Registration of ‘CHAMPS’ Peanut

‘CHAMPS’ (Reg. no. CV-87, PI 641799) is a large-seeded virginia-type peanut (Arachis hypogaea L. subsp. hypogaea var. hypogaea) cultivar that was jointly released in 2005 by the Virginia Agricultural Experiment Station, Virginia Polytechnic Institute and State University, and the United States Department of Agriculture, Agricultural Research Service. It was evaluated experimentally as VT 9506102–6 in breeder tests, early maturity tests, the Virginia-North Carolina Peanut Variety and Quality Evaluation Program, the Uniform Peanut Performance Tests, and disease management tests. The release of CHAMPS will offer growers a new cultivar with early maturity, excellent grade characteristics, high yield potential, and reduced susceptibility to Tomato spotted wilt virus (TSWV).

CHAMPS was developed from a cross of the breeding line VA 8911215 and the cultivar ‘VA-C 92R’ (Mozingo et al., 1994). The pedigree of VA 8911215 included another virginia breeding line VA 780839P × ‘Virginia 81Bunch’ (Coffelt et al., 1982). From the CHAMPS cross made in the greenhouse in 1992, an F1 plant was grown in the field in 1993 and hand harvested. All F2 seed from the F1 plant were grown in a single field plot in 1994. The segregating F3 seed from this field plot were planted in a nursery in 1995 from which a single F4 plant selection was made for seed increase. Seed of the F4 single plant selection were planted in a nursery field plot in 1996 to produce the F5. The F5 plants were uniform for growth habit with pink testa color and uniform pod and kernel shape and size; therefore, no further selection was made. Seed have continued to be bulked and selfed to the present F12 generation. Yield trials have been conducted since 1997 (Mozingo, 2003). Plants of CHAMPS have a runner growth habit. Mainstem height of CHAMPS (297 mm) is slightly shorter than ‘NC 7’ (330 mm, P < 0.05) (Wynne et al., 1979) and ‘Wilson’ (322 mm, P < 0.05) (Mozingo et al., 2004) equal to ‘NC-V 11’ (297 mm, ns) (Wynne et al., 1991) but taller than ‘VA 98R’ (282 mm, P < 0.05) (Mozingo et al., 2000).

CHAMPS pod characteristics such as shape, size, and bright color make it ideal for the in-shell trade. Measurements of pod brightness were determined by a colorimeter using Hunter L scores (higher number indicates brighter pod color). CHAMPS has similar scores to VA 98R and Wilson (43.6 vs. 43.4 and 44.4, ns). In other tests, CHAMPS has brighter jumbo (47.0 vs. 45.0, P < 0.01) and fancy (46.5 vs. 45.1, P < 0.01) pod color than NC-V 11 and much brighter color than NC 7 for both the jumbo (47.0 vs. 43.8, P < 0.01) and fancy-sized (46.5 vs. 42.2, P < 0.01) pods. The fancy pod percentage of CHAMPS (83%) is higher than VA 98R (73%, P < 0.01), NC-V 11 (75%, P < 0.01), and Wilson (79%, P < 0.01) but lower than NC 7 (88%, P < 0.01). The 34% extra large kernels (ELK) for CHAMPS is higher than Wilson (30%, P < 0.01), VA 98R (32%, P < 0.01), and NC-V 11 (31%, P < 0.01) but lower than NC 7 (44%, P < 0.01). Total kernel content of CHAMPS averaged approximately 1 to 4% higher (P < 0.05) than other cultivars tested. The blanchability of CHAMPS is equal to NC-V 11 (the most large-seeded virginia-type cultivar currently available) in susceptibility (6.7 vs. 7.1 plants 24 m⁻¹ of row when harvested around 140 to 145 d after planting (Mozingo, 2003). The dollar value per hectare at this digging date was also 4.2, 5.3, and 9.2% higher (P < 0.01) than NC 7, NC-V 11, and VA 98R, NC-V 11, and NC 7 when dug at 145 d maturity range (Mozingo, 2003). The blanchability of CHAMPS is equal to NC-V 11 (the most TSWV resistant cultivar tested. On the basis of general observations, CHAMPS responds to recommended insect and disease control measures as well as other released virginia-type cultivars.

Foundation seed will be produced under the direction of the Tidewater Agricultural Research and Extension Center Info. Series No. 471. Royalty is charged on all harvested seed. Breeder seed will be maintained by the Tidewater Agricultural Research and Extension Center Info. Series No. 472. Foundation seed will be produced under the direction of the Tidewater Agricultural Research and Extension Center Info. Series No. 472. Foundation seed will be produced under the direction of the Tidewater Agricultural Research and Extension Center Info. Series No. 472.

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References