2012-2013 US SURVEY OF FUSARIUM OXYSPORUM F.SP. VASINFECTUM DISTRIBUTION A. N. Cianchetta R. M. Davis Department of Plant Pathology University of California, Davis

<u>Abstract</u>

Fusarium wilt, caused by the pathogenic fungus *Fusarium oxysporum* f. sp. *vasinfectum* (FOV), is a major disease of cotton. FOV is soilborne and colonizes the vascular system of susceptible cotton hosts, causing vascular discoloration, wilting and, eventually, death of the plant. For the past two years, cooperators from across the cotton belt have submitted symptomatic plants for FOV race diagnosis in effort to assess the distribution of isolates, in particular FOV-4, a highly virulent strain widespread in California. Sequence analysis of the elongation factor (EF) region showed the majority of samples with Fusarium wilt to be infected with one of the five known characterized races of FOV. Maximum parsimony analysis using EF placed these isolates in accordance with the race relationships previously published by Kim et al. (2005), in distinct lineages for races 1, 2, 4 and 8 as well as the race 3 cluster. The frequency of four severe unique southeastern isolates, described by Holmes et al. (2009), was also reported. Pathogenicity assays were conducted in order to further characterize the new and unique genotypes. To the best of our knowledge, FOV-4 remains limited to California.

References

Holmes, E.A., R.S. Bennett, D.W. Spurgeon, P.D. Colyer, and R.M. Davis. 2009. New genotypes of *Fusarium* oxysporum f. sp. vasinfectum from the southeastern United States. Plant Dis. 93:1298-1304.

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