

Development of Peanut Cultivars with the University of Florida: Performance of Florida Breeding Lines in Virginia.

M. BALOTA*, W. CHERRY, Tidewater Agricultural Research and Extension Center, School of Plant & Environmental Sci., Virginia Tech, Suffolk, VA 23437; B. L. TILLMAN, North Florida Research & Education Center, Agronomy Dept., Univ. of Florida, Marianna, FL 32446.

Starting in 2012, University of Florida and Virginia Tech partnered with the goal to develop virginia market type cultivars with increased super extra-large kernel (SELK) content to satisfy the gourmet market requirements. The agreement included crossing and advancement to F4 in Florida, followed by thrips and *Tomato spotted wilt virus* (genus *Tospovirus*; family *Bunyaviridae*) (TSWV), yield trials, and advancement to F7 in Virginia. In this way 'Walton' was released in 2019, even though 'Walton' is not a large seeded cultivar but rather has superior yield that is maintained under dry conditions. In 2020 and 2021, ten lines and five checks including 'Bailey II', 'Emery', 'N.C. 20', 'Sullivan', and 'Walton', were tested for yield and grade characteristics in replicated trials at the Tidewater Agricultural Research and Extension Center (TAREC) in Suffolk, VA, and three other locations in Virginia and Northern North Carolina. In 2020, the test at TAREC included treatments with and without in-furrow thrips control. For this test, thrips damage and TSWV incidence were monitored, in addition to yield and grade. In 2021, all tests were maintained under optimum recommended management. A few lines exhibited superior yield, ELK, and insect & TSWV resistance relative to the checks. For some lines, the SELK content was 10 to 15% higher than for the checks. Results suggest that the UF can develop high yields and large kernels in Virginia.