

Select Publications: Fusarium Wilt – in particular FOV Race 4 in California

- 2005 Kim, Y.^f, R.B. Hutmacher^d, R.M. Davis^d. 2005. Characterization of California Isolates of *Fusarium oxysporum* f. sp. *Vasinfectum*. Plant Disease 89:366-372.
- 2005 Hutmacher, R.B.^d, R.M. Davis^d, S.D. Wright^g, M. Ulloa^c, D.S. Munk^g, B.H. Marsh^g, B.A. Roberts^g, R.N. Vargas^g, M.P. Keeley^b. 2005. New Fusarium Issues for California Cotton. Cotton Industry – National Cotton Council and J. Cotton Sci.
- 2006 Ulloa, M.^d, R.B. Hutmacher^d, R. M. Davis^g, S.D. Wright^g, R. Percy^c, B. Marsh^g. 2006. Breeding for Fusarium Wilt Race 4 Resistance in Cotton Under Field and Greenhouse Conditions. J. Cotton Sci. 10:114-127.
- 2006 Hutmacher, R.B.^a, R.N. Vargas^g, S.D. Wright^g. 2006. Methods to Enable the Coexistence of Diverse Cotton Production Systems. Agricultural Biology In California Series, Publication # 8191. Univ. of CA Div. Agric. Nat. Resources, <http://anrcatalog.ucdavis.edu>
- 2006 Ulloa, M.^a, R. Percy^c, R.B. Hutmacher^g, R.G. Cantrell^h. 2006. Registration of SJ-U86 Cotton Germplasm Line with High Yield and Excellent Fiber Quality. Crop Sci. 46:2336-2338.
- 2007 Ulloa, M.^a, R.G. Percy^c, R.B. Hutmacher^g, R.G. Cantrell^h. 2007. Notice of release of one Upland cotton germplasm line (SJ-U86) for California possessing superior lint yield, fiber traits and heat tolerance. Germplasm Release. Crop Sci.: 47:106-107.
- 2007 Ulloa, M.^a, Percy, R.^c, R.B. Hutmacher^g, J.F. Zhang^e. 2007. The Future of cotton breeding in the Western United States. Paper #1355. Proc. World Cotton Research Conference IV, September 11-14, 2007, Lubbock, TX, Cotton Council International, 15 pp. electronic: <http://www.icac.org/meetings/wcrc/wcrc4/presentations/data/html>
- 2007 Bennett, R.S.^a, R.M. Davis^g, R.B. Hutmacher^g. 2007. Fusarium oxysporum f. sp. vasinfectum Race 4 in California: A Reemerging Threat to Cotton Production. Paper #1383. Proc. World Cotton Research Conference IV, September 11-14, 2007, Lubbock, TX, Cotton Council International, 9 pp. electronic: <http://www.icac.org/meetings/wcrc/wcrc4/presentations/data/html> Contributions to
- 2008 Bennett, Rebecca S., R.B. Hutmacher, R. Michael Davis. 2008. Seed Transmission of *Fusarium oxysporum* f. sp. *vasinfectum* Race 4 in California. J. Cotton Science. 12: 160-164.
- 2008 Ulloa, M., Percy, R.G., Hutmacher, R.B., Wright, S. and Davis, M. 2008. Release of SJ-07P-FR01, SJ-07P-FR02, SJ-07P-FR03, and SJ-07P-FR04 'Cotton'. USDA Germplasm Release. Pp. 79-81.
- 2008 Gilbert, C.A., N. Zhang, R.B. Hutmacher, R. M. Davis, C.D. Smart. 2008. Development of a DNA-based Macroarray for the Detection and Identification of *Fusarium oxysporum* f. sp. *vasinfectum* in cotton tissue. J. Cotton Science 12:165-170.
- 2009 Hao, J.J., M.E. Yang, R.M. Davis. 2009. Effect of soil inoculum density of *Fusarium oxysporum* var *infectum* (race 4) on disease development in cotton. Plant Disease. 93:1324-1328.
- 2009 Holmes, E.A., R.S. Bennett, D.W. Spurgeon, P.D. Colyer, R.M. Davis. 2009. New genotypes of *Fusarium oxysporum* var *infectum* in the Southeast United States. Plant Disease. 93: 1298-1304.
- 2009 Ulloa, M., R. Percy, R.B. Hutmacher, J. Zhang, R.M. Davis, S.D. Wright. 2009. Registration of Four Pima Cotton Germplasm lines (SJ-07P-FR01 – FR04) Possessing Good Levels of Resistance to Fusarium wilt race 4 With Moderate Yields, and Good Fibers. J. Plant Registration. 3(2):198-202.
- 2010 Bennett, R.S., P.D. Colyer. 2010. Dry heat and hot water treatments for disinfecting cotton seed of *Fusarium oxysporum* f. spp. *Vas infectum*. Plant Disease. 94: 1469-1475.

