Registration of 'ANorden' Peanut

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'ANorden' peanut (Arachis hypogaea L. subsp. hypogaea var. hypogaea) (Reg. No. CV-97, PI 636442) cultivar was developed by the Florida Agricultural Experiment Station (FAES) and approved for release in 2002. ANorden is a runner market-type cultivar with medium maturity (137 d) and has good resistance to spotted wilt disease caused by Tomato spotted wilt virus (TSWV), a Tospovirus. Tested experimentally as UF98511 (92xOL19-3-3-3-b2-B), ANorden originates from a cross made at the North Florida Research and Education Center (NFREC) at Marianna, FL, between two unreleased FAES breeding lines (F72x84B) and F1248. Both lines are runner market-type peanuts with medium maturity and prostrate runner growth habit. F72x84B originates from a cross of ‘Florunner’ (Norden et al., 1969) with a selection from F427-B. The latter is a sister line of ‘Altika’ (Norden and Gorbet, 1974). F1248 was derived by backcrossing the high-oil elite trait (Norden et al., 1987) into ‘Sunrunner’ (Norden et al., 1985) and was a BC1F6 at the time of the cross. A pedigree selection program was followed under conventional management production conditions (fungicide sprays, irrigation, and good fertility) with single plant selections made through the F6 generation. Seed from two F6 plants were bulked to first yield test at the NFREC in 1997. Tomato spotted wilt virus pressure was strong in field breeding nurseries during the selection phase, and emphasis was placed on selecting plants with good runner market-type and resistance to TSWV (Gorbet, 2003).

Plants of ANorden have a runner or prostrate growth habit with alternate branching pattern and normal leaf size and color, being similar in appearance to Sunrunner. Seed of ANorden have pink tests and are plump and rounded to somewhat elongated, similar in size and shape to Florunner, with a 100-seed weight of 61 ± 2 g, similar to ‘SunOleic 97R’ (Gorbet and Knauft, 1995). ANorden is most similar to SunOleic 97R (4506 vs. 3011 kg ha−1, P < 0.01). Total sound mature kernel (TSMK) content was similar for all three (76.2 vs. 77.8, and 75.9%, respectively, not significant). The seed size and weight for ANorden are similar to Georgia Green with a 100-seed weight of 60 to 62 g and a jumbo runner seed size distribution of approximately 16% for both, which is not significantly different. ANorden has typical runner seed size, shape, and appearance but has high-oil chemistry, with about 80% oleic (C18:1) and 2% linoleic (C18:2) fatty acid content of the oil from its seed. The seed of ANorden also have about 46 to 47% oil content with 27% protein and an iodine value of near 78, based on Florida samples (Gorbet, 2003). ANorden is most similar to SunOleic 97R in overall characteristics, except for the pod yield advantage and TSWV resistance.

ANorden has shown better resistance to TSWV than Georgia Green. In 29 replicated field tests in Florida (1998–2001), ANorden rated 3.5 vs. 4.2 (P < 0.05) for Georgia Green and 7.2 (P < 0.01) for Florunner and SunOleic 97R, using a scale of 1 to 10, where 1 = no symptoms and 10 = 100% of plants showing severe symptoms. These tests were planted in April and May with recommended production practices and 18 to 20 seed m−1 of row. In six April space-planted studies in Florida and Georgia (1998–2000) seeded at 6 to 14 seed m−1 of row to maximize TSWV, ANorden had a disease rating of 44.3% vs. 54.2% (P < 0.05) for Georgia Green and a pod yield of 4390 vs. 3716 kg ha−1 (P < 0.05), respectively (Gorbet, 2003). ANorden has not shown any other significant disease resistance in Florida tests. ANorden appears to be similar to somewhat more susceptible than Georgia Green to stem rot (Sclerotium rolfsii (Berk. & M.A. Curtis) Deighton), being more susceptible than Georgia Green (Gorbet, 2003).

ANorden is similar to SunOleic 97R in shelling, blanching, and flavor ratings. Based on data from Florida test samples (1999–2001), ANorden had 88% whole blanched kernels compared with 84% for Georgia Green, not significantly different. In Florida shelling studies (1998–2000), ANorden had somewhat less meat content than Georgia Green (77 vs. 79%, respectively, P < 0.05) with a nonsignificant difference in percent mediums (38.6 vs. 37.6%).

ANorden should be adapted to all U.S. peanut production areas. It received approval for a U.S. Plant Variety Protection Certificate (PVP No. 200300205) in August 2005 for growing only as a class of certified seed. Current commercial seed production is through contracts with Florida Foundation Seed Producers, Inc.,

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