

SCREENING COMMERCIAL COTTON VARIETIES AGAINST FUSARIUM WILT SUMMARY
(Cotton-03-327AL)

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Introduction: Fusarium wilt has been successfully controlled through the use of resistant varieties during the past 50 years. Many of the newer genetically engineered cotton varieties do not have good Fusarium wilt resistance. Consequently, wilt has become a serious problem in wilt infested fields where these varieties are grown. The Fusarium wilt nursery at the Plant Breeding Unit helps us identify these susceptible commercial varieties as well as the FW resistant varieties. A list of the commercial varieties and their relatively susceptibility or resistance to Fusarium Wilt for the past three years is published in the Alabama Cotton IPM recommendations and in the Cotton Variety Report annually.

Method and Materials: Fifteen of the most commonly grown cotton varieties were screened for wilt. Rowden, an extremely susceptible cotton variety, was used as the Fusarium wilt susceptible control. Plots were 20 feet long and 16 rows wide. The test contained 5 replicates. Plants were first evaluated for wilt soon after they reach the first true leaf stage. Thereafter, plots were evaluated for wilt on a weekly basis throughout the growing season until just before harvest. Plants were counted and removed as soon as they showed symptoms of Fusarium wilt.

Results and Discussion: Fusarium wilt incidence was especially low this year (2006) compared to previous years (Table 1). This low FW incidence makes it difficult to accurately assess FW susceptibility or resistance among the commercial cotton varieties tested in 2006. Dry weather which suppressed Root-knot nematode populations was a major reason for this low FW disease incidence.

Table1. Commercial Cotton Varieties Response to Fusarium Wilt and to Root-knot Nematodes. (2006)

COTTON VARIETY	Percent Fusarium Wilt
Rowden	44
DP 454 BG/RR	4
DP 555 BG/RR	3
DP 147 B2AF	2
FM 965 LLB2	2
PHY 480 WR	2
PHY 485 WRF	1
FM 960 BR	1
DP 143 B2RF	1
DP 515 BG/RR	1
FM 9063 B2F	1
ST 6611 B2RF	1
ST 4664 RF	0
DP 445 BG/RR	0
DG 2520 B2RF	0
CG 3020 B2RF	0