Cyst Nematodes Continue To Challenge

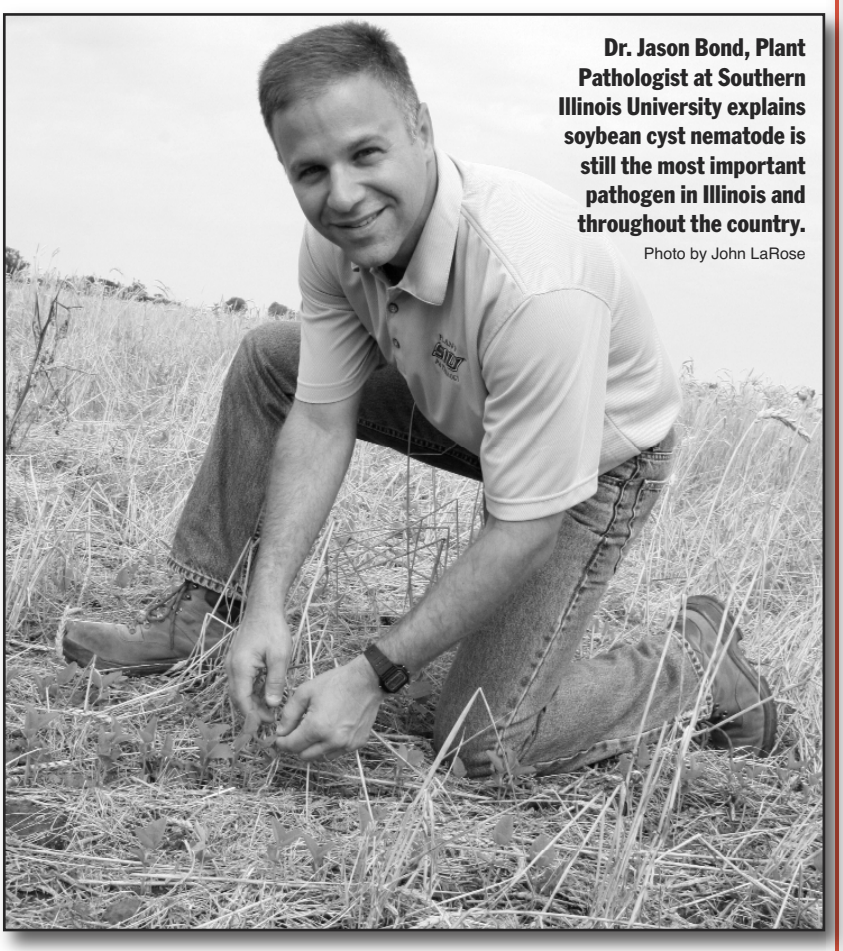
Interaction With Sudden Death Syndrome Adds Complexity

REGINA LAROSE
MidAmerica Farmer Grower

EWING, ILL.

Plant pathologist, Dr. Jason Bond, Southern Illinois University, recently reminded growers about the problem with soybean cyst nematode (SCN)'s. "Cyst nematode is still the most important pathogen we have of soybean in Illinois; and throughout the entire country for that matter. It is our biggest yield robber."

Bond explained the nematode easily adapts to management practices. "We have the tools to manage the nematode but it is probably one of our more capable pathogens at adapting to what we are trying to do to. We manage cyst nematode in this country primarily by using resistant cultivars, and rotating the cultivars with corn or other non-host crops. We have some pretty good resistance and it is going to provide some level of control. The problem is that over time, we have seen this in the South and are now seeing it in Illinois and the Upper- Midwest; is that the SCN populations adapt to this resistance and they become more virulent and more difficult to control."



Dr. Jason Bond, Plant Pathologist at Southern Illinois University explains soybean cyst nematode is still the most important pathogen in Illinois and throughout the country.
Photo by John LaRose

Bond had this recommendation to growers, "it requires farmers to step back and do what we were doing maybe 10, 15, 20 years ago, sampling for the nematodes. It is important to determine if we are reducing or keeping the SCN at a low level and then making changes either in their rotation scheme or in the types of cultivars selected for."

Bond was asked if soil testing could help. He responded, "if we are doing soil tests to determine the egg counts in the soil that is very important. You don't have to do it every year. You would sample a field, maybe your problematic fields where the yield seems to have hit a barrier or gotten progressively worse. The SCN level found in your field may force changes in the next scheduled crop. If you are in a corn year and SCN is very high, then a crop other than soybean may be advised. If soybean had to be planted in a highly infested field, then great care needs to be taken when selecting SCN resistant varieties for that field. As you progress through the corn-soybean rotation cycle, you will want to sample again in three or four years to determine what your rotation cycle did to the SCN field population. Soil testing needs to be on a planned schedule, because it is not cost effective (or needed) to sample every acre or every field annually."

Bond stated over 26 million bushels are lost each year to SCN in Illinois. "The other thing that we see with SCN is the potential to interact with other problems and there is an interaction between SCN and the pathogen that causes sudden death syndrome (SDS). So having SCN feeding on a field is bad, having SCN feeding on a field with a history of SDS is really bad. It adds a little bit of complexity, because using SCN resistance is critical in most fields you may also need to make sure the cultivar has at least moderate resistance to SDS. It complicates things. We don't have problems with SDS every year. If you get early planting, with the minimum of average rainfall in a field with SDS in the past are probably set up to have it again in the future. SDS will probably be more severe in 2010, with the early planting and the abundant rainfall in many areas of Illinois and the Midwest."

The Illinois Soybean Association has been funding cultivar evaluations to identify resistance to SDS, SCN, and other diseases. Bond said, "growers can learn more about the level of SCN and SDS resistance in modern cultivars and what to do when they have one of these more problematic cyst populations that are becoming more and more prevalent in the state, by visiting www.scnresearch.info or www.vipsoybeans.org or calling 618-453-4309. A newly updated, SCN management guide has been developed by the North Central Soybean Research Program and is available for online viewing or downloading at www.planthealth.info. Hard copies are also available for free through you state plant pathologists. Δ

REGINA LAROSE: Associate Editor, MidAmerica Farmer Grower