NOTICE OF RELEASE OF FLOREGEN ITALIAN RYEGRASS WITH RESISTANCE TO CROWN RUST

The Agricultural Research Service, United States Department of Agriculture announces the release of Florege Italian ryegrass (Lolium multiflorum) with resistance to crown rust caused by Puccinia coronata (Pers.) Cak. The cultivar was developed by R.E. Barker of the USDA-ARS National Forage Seed Production Research Center, Corvallis, OR and G.M. Prince of the University of Florida, Gainesville, FL, thus the cultivar name is a combination of Florida and Oregon. Linage of Florege traces through a crown rust resistance selection program to the cultivar Surrey. Specific plants from Florege were grandparents in a ryegrass genetic mapping population and the cultivar will be useful for further cultivar development and other experimental purposes. Florege was field tested for forage and seed production under the experimental designation, FL/OR 1994 LR and FL/OR X 1994 LR.

Florege is a sister selection to the cultivar Jumbo released in 1999 by the University of Florida, Institute of Food and Agricultural Sciences, both developed through three cycles of recurrent selection from 1989 to 1991. In each year, three ramets from about 300 plants showing little or no crown rust symptoms were selected in early April utilizing a 4-by-10 grid selection pattern over a 9000 spaced-plant crossing nursery at Gainesville, FL. More than 900 ramets from selected plants were sent to the USDA National Forage Seed Production Center, Corvallis, OR, in early May of 1989, 1990, and 1991. The ramets were established in a greenhouse and subsequently transplanted to a field to evaluate seed production and resistance to stem rust caused by P. graminis Pers.:Pers.). Seed of selected plants was returned to Gainesville each fall to establish the 1990-1991 and 1991-1992 plantings in Florida. Selection criteria in the Oregon open-pollinated, stratified mass selection nursery was freedom of any stem rust symptoms, total seed yield per plant, and average individual seed weight. Selected plants from the final selection nursery in 1993 were intercrossed in isolation and designated breeder seed.

Vernalization requirement is segregating in Florege with up to 20% of the plants not flowering, or very late under southeastern US conditions in winter forage production trials. Forage yield of Florege was similar to other high yielding annual-type ryegrass cultivars and crown rust resistance was slightly higher when the cultivar was tested twenty-three southeastern US locations. Seed production was higher than other commercial cultivars in two years and at two locations in Oregon.

Florege is a public release and is available without charge to interested individuals or groups. Seed of Florege will be stored at the USDA-ARS National Forage Seed Production Research Center and limited quantities made available upon request while the storage supply lasts. Seed also will be deposited in the National Plant Germplasm System where it will be available for research purposes, including development and commercialization of new cultivars. Appropriate recognition should be given to the source of this germplasm when it contributes to development of a new cultivar or is used in scientific studies. Request seed from Reed E. Barker, USDA-ARS National Forage Seed Production Research Center, 3450 SW Campus Way, Corvallis, OR 97331-7102.

Deputy Administrator, Crop Production and Protection
Agricultural Research Service, U.S. Department of Agriculture

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