

This newsletter is a special issue about a head disease currently being observed in a handful of wheat fields in Hill County. There will be an additional newsletter later this week to discuss other issues in wheat, corn and cotton. This issue was first picked up last Friday after I had finished writing the newsletter.

LOOSE SMUT

Loose smut is a fungal disease that is common in most wheat production regions across the world. Its incidence varies from year to year based on the environmental conditions at flowering. Currently, I am finding fields with a low incidence of loose smut, probably equal to or less than 1 percent of heads infected with loose smut. This will be a major factor into how we harvest our crop, as it can have an impact on the following crop's yield potential. Favorable conditions for loose smut include cool, humid weather accompanied by light rains and/or heavy dew. Under favorable conditions fields with 1 percent of heads infected can lead to 10 percent or more infected kernels at harvest. This disease is seedborne, and shortly after the seed germinates the fungus begins growing within the plant. Loose smut is a seedborne disease that grows systemically in the plant. The fungus is carried within infected seeds, that will systemically infect the plant shortly after the seed germinates. Infected seeds do not show symptoms of infection until the head emerges with the black smut spores in the following crop.

SYMPTOMOLOGY

Loose smut is probably the most easily recognized head disease of wheat because of its dusty, black appearance of diseased heads (**Figure 1**). Infection of the plant begins shortly after the seed germinates, and infected heads usually come out of the boot a few days ahead of healthy plants. Infected (smutted) heads have all the glumes replaced by the black sooty mass of smut spores, leading to a complete lack of grain fill on that head. These spores are then quickly dispersed by wind, rain, and harvest to new kernels.



Figure 1. Symptomology of loose smut on wheat. Photo credits: left: Tyler Mays, Extension Agent-IPM, right: Donald Groth, Louisiana State University AgCenter, Bugwood.org

MANAGEMENT

Since loose smut is seedborne there are only a few management options available. The first management option is to plant certified disease-free seeds. Secondly you can plant varieties with know resistance to loose smut, which you may have to ask you seed dealer about this rating. I would not search hard for varieties resistant to loose smut as they may not be fit for our production region, and we still have other management options that can allow us to plant a variety adapted to the Texas Blacklands to maximize our yield. The third and management option is to use fungicide seed treatments. Recommended fungicide seed treatments include Carboxin, Triadimenol, Difenoconazole/Mefenoxam, and Tebuconazole/Thiram. The use of fungicide seed treatments using a systemic fungicide will reduce the disease incidence later in the season. The last management option is to not replant seeds from a field that had loos smut, as this will increase the risk of having a higher incidence of disease than last year.

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