Renwood Farms Inc.

January 28, 2021

2020 Soybean Season Review

by Paul W. Bodenstine, agronomist

The goal of this newsletter is to discuss yield-limiting events that occurred frequently in the 2020 soybean crop in the Mid-Atlantic. Hopefully, making plans to avoid these events will allow you to capture extra profits in 2021.

The three main problems were:

- Sudden Death Syndrome
- Fusarium Root Rot
- Cercospora Leaf Blight

Sudden Death Syndrome (SDS)

SDS (shown at right) is an infection that can take place not long after germination. Yield loss ranges from 5% to 100% depending on when plants gets infected. It is associated with the presence of Soybean Cyst Nematode and is most often found is heavier, wetter soils. The only way to prevent this disease is to select varieties with resistance. All USG Enlist soybean varieties and three USG Xtend varieties produced by Renwood Farms, available for 2021, have resistance to this disease.

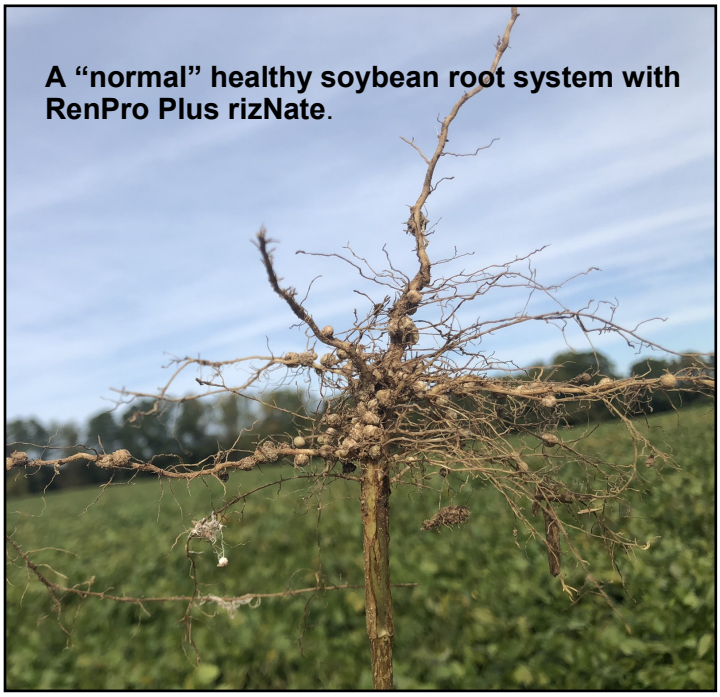
Fusarium Root Rot (FRR)

Associated with two different fusarium species, FRR infects the plants early and is **associated with warm temperatures and slightly acidic soils**. It is worst in drier weather spells. The photos at right show a normal root system (top) and a root system infected with FRR (bottom). Yields are reduced by 60%.

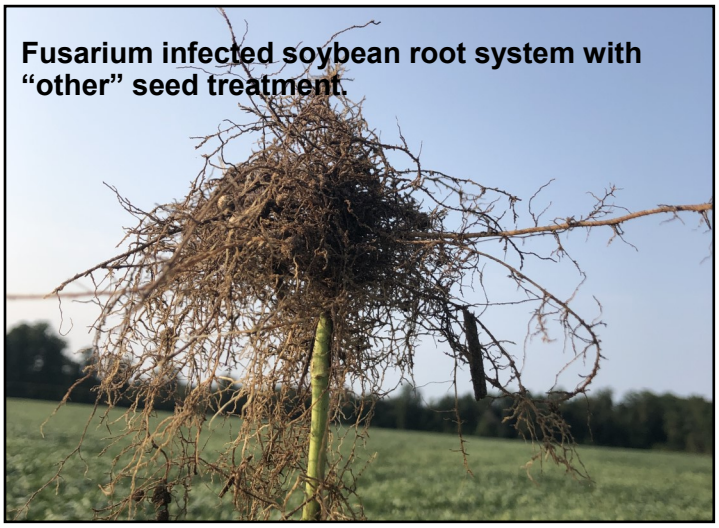
RenPro™ and ***RenPro Plus***™ soybean seed treatments are ***the only treatments*** that provide your seeds with protection against soil pathogens that infect soybeans in both wet and dry soil conditions when planting in cool/cold soils or warm/hot soils.

RenPro™ soybean seed treatments also provide:

- Protection from fungal pathogens carried **on** the seed
- Nutrients that stimulate soil microbes plus regulate nitrogen uptake and utilization
- Biological microbes to stimulate plant growth and provide plant protection



A "normal" healthy soybean root system with RenPro Plus rizNate.



Fusarium infected soybean root system with "other" seed treatment.

RenPro™ contains four fungicides plus molybdenum to reduce soil-born pathogens in cool and damp soils, in warm and damp soils and in warm/ hot and dry soils, especially lighter, sandier soils and in ***double-cropped situations***. Research from Iowa State demonstrated that ipconazole, a key ingredient, is the only material effective on these types of fusarium.

Molybdenum (moly) is essential for nitrogen-producing bacteria nutrition and for plant nitrogen utilization. Moly is a critical nutrient for the *soil microbes that feed and protect soybean plants*.

January 28, 2021

2020 Soybean Season Review

Renwood Farms Inc.
Customer Service: (804) 829-2450

Paul Bodenstine, Agronomist: (804) 314-7463

For more information about Renwood Farms Inc., please check our web page at:
http://www.renwoodseed.com

Target Spot made its first appearance in the Mid-Atlantic in 2020 which is no surprise with the heavy August and September rains. Most fungicides are effective at controlling this pathogen. Our recommendation is to apply your first fungicide at R1 (first open flower) and again at R3.

Cercospora Leaf Blight showed up in several fields in 2020. This disease is responsible for "purple stain" on soybeans. Research from LSU indicates the root cause Cercospora is an iron deficiency. Renwood Farms now has ***Molyron***™, a foliar fertilizer that contains iron and molybdenum, a major limiting nutrient. Molyron is designed to be applied with fungicides at R1 through R5 to supply moly and iron. Iron will help retain pods, especially on the upper branches and moly will help fill out the pods.

Finally, in 2020, the good news is that growers on the Renwood Farms program saw roots with high populations of soil VAM fungi (seen below as "white roots") which indicate really good soil health. High soybean yields occurs when grown in soils with healthy microbial populations which produces healthy roots and plants.

In the photo above, Target Spot was found in Essex Co. in 2020. Without fungicides, yield losses reach 30%. The bottom photo shows Cercospora Leaf Blight, an indication of an ***iron deficiency***. Fungicides have limited activity on this disease and yield losses reach 15%.

On the plus side of 2020: the white "roots" are actual VAM fungi working with the soybean roots. These are signs of a healthy root system and good soil health.