

COTTON SEEDLING DISEASE MANAGEMENT ON THE TEXAS HIGH PLAINS

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seedling disease control, planting high quality seed is the most important.

Abstract

Growers on the Texas High Plains have always been encouraged to use all the traditional practices to control seedling disease, such as rotation, timely planting and fungicide seed treatments. However, each of these practices has its limitations. High Plains farmers have known the benefits of rotation for a long time, but finding suitable rotation crops is a problem when you are dealing with a 2.5 - 3 million acre crop. Corn and sugar beets are available in only 6 of the 26 cotton counties. Only a small portion (77,000 acres) of the High Plains wheat occurs in the cotton area, and sorghum, other than contracted seed sorghum, has too little profit potential. Timely planting, for seedling disease control, usually means planting later when soils are warmer. But growers often feel forced to plant early due to a lack of labor and equipment to get planted quickly. Fungicide seed treatments have been shown to be very effective in years with a cool, wet planting season. A fungicide, seed quality, and tillage study conducted on the Lubbock station from 92 - 94 showed no difference in emergence with various fungicides in 92 and 93. However, improved emergence was evident in 94 with the treatments such as Captan + Baytan, Captan + Apron + Baytan, and Captan + apron + Vitavax-PCNB in comparison to the Captan check. County seed treatment tests were placed at 15 locations in 14 counties in 1995 to provide County Agents experience with seed treatment chemicals. The LSO 11, LSO 3, and LSO 4 experimentals and Baytan + Apron + Thiram treatments improved emergence in some tests, but disease pressure was not sufficient in many of the tests to show a difference. As with these tests, growers will see years when seed treatment fungicides do not have the opportunity to perform due to weather conditions unfavorable to disease. However, Texas Extension continues to recommend the use of seed treatment fungicides because the weather can not be predicted, and the low cost of \$2.00 - \$3.00 per acre requires only one avoided replant in 13 years to pay for all 13 years of applications. Although seed treatment is a corner stone of seedling disease management, recent tests have shown that the use of high quality planting seed has a more consistent positive impact on stand establishment than any other practice. The fungicide, quality, and tillage test from 92 - 94 consistently showed increased emergence with increased seed quality. When you consider grower options for