REGISTRATION OF CULTIVARS

REGISTRATION OF ‘ALFagraze’ ALFALFA

‘ALFagraze’ alfalfa (Medicago sativa L.) (Reg. no. CV-164, PI 540873) was developed by the Georgia Agricultural Experiment Stations and released in February 1990. It was tested experimentally as GA-GC and Georgia-GC.

Alfagraze is a synthetic cultivar. Thirty parental plants were polycrossed with seed from 19 plants bulked to form the Syn 1 generation. These parental plants originated from two cycles of recurrent phenotypic selection from two base populations; the first population included 22 cultivars and/or germplasms and the second was made up of equal portions of 1070 USDA plant introductions (PI). Each cycle was subjected to continuous grazing by beef cattle (Bos taurus) for ≈120 d in each of 3 yr in Cycle 1 and 2 yr in Cycle 2. Populations were bulked (64% cultivar/germplasm based population, 33% PI based population, and 3% ‘Travois’ [1]) after Cycle 1. The estimated genetic constitution is ≈3% M. falcata, 4% Ladak, 9% M. varia, 5% Turkistan, 4% Flemish, 8% Chilean, and 67% unknown sources (2).

Fall dormancy of alfagraze is similar to ‘Vernal’ (3). It is a semierect, broad-crowned type which produces numerous crown buds in the fall (4). Flower color is ≈100% purple with traces of variegated and cream. Alfagraze has resistance to fusarium wilt [caused by Fusarium oxysporum (Schlechtend.:Fr.) f. sp. medicaginis (J.L. Weimer) W.C. Snyder & H.N. Hans.], moderate resistance to anthracnose (Race 1) (caused by Colletotrichum trifolii Bain & Essary) and bacterial wilt [caused by Clavibacter michiganense subsp. insidiosum (McCulloch)], and low resistance to phytophthora root rot (caused by Phytophthora megasperma Drechs. f. sp. medicaginis T. Kuan & D.C. Erwin). It is susceptible to spotted alfalfa aphid [Theroaphis maculata (Buckton)] and blue alfalfa aphid (Acyrthosiphon kondoi Shinji).

Alfagraze is intended for use in the east central and southeastern USA for grazing, hay, and silage production. Under continuous grazing, it is much more persistent than other cultivars tested, yet is similar in yield, palatability, and animal performance (5; Hoveland and McCann, 1990, unpublished data).

A breeder block of ≈2000 Syn 1 plants was established and maintained as clonal material. This material was replicated and transplanted to Prosser, WA, to produce foundation seed (Syn 2). With permission of the breeder, Syn 3 foundation seed can be produced. A certified class (Syn 3 or Syn 4) will also be recognized. Stands of foundation and certified