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NEW GERMPLASM LINES WITH HIGH YIELD AND FIBER QUALITY COMBINED WITH NEMATODE RESISTANCE Alois A. Bell Jose Ouintana Sandria Prom **USDA-ARS-SPARC College Station, TX** David M. Stelly **Xiuting Zheng** Vince Saladino Texas A&M University-Soil and Crop Sciences **College Station**, **TX Robert L. Nichols Cotton Incorporated** Cary, NC Abstract

The lines BAR-8, -11, -13, -25, -33, -41, and -48 were developed to have both resistance to nematodes and superior yield and quality. All have resistance to reniform nematodes derived from *G. barbadense GB 713* and several carry the DNA marker for Mi_1 , the gene for resistance to root-knot nematodes. From 2011 to 2013 these lines gave yields equal to or greater than many commercial cultivars and produced fiber with similar or greater length and strength. The lines suppressed reniform nematode production by 38 to 67% over 8 weeks with 28°C, 13-hour days and 22°C, 11-hour nights. These lines will be submitted for release as new germplasm lines.