- 2011 Bennett, D.W. Spurgeon, W.R. DeTar, J.S. Gerik, R.B. Hutmacher, B.D. Hanson. 2011. Efficacy of four soil treatments against *Fusarium oxysporum* f. sp. *Vasinfectorum* Race 4 on cotton. *J. Plant Disease*. 95:967-976..
2011. Ulloa, M., C. Wang, R.B. Hutmacher, S.D. Wright, R. Michael Davis, S.A. Saski, P.A. Roberts. 20___. Mapping *Fusarium* Wilt Race 1 Resistance Genes in Cotton by Inheritance, QTL, and Sequencing Composition. *Molec. Genetic Genomics*. 286(1): 21-36.
- 2011 Bennett, R.S., W. O'Neill, L. Smith, R.B. Hutmacher. 2011. Commercial detergents effective against conidial and chlamydospores of *Fusarium oxysporum* f. sp. *Vasinfectorum*. *J. Cotton Science*. 15:162-169
- 2013 Ulloa, M., Hutmacher, R.B., Roberts, P.A., Wright, S.D., Nichols, R.L. and Davis, R.M. 2013. Inheritance and QTL mapping of *Fusarium* wilt race 4 resistance in cotton. *Journal of Theoretical and Applied Genetics*. 126:1405-1418.
- 2013 Hutmacher, R.B., Ulloa, M., Wright, S.D., Campbell, B.T., Percy, R.G., Wallace, T., Myers, G., Bourland, F., Weaver, D., Chee, P., Thaxton, P., Zhang, J., Smith, W., Dever, J., Kuraparthi, V., D. Bowman, D. Jones, J.Burke. Elite Upland Cotton Germplasm-Pool Assessment of *Fusarium* wilt resistance in California. *Agronomy Journal* 105:1635-1644. 2013.
- 2014 Doan, H.K., R.M. Davis. 2014. Evaluation of *Fusarium oxysporum* f. Spp. *Vas infectum* resistance in six Upland cotton germplasm lines. *J. Cotton Sci.* 18:430-434.
- 2015 Doan. H.K., R. Michael Davis. 2015. Efficacy of seed treatments on viability of *Fusarium oxysporum* F. spp. *Vas infectum* (race 4) in infected cotton seed. *Crop Protection*. 78: 178-184.
- 2015 Cianchetta, A., T.W. Allen, R.B. Hutmacher, R.C. Kemerait, TL. Kirkpatrick, G.W. Lawrence, K.S. Lawrence, J.D. Mueller, R.L. Nichols, M. Olsen, C. Overstreet, J.E. Woodward, R.M. Davis. 2015. Survey of *Fusarium oxysporum* f. spp. *Vas infectum* in the United States. *J. Cotton Science*. 19: 328-336.
- 2015 Ulloa, M., Hutmacher, R., Percy, R.G., Wright, S., Burke, J.J. Release of Pima SJ-FR05, Pima SJ-FR06, Pima SJ-FR07, Pima SJ-FR08, and Pima SJ-FR09 Pima cotton with improved FOV4 resistance, and good lint yield and fiber quality. *Germplasm Release*. p.1-2. 2015.
- 2016 Ulloa, M., Hutmacher, R.B., Percy, R.G., Wright, S.D., Burke, J.J. Registration of five pima cotton germplasm lines (SJ-FR05 - FR09) with improved resistance to *fusarium* wilt race 4 and good lint yield and fiber quality. *Journal of Plant Registrations*. 10:154-158. 2016.
- 2016 Ulloa, M., Wang, C., Saha, S., Hutmacher, R.B., Stelly, D.M., Jenkins, J.N., Roberts, P. Analysis of root-knot nematode and *fusarium* wilt disease resistance in cotton (*Gossypium* spp.) using chromosome substitution lines from two alien species. *Genetica*. 144(2):167-179. 2016.

*Many additional studies have been conducted by Dr. Al Bell and colleagues with USDA-ARS in College Station, TX that can be relevant to discussions of options in dealing with and management of *Fusarium oxysporum* (race 4 or others) in cotton (contact them for additional information).*

*In addition, various researchers in Australia have been figuring out how to deal with two virulent strains of *Fusarium oxysporum* (not race 4) that have had major impact on Australian cotton production and variety choices since the 1990's. For some perspective of the situation that existed for them as early as the late 1990's/2000, see:*

Allen, S.J., P.A. Lonergan. 2000. Control strategies for *Fusarium* Wilt of Cotton in Australia. In: Proc. Beltwide Cotton Conferences, San Antonio, TX 4-8 January, 2000. Nat'l Cotton Council America, Memphis, TN. Pp. 136-138.