Release of 'Bailey' Virginia-Type Peanut Cultivar.


The peanut breeding program at N.C. State University, in collaboration with state and federal scientists in North Carolina, Virginia, and South Carolina, announces the release of Bailey virginia-type peanut (Arachis hypogaea L.) cultivar. Bailey, named in honor of the late Jack E. Bailey, formerly the program's collaborating plant pathologist, was developed by the N.C Agricultural Research Service and was released in 2008. It is a BC_{6}-F_{6}-derived inbred line deriving 75% of its ancestry from virginia-type cultivar NC 12C and 25% from N96076L, a disease-resistant registered germplasm line (GP-125, PI 641950) with ancestry from the diploid (2n=2x=20) wild species A. cardenasii Krap. & W.C. Gregory, PI 270806, PI 261942 and NC 5. Bailey is partially resistant to five common diseases in the Virginia-Carolina peanut production area: early leaf spot, Cylindrocladium black rot (CBR), Sclerotinia blight, southern stem rot and tomato spotted wilt virus (TSWV). It has seeds with tan testa averaging 823 mg seed^{-1}, mean jumbo pod content of 36%, fancy pod content of 46%, extra large kernel content of 43%, sound mature kernel content of 66%, and total kernel content of 73%. Yield and grade of Bailey were evaluated over 7 years in the N.C. State Univ. trials, over 4 years in the three-state Peanut Variety and Quality Evaluation (PVQE) program, and over 2 years in the Uniform Peanut Performance Test (UPPT). Its yield has been superior in all those testing programs. In the 2004-2008 PVQE trials, yield of Bailey was greater than the mean yield of other virginia-type cultivars tested over the same period (5391 vs. 4763 kg ha^{-1}, P<0.01) and also greater than the yield of NC-V 11 (5391 vs. 4996 kg ha^{-1}, P<0.01), the next highest-yielding cultivar. Bailey has superior pod brightness for use in in-shell peanut products, and its flavor profile is comparable to that of Florunner, the US peanut industry's flavor standard.