Renwood Farms Inc.

2018 Soybean Update: Managing Diseases

Soybean fungal diseases limit yields in the Mid-Atlantic and Southeast. To remove this limitation, Renwood Farms recommends two fungicide applications on soybeans. The first, a strobi, (ex: generic Quadris) needs to be applied at early flowering (R1) while the second application (Priaxor is best) needs to be applied two to three weeks after the first fungicide application (around R3).

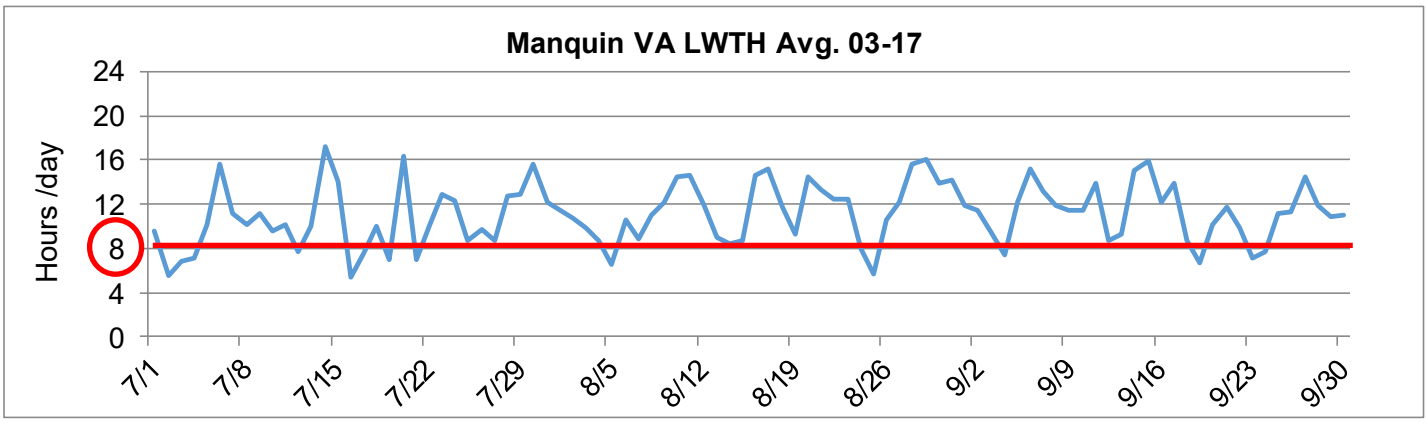
Molyron™, a molybdenum and iron nutritional foliar spray from Renwood Farms, should be added at 1 qt./acre each time with these fungicides to increase yields and lower disease pressure.

Insecticides are NOT usually needed with the first fungicide but may be needed on the second for stinkbugs and/or corn earworms. Applying insecticides "just because" will lower soybean yields.

In ag.systems' plots in 2017, R1 and R3 fungicide applications plus ***Molyron***™ produced 11 bu. /acre more than beans with no fungicide and 8 bu./acre more than soybeans with one fungicide at R1 and ***Molyron***™.

Soybean fungal diseases infect both full-season and double-cropped soybeans. There are fundamental reasons for these fungal infections.

Weather conditions are the greatest contributor to fungal infections. Leaf wetness total hours (LWTH) averaging over 8 hours/day are needed for fungal diseases. The graph below shows the average leaf wetness hours sustained in Central VA from July-Sept. is just over ***11 hours/day***. LWTH simply means the number of hours the leaves stay wet or have moisture on them from dew and rain.



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RenPro Soybean Update: Diseases

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We have plenty of heat this time of year; add 11 hours of leaf wetness and the environment for fungal disease infection is ripe.

Nutritional imbalances can cause plants to be predisposed to fungal infections. Based on the hundreds of plant tissue samples taken since 2003, **iron and molybdenum** remain the most limiting nutritional factors in soybean production. On occasion, manganese, boron, sulfur and potassium can be limiting.

Molybdenum and iron are critical components of nitrogen reductase, the enzyme required for the plant to defend itself and for chemical fungicides to perform.

In addition to their roles in plant protection, increasing plant molybdenum and iron increases the number of flowers and pods per plant which increases yields. Iron and molybdenum are important nutrients for plant and soil microbes especially the bacteria that provides nitrogen from the air to the soybean.

Renwood Farms developed ***Molyron***™ in 2016 after it was discovered that the two elements need to be applied together, in sufficient amounts, to get reliable results. A small amount of nitrogen is added to enhance foliar absorption. ***Molyron***™ is available only from Renwood Farms.

Finally, rotation and tillage are contributors to plant diseases. No-till fields leave soybean stubble on the surface and, coupled with limited rotation, offers an available source for fungal inoculum.

All these reasons make it important to protect your soybeans as disease becomes more likely. The good news is that the availability of generic fungicides means much lower costs than in previous years.

Applying fungicides early at R1, before the diseases get going, means better control. Applying again at R3 means continued control. Adding ***Molyron***™ to both means more profit.


Cercospora lesions on leaves


Pod and Stem Blight lesions on stems


Phomopsis Seed Decay