

**UPDATE OF COMMERCIAL CULTIVAR SCREENING FOR RESISTANCE TO RACE 4 FUSARIUM
OXYSPOBUM VASINFECTUM**

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Abstract

Fusarium wilt impacts on cotton in the San Joaquin Valley of California focused mostly on race 1 *Fusarium oxysporum* var infectum (FOV), with most economic impacts occurring when the disease was present in association with nematode damage. During the past five years, field investigations have found Fusarium symptoms across a range of soil textures in which root knot nematode populations were very low. This more-recently studied FOV for which field observations have shown significant virulence has been identified as race 4. Field and greenhouse studies have been run to conduct germplasm screening trials to identify useful genetic differences in susceptibility / resistance to race 4 FOV that can be utilized in further genetic evaluations and to identify sources of host plant resistance potentially of use to growers and breeders. Screenings emphasized in this presentation will include *Gossypium hirsutum* (non-Acala and Acala Uplands) and *Gossypium barbadense* (Pima) plantings, both commercially-available current varieties as well as experimental (not yet in wide-scale production) cultivars from seed companies. Screening summaries over multiple sites/years will be summarized and discussed, focusing on findings that: (1) most Pima varieties show more severe symptoms and plant losses than Acala/Uplands; (2) several highly-resistant commercial and experimental Pimas have been identified; and (3) most Acala / Upland germplasm tested were still infected by race 4 FOV when tested at infested field sites or when inoculated in greenhouse trials.