Registration of 'Palmer II' Perennial Ryegrass

'Palmer II' perennial ryegrass (Lolium perenne L.) (Reg. no. CV-160, PI 561707) was developed through cooperative efforts of Lofts Seed of Bound Brook, NJ, Pure-Seed Testing of Hubbard, OR, and the New Jersey Agricultural Experiment Station. It was released in August 1992 by Lofts Seed. Palmer II was evaluated under the experimental designation P-89.

Palmer II is an advanced-generation synthetic cultivar selected from the maternal progeny of 40 clones. Each of these clones contained a fungal endophyte, Acremonium lolii Latch. Kristensen & Samuels. Perennial ryegrasses containing selected strains of Acremonium endophytes have shown enhanced resistance to many harmful turfgrass insects, greater persistence and improved performance under some, but not all, conditions (1,2,3).

Most of the parental germplasm of Palmer II traces to plants selected from old turfs in Maryland, Pennsylvania, New York, and New Jersey from 1962 to 1977. Subsequent generations derived from intercrossing these plants were subjected to several cycles of phenotypic and genotypic recurrent selection. This included screening seedlings for disease resistance, clonal evaluation in spaced-plant nurseries, and half-sib progeny evaluation in seeded turf trials subjected to frequent, close mowing. Plants selected from this program were subsequently crossed with plants related to 'Palmer' perennial ryegrass (4). These progenies were subjected to three additional cycles of selection starting in 1983.

The 60 parental clones of Palmer II were selected from a spaced-plant nursery at Adelphia, NJ, containing >4000 plants selected from closely mowed turf trials. These 60 clones were established in an isolated spaced-plant nursery prior to anthesis. Seed was subsequently harvested from 40 selected plants, each containing the fungal endophyte A. lolii.

An isolated nursery containing 2867 spaced plants was subsequently established near Hubbard, OR, using bulked seed of the 40 parental parents of Palmer II perennial ryegrass. Plants were selected for medium-early maturity, dark color, upright growth habit of seed heads, resistance to leafspot [caused by Drechslera dictyoides (Drechs.) Shoemaker f. sp. perenne Bratman & Graham], resistance to leaf scald [caused by Rhynchosporium orthosporum R.M. Caldwell and R. secalis (Oudem.) J.J. Davis], and high seed yield potential. Plants not meeting these objectives were rogued before anthesis, and breeder seed was harvested from the 555 remaining plants. Certified seed was first harvested in 1992.

Palmer II is a medium-early-maturing, leafy, turf-type perennial ryegrass capable of producing a persistent, dense, low-growing, fine-textured turf with a bright, very dark green color. It has shown improved mowing quality, good summer performance, and good winter hardiness on well-drained soils. Palmer II has excellent seedling vigor, rapid tillering, and the ability to rapidly establish an attractive turf with good wear tolerance. It performs well under varying light intensities from full sun to moderate shade in regions where turf-type ryegrasses are well adapted. Palmer II is recommended for winter overseeding of dormant warm-season turfgrasses on golf greens, tees, fairways, sports fields, and lawns in the southern USA.

Breeder seed of Palmer II will be produced and maintained by Lofts Seed, Inc., with the cooperation of Pure-Seed Testing and the New Jersey Agricultural Experiment Station. Seed classes will include one generation each of breeder, foundation, and certified seed. Application no. 9200209 has been made for U.S. Plant Variety Protection.


References and Notes


Appreciation is expressed to all participants in the National Turfgrass Evaluation program for their assistance in the evaluation of Palmer II.

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Registration of 'VA-C 92R' Peanut

'VA-C 92R' (Reg. no. CV-50, PI 561566) is a high-yielding, large-seeded, virginia-type peanut (Arachis hypogaea L.) cultivar released in 1992 jointly by the Virginia Agricultural Experiment Station, the North Carolina Agricultural Research Service, and the USDA-ARS. It was tested experimentally as VNC 851. VA-C 92R was developed from a cross of the North Carolina breeding line NC Ac. 17213 and the cultivar 'NC 7' (6). The pedigree of NC Ac. 17213 is ' Florigiant' (Fla 939, and the pedigrees of NC 7 is Fla 393/NC 5' (3). The cross was made at North Carolina State University in 1978. The new cultivar was derived by the pedigree breeding system and originated from a single-plant selection made in the F1 generation in 1980. In the F1 generation, plants appeared uniform and seed testa color was mostly pink, although some plants produced seed with tan testa. Individua plants were selected for plant, pod, and seed uniformity as well as pink testa color in the F1 and F2 generations by the coordinator of the Virginia–North Carolina Peanut Variety and Quality Evaluation Program. Seed from these plants were bulked and the plants self-pollinated to produce breeder seed (F3 generation).

Plants of VA-C 92R have an intermediate-runner (spreading) growth habit, with lateral branches less prostrate than Florigiant but more spreading than NC 7. Under similar production conditions, the growth duration of VA-C 92R is approximately equal to 'NC 9' (7) and 'NC-V II' (5), 10 d earlier than Florigiant, and 7 d later than 'VA 81B' (2). VA-C 92R is similar to NC 7 in disease and insect reaction.

Six-year (1986–1991) averages from the Virginia–North Carolina Peanut Variety and Quality Evaluation Program across all locations show VA-C 92R has superior yield compared with current cultivars (4). VA-C 92R averaged 7.8 and 4.6% higher yield than NC 7 and NC 9 at the first harvest date, and 8.5 and 5.8% higher at the second date, respectively. VA-C 92R had fewer loose-shelled kernels (LSK) after harvest than did NC 7 (4.6%, compared with 3.0% for NC 7) and about the same as other prominently grown cultivars of the virginia market class. Average value per ton, based on Peanut Loan Schedule, and total kernel percentage were equal to those of NC 7 at both digging dates.