

**REPORT OF THE VERTICILLIUM WILT
AND FUSARIUM WILT COMMITTEE-1998**

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Alabama

1998 National Fusarium Wilt Cotton Report

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Cotton cultivars and elite breeding lines submitted by 27 cooperators were evaluated for Fusarium wilt resistance under field conditions at the Plant Breeding Unit, E. V. Smith Research Center, Tallassee, Alabama. Entries were grown on an Independence loamy fine sand highly infested with both the Fusarium wilt fungus (*Fusarium oxysporum* Schlecht. f. sp. *vasinfectum* [Atk.] Snyder & Hans.) and root-knot nematodes (*Meloidogyne incognita* [Kofoid & White] Chitwood).

Due to lack of disease symptoms in the Tallassee Fusarium wilt nursery, the test was not evaluated. Preliminary results suggest weather was a factor in the lack of symptoms.

Louisiana

Patrick D. Colyer, William D. Caldwell, and Philip R. Vernon, Louisiana State University Agricultural Center, Bossier City, LA. Selected cotton varieties were evaluated for response to the Fusarium wilt/root-knot nematode disease complex on a Norwood very fine sandy loam soil heavily infested with the wilt pathogen (*Fusarium oxysporum* Schlecht. f. sp. *vasinfectum* [Ark.] Snyder & Hans.) and root-knot nematodes (*Meloidogyne incognita* [Kofoid & White] Chitwood). Experimental design was a randomized complete block with eight replications. Plots were single rows, 45 feet long. Ratings were taken on ten plants per plot from four replications at the end of the season. Wilt ratings were based on the degree of stem discoloration, and root gall ratings were based on the number of galls formed on the roots.

Table 1. Variety Test - Fusarium wilt and root-knot nematode ratings for cotton varieties at the Red River Research Station, Bossier City, LA, 1998.

Variety	Wilt Rating ^a	Gall Rating ^b
Acala Nemx	0.3	1.3
Agripro AP6102	0.9	3.9
Agripro AP4103	1.6	2.8
Deltapine 20B	1.1	2.6
Deltapine 32B	2.3	3.2
Deltapine 50B	1.1	2.3
Deltapine 425RR	1.1	2.6
Deltapine 33B	1.7	2.9
Deltapine 458B/RR	1.5	3.4
Deltapine 655B/RR	2.1	2.8
Deltapine 5415RR	2.2	3.4
FiberMax 963	2.5	3.0
FiberMax 832	3.7	3.0
FiberMax 975	4.0	3.7
FiberMax 989	2.0	2.8
Paymaster 1266	1.6	2.8
Paymaster 1215BG	2.8	2.6
Paymaster 1330BG	1.3	3.0
Paymaster 1220RR	2.6	2.4
Paymaster 1220BG/RR	1.7	2.7
Paymaster 1560BG	1.8	3.5
Phytogen TX224	2.3	2.4
Phytogen TX300	2.6	2.9
Phytogen PSC556	1.8	2.8
Phytogen PSC569	2.3	2.9
Phytogen PSC636	3.1	2.6
Stoneville BG4740	4.7	3.5
Stoneville BXN47	3.4	3.3
Stoneville 373	1.8	2.9
Stoneville 474	3.0	3.1
Stoneville LA887	0.7	1.2
Stoneville 825	2.7	2.8
Sure-Grow 125	1.8	3.0
Sure-Grow 747	1.5	2.9
Sure-Grow 180	1.4	2.8
Sure-Grow 821	1.6	3.0
LSD (P=0.05)	1.3	0.9

^aWilt rating on a scale of 0-5; 0=no stem discoloration, 5=complete stem discoloration.

^bRoot-gall rating on a scale of 0-5; 0=no root galling, 5=severe root galling.