

Soybean Seedling Diseases

Like last year, soybean planting has been delayed due to inclement weather. Even so, most farmers have been able to get their beans planted and several fields already have emerged seedlings. So now it's time to sit back and breathe a sigh of relief, right? Not necessarily. Soybean seedling diseases occur every year in Missouri. The likelihood of these diseases being present in your fields is increased with rainy weather or poor planting conditions. The three main seedling diseases to be looking out for are:

Phytophthora seedling blight – Phytophthora is a soil-borne fungus that causes seed decay, pre-emergence or post-emergence damping-off and seedling blight of soybeans. The seedling blight phase may cause yellowing, wilting, and death of the plant. It is more likely to occur low-lying or poorly drained areas. There is no rescue treatment for this disease. Precautions should be taken prior to planting.

Rhizoctonia seedling blight – Rhizoctonia is another common soil-inhabiting fungus that can cause seed decay and pre-emergence damping-off of soybean seedlings. More typically, symptoms of Rhizoctonia are found on seedlings, young plants, and even older plants and consist of localized red to reddish-brown lesions near the soil surface. Infected plants may be stunted or less vigorous than healthy plants, causing uneven stands. Severe infestations and dry weather may cause death of the plant. As with phytophthora, management options for controlling this disease should be utilized prior to planting.

Fusarium seedling blight – Like the first two, fusarium seedling blight is caused by a soil-inhabiting fungus and causes weak or stunted plants and uneven stands. The disease causes a rot of the root system while the above-ground portion of the plants may simply yellow in color. Plants may eventually wilt and die during periods of warm to hot weather. The disease is most severe when the soil is saturated and soil temperature is around 57 degrees, conditions we have recently experienced. Like the first two, precautions against this disease should be taken prior to planting.

If there is nothing that can be done about these diseases now, then why am I writing about them? Because if you are having problems with your soybean seedlings, it is important to determine whether they are caused by one of the above diseases so that precautions may be taken to avoid plant death or yield loss next year. If you determine that you have one of these seedling diseases, options for next year may include using good quality disease-resistant seed, only planting in ideal seedbed conditions, or using fungicide seed treatments. If you think you may have one of these seedling diseases and need assistance with identification, contact Travis Harper by phone (660)885-5556 or e-mail harpertw@missouri.edu or consult MU Extension Guide IPM 1002 *Soybean Diseases* which is available at your county extension office.