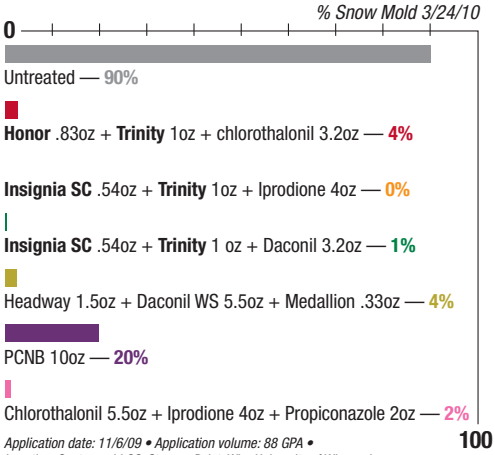
In addition to the excellent snow mold control that **Insignia** and **Honor** help to provide, they will also provide protection against take-all patch, anthracnose and dollar spot when applied at the snow mold timing. Also, using **Curalan® fungicide** + chlorothalonil as a late-season dollar spot clean-up and pink snow mold preventative, and following that application four weeks later with **Insignia** + **Trinity** + chlorothalonil, results in exceptional total disease control.

FIGURE 3. CONTROL OF SNOW MOLD ON A CREEPING BENTGRASS/ANNUAL BLUEGRASS FAIRWAY



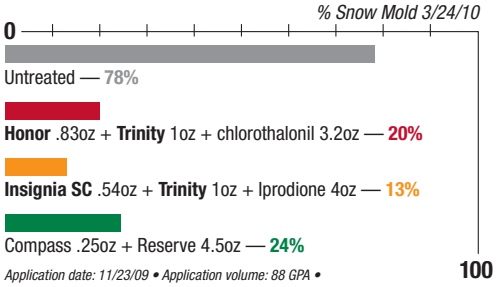
Application date: 11/10/09 • Application volume: 88 GPA • Location: Berkshire Hills CC in Pittsfield, MA • University of Massachusetts, 2009-2010 • Species include: Typhula sp. • Partial data shown

FIGURE 4. CONTROL OF SNOW MOLD ON A CREEPING BENTGRASS/ANNUAL BLUEGRASS FAIRWAY



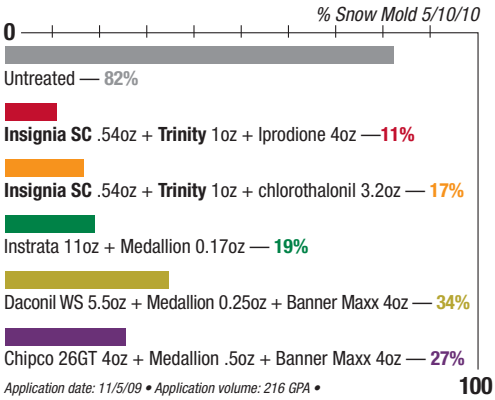
Application date: 11/6/09 • Application volume: 88 GPA • Location: Sentryworld GC, Stevens Point, WI • University of Wisconsin, 2009-2010 • Species include: T. incarnata, T. ishikariensis • Partial data shown

FIGURE 5. CONTROL OF SNOW MOLD ON A CREEPING BENTGRASS/ANNUAL BLUEGRASS FAIRWAY



Application date: 11/23/09 • Application volume: 88 GPA • Location: Craguns Golf Resort in Brainerd, MN • University of Wisconsin, 2009-2010 • Species include: T. ishikariensis • Partial data shown

FIGURE 6. CONTROL OF SNOW MOLD ON AN ANNUAL BLUEGRASS FAIRWAY



Application date: 11/5/09 • Application volume: 216 GPA • Location: Vail, CO • Colorado State University, 2009-2010 • Species include: T. incarnata, T. ishikariensis • Partial data shown

LOCATION	LEVEL OF PRESSURE	PRODUCT	RATE
Greens/Tees	Low	**Insignia** + chlorothalonil	.54+5
Greens/Tees	Low	**Honor** + chlorothalonil	.83+5
Greens/Tees	Moderate/High	**Insignia** + **Trinity** + chlorothalonil	.54+1+5
Greens/Tees	Moderate/High	**Curalan** + chlorothalonil	1+5
	followed by		
		Insignia + **Trinity** + chlorothalonil	.54+1+5
Greens/Tees	Moderate/High	**Insignia** + **Trinity** + Iprodione	.54+1+4
Greens/Tees	Moderate/High	**Honor** + **Trinity** + chlorothalonil	.83+1+5
Greens/Tees	Moderate/High	**Honor** + **Trinity** + Iprodione	.83+1+4
Fairways	Low	**Insignia** or **Honor**	.54 or .83
Fairways	Low/Moderate	**Insignia** or **Honor** + PCNB	.54 or .83+8
Fairways	Moderate/High	same as Moderate/High Greens/Tees	

Insignia SC Intrinsic brand fungicide

Trinity FUNGICIDE

Honor Intrinsic brand fungicide

Always read and follow label directions.