

Stem Rot in Rice

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Abstract

Stem rot is a fungal disease that affects rice plants. It forms black lesions on the plant's stem, usually near the water level, and is often initially detected around panicle commencement in 1995, stem rot was discovered in the MIA. A considerable number of farms were impacted, although no severe damage occurred. There were yield reductions. A similar scenario occurred in 2017, with a number of people being killed. Certain characteristics have been reported. *Sclerotium oryzae* causes the stem rot described in this fact sheet.

Keywords: Stubbles; Sclerotia; *Sclerotium oryzae*

Introduction

Stem rot is a fungal infection in the stem that causes the disease. The *Rhizoctonia*, *Fusarium*, and *Pythium* genera all have fungi that cause stem rot. Plants in the vegetative or flowering stages are particularly susceptible to stem rot [1]. It is one of a variety of critters that can harm the sheaths and/or stems of rice leaves. Others can be found in the Rice section. Pests, illnesses, and weeds in the Field is a field handbook to pests, diseases, and weeds. On the outer leaf sheath, little black lesions appear, which expand and spread to the inner leaf sheath. The damaged tissues deteriorate, and the rotting tissues are covered in tiny black sclerotia. Plants lodge as the culm falls. After harvest, the sclerotia are carried in stubbles. The sclerotia can be found in stubbles and straw carried by irrigation water. The fungus overwinters as sclerotia in the upper layers of the soil profile and thrives for lengthy durations. In the field, sclerotia has a half-life of roughly 2 years. After a rice crop, viable sclerotia have been observed in fields for up to 6 years. The sclerotia float to the surface of the water because they are buoyant.

Rice is infected by stem rot through sclerotia, which are small black spherical structures generated by the fungus. They float on the water's surface and germinate when the conditions are right. Linked to rice stems, with the fungus spreading into plant tissue as a results. The Sclerotia appear on the interior and exterior of stems shortly after infection. Rice that has reached maturity sclerotii is primarily found

in plants. Infected rice plants may go undiscovered in the early years of regularly cropped blocks, i.e. the disease is not severe or widespread throughout the block, and it is easily overlooked. Ordinary surveillance. Continuous rice growing raises disease risk, particularly if stubble burning is inadequate between crops. Due to the damp weather, burning stubble might be difficult, and unburned stubble can result in a lot of sclerotia being available for subsequent crops. Sclerotia will be smashed out of the stems and into the soil surface or into fissures in the soil if stubble is sliced before burning. Once sclerotia are on the ground, burning is insufficient to destroy them all. Infected stubble that sits in a block for a long time before being planted in the next year or two can behave as a sclerotia reservoir. A fallow field where rice is left to grow the next season. The illness can live in the soil for up to five years. Because the disease is not generally yield limiting in a big area, soybean growers do not manage for it. Fungicides, as well as burning or allowing the crop decay, can be used to control the disease [2]. Diseases have historically been one of the major causes of rice shortages [3].

References

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