

Frequently Asked Questions on White Mold

ABOUT THE DISEASE

What is white mold?

White mold is caused by *Sclerotinia sclerotiorum*. Its official common name is Sclerotinia stem rot. The fungus has a wide host range, having been reported on 361 plant species (Purdy, 1979).

What types of environmental conditions increase the occurrence of white mold?

Wet weather, cool temperatures, high humidity and moist soil during bloom and early pod development are prime conditions for the occurrence of white mold. The disease often develops in areas where extended periods of dew or fog are present.

Is narrow row spacing correlated with higher levels of white mold?

Anything that favors earlier canopy closure and shading of the soil surface will restrict air movement, increase dew periods and cool the soil surface, thus favoring white mold development. Therefore, early planting, narrow row spacing and high plant populations all favor disease development.

Can white mold reduce soybean yield?

Yes. In fact, results from a 2009 white mold research trial, conducted at the University of Illinois by Carl Bradley, showed a yield loss of 43 percent with disease incidence levels of 75 to 95 percent.



White mold and stem rot

MANAGING WHITE MOLD

What is the best application timing for managing white mold?

If possible, growers should take action against white mold before any signs of infection. Since *S. sclerotiorum* infects during bloom and early pod development, applications should be made between V5 (five leaf nodes) and R3 (early pod development), with optimum timing at R1 (early flowering). The later the application beyond R1, the less effective the treatment will be.

Which product(s) should I use?

Cobra® Herbicide at a 6 fl oz/A rate has been shown to suppress white mold, reduce the incidence of sudden death syndrome (SDS) and minimize yield loss, while the 12 fl oz/A rate can also provide postemergence control of more than 54 weeds. Furthermore, growers who used Cobra followed by Domark® Fungicide in 2010 trials saw even less white mold, with further reduction of other foliar diseases.



How does Cobra work to help prevent white mold?

Basically, Cobra stimulates soybeans to produce natural compounds (or natural defenses) that ward off infection by Sclerotinia. Research indicates that lactofen, the active ingredient in Cobra, induces a soybean plant to produce isoflavones, which can help protect the plant from fungal infection. This plant response is called systemic acquired resistance (SAR). The SAR response Cobra induces is not due to any direct antifungal activity from the herbicide; rather, it is a physiological response within the soybean plant. Put simply, research has shown Cobra can help jump-start the naturally occurring disease-fighting responses present within soybeans.

How does Domark work to help prevent white mold?

The active ingredient in Domark is tetraconazole, a triazole fungicide that works by inhibiting sterol biosynthesis. Tetraconazole is absorbed quickly into the plant tissue and can move to areas of new growth. When applied in a regularly scheduled spray program, Domark has been shown to suppress white mold and control other diseases such as frogeye leaf spot and Septoria brown spot.

Will Cobra and Domark fit into my Roundup® program?

Yes, Cobra and Domark can be tank mixed with glyphosate. Ideally, Cobra should be applied around V5 and before the R1 soybean stage; the optimal timing for Domark application is at R1, but Domark can be applied up to R3, preferably before disease is present. Be sure to follow the product label for further information on adjuvants and application instructions.

When is it too late to spray for white mold?

If a mature soybean plant (R3) is severely infected with white mold, it is too late to make an application. The longer a grower waits to spray (after soybeans begin to flower), the less effective an application will be.

Purdy, L.H. 1979. *Sclerotinia sclerotiorum: history, diseases and symptomatology, host range, geographic distribution, and impact. Phytopathology* 69:875-880

Bradley, C.A. 2009. Soybean white mold fungicide trial results from the Northern Illinois Agronomy Research Center. *The Bulletin: Issue No. 25, Article 4/Dec 4*: <http://bulletin.ipm.illinois.edu/article.php?id=1252>



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