

# 2005 Louisiana Corn Hybrid Performance Trials

## Summary

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Performance of commercial corn hybrids are evaluated each year by Louisiana Agricultural Experiment Station (LAES) researchers. The purpose of the trials is to provide Louisiana growers and seedsmen with unbiased results on performance of commercial corn hybrids submitted for evaluation by private agencies. The data generated in these trials are used by the Louisiana Cooperative Extension Service for recommending hybrids.

The Louisiana Agricultural Experiment Station units cooperating in 2005 were the Dean Lee Research Station at Alexandria, the Northeast research Station at St. Joseph, the Macon Ridge Branch of the Northeast Research Station at Winnsboro, and the Red River Research Station at Bossier City. Ninety-four corn hybrids were tested in 2005. Although there was a range of maturity among hybrids, all entries were combined in one test at each location. Entries were evaluated at all locations in randomized complete block designs. In each test, hybrids were replicated at least four times. Although not all variables were measured at all locations, data reported in the tables were generally measured according to the following guidelines; yield (bushels of corn per acre calculated from plot weights), moisture (moisture of grain when measuring plot weight), test weight (pounds per bushel of corn grain), mid-silk (date at which 50% of silks were visibly protruding from ear shoots), plant height (height in inches to collar of the uppermost (flag leaf), ear height (height in inches to point of ear attachment to main stem), shuck coverage (numerical rating of 1 to 3 corresponding to 1=good, 2=average, and 3=poor; good coverage is when husks reach well beyond ear tip and fit tightly, average is when husks reach the tip of the ear or fit loosely, poor is when ears are open to the weather), stem lodging (numerical percentage of plants that are lodged due to break or bend in main stem, 0=none, 1=>0 to 20%, 2=20-40%, 3=40-60%, 4=60-80%, 5=80-100%), root lodging (numerical rating of percentage of plants that are lodged due to failure of crown roots, 0=none, 1=>0 to 20%, 2=20-40%, 3=40-60%, 4=60-80%, 5=80-100%), and stands (count from equal sections of the middle two harvest rows).

Yield and agronomic data were analyzed using statistical procedures from 'Agrobase 21' (software for managing variety tests and breeding programs) and checked using the Statistical Analyses System (SAS). Least significant differences (LSD) were computed using a one sided test at a probability level of 0.10. The coefficient of variation was calculated for each test and reflects the degree of error not attributed to hybrids or blocks.

The corn hybrid test was planted in 38-inch row spacings at the Dean Lee Research Station on March 31, but due to high and variable plant populations that resulted from a packing error, a second test with four replications was planted on April 20. One rep of the second date was dropped due to a dry and crusty area that affected emergence and growth. The corn test at the Macon Ridge Branch of the Northeast Research Station was planted March 18 on a Gigger silt loam soil in 40-inch rows. The corn hybrid test was planted in 40-inch rows on both a light and a heavy textured soil at the Northeast Research Station. The test was planted March 17 on the Sharkey clay soil and was planted March 18 on the Commerce silt loam soil. The corn test was

planted in 40-inch rows on a Norwood loam soil at the Red River Research Station on April 18. The test had excessive error (high C.V.), at least partially due to animal-damage, and yields were not used for recommendations to producers.

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