CROP REGISTRATIONS

Registration of ‘Derry’ Forage Soybean

‘Derry’ forage soybean [Glycine max (L.) Merr.] (Reg. no. CV-388, PI 601982) was developed by the USDA-ARS at Beltsville, MD, and released on 24 Sept. 1997. It is a Maturity Group VI cultivar released for its superior forage yielding ability; it is not intended for grain production. In replicate 1994 and 1995 trials at Ames, IA, Derry produced an average of 23% more total dry matter per hectare than the adapted grain-type soybean cultivar, Sherman (10 805 vs. 8793 kg ha⁻¹). As a legume with the capacity for symbiotic N₂ fixation, forage soybean can, when properly nodulated by the appropriate bradyrhizobia, provide forage high in protein content, as well as providing the fiber required for livestock health. As with other forage crops, percent crude protein and fiber content of Derry forage will vary with stage of development at harvest. Values of 15.3% crude protein and 53.6% in vitro dry matter digestibility were obtained for Derry forage harvested 116 d after planting at Ames in 1994. Derry has been evaluated for forage production at Chazy and Canton, NY; State College and Landisville, PA; Orange, VA; Yadkin and Forsythe counties, North Carolina; Waseca, Rosemont and Lamberton, MN; Ames and Maquoketa, IA; and Fayetteville and Rohwer, AR, under the experimental designation OR14-13-2. It is an exceptionally tall cultivar with high forage yield potential and good lodging resistance.

Derry is an F₄-derived line from the cross PA4-11b × ‘Tracy M’ (1). The F₂ progeny of this cross were subject to selection for forage type at Beltsville, MD, in 1990. The F₃ and F₄ progeny from this cross were selected for forage type at Orange in 1991 and 1992. PA4-11b was developed from the four-way cross (‘Wilson 6’ × ‘Forrest’) × (‘Perry’ × L76-0253) (2,3,4,5). Successive generations of progeny from this cross were subjected to selection for forage type at State College in 1982 and 1984 and at Beltsville in 1983 and 1985. L76-0253 is an F₄ line from the cross ‘Williams’ × PI 229358 (6).

Derry has white flowers and tawny pubescence. Seeds are yellow, with shiny seed coat luster and black hila. Derry is subject to mutation at the / locus and often contains a low frequency (<1%) self colored black seed. Derry is resistant to bacterial leaf blight [caused by Pseudomonas syringae pv. glycinea (Cooper) Young, Dye & Wilkie], and bacterial pustule [caused by Xanthomonas campestris pv. glycines (Nakano) Dye]. It has expressed field tolerance, at Beltsville, MD, to phytophthora root rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann), but it has no known phytophthora resistance genes. It is susceptible to the soybean cyst nematode (Heterodera glycines Ichinohe), downy mildew [caused by Peronospora manshurica (Naum.) Syd. in Gäum.], and southern stem canker [caused by Diaporthe phaseOLORUM (Cooke & Ellis) Sacc. var. meridionalis F.A. Fern.]. Derry should be increased and maintained under a limited generation system of no more than three generations beyond breeder seed: foundation, registered, and certified. Limited quantities of seed are available for research purposes from the corresponding author for at least 5 years. Seeds of Derry will be deposited in the National Plant Germplasm System. Rights for production and marketing of Derry will be awarded by the USDA-ARS Polyphenol Science Laboratory, Plant Sciences Institute, USDA-ARS, BARC-West, 10300 Baltimore Blvd., Beltsville, MD 20705.

Published in Crop Sci. 38:1719 (1998).

References and Notes


Registration of ‘Donegal’ Forage Soybean

‘Donegal’ forage soybean [Glycine max (L.) Merr.] was developed by the USDA-ARS at Beltsville, MD, and released on 24 Sept. 1997. It is a Maturity Group VI cultivar released for its superior forage yielding ability; it is not intended for grain production. In replicate 1995 trials at Chazy, NY, Donegal produced an average of 66% more total dry matter per hectare than the adapted grain-type soybean cultivar, Sherman (10 329 vs. 6226 kg ha⁻¹). As a legume with the capacity for symbiotic N₂ fixation, forage soybean can, when properly nodulated by the appropriate bradyrhizobia, provide forage high in protein content, as well as providing the fiber required for livestock health. As with other forage crops, percent crude protein and fiber content of Donegal forage will vary with stage of development at harvest. Values of 14.5% crude protein and 47.1% neutral detergent fiber were obtained in 1995 and values of 16.2% crude protein and 47.1% neutral detergent fiber were obtained in 1996.

Donegal has white flowers and tawny pubescence. Seeds are yellow, with shiny seed coat luster and black hila. Donegal is subject to mutation at the / locus and often contains a low frequency (<1%) self colored black seed. Donegal is resistant to bacterial leaf blight [caused by Pseudomonas syringae pv. glycinea (Cooper) Young, Dye & Wilkie], and bacterial pustule [caused by Xanthomonas campestris pv. glycines (Nakano) Dye]. It has expressed field tolerance, at Beltsville, MD, to phytophthora root rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann), but it has no known phytophthora resistance genes. It is susceptible to the soybean cyst nematode (Heterodera glycines Ichinohe), downy mildew [caused by Peronospora manshurica (Naum.) Syd. in Gäum.], and southern stem canker [caused by Diaporthe phaseolorum (Cooke & Ellis) Sacc. var. meridionalis F.A. Fern.].

Published in Crop Sci. 38:1719 (1998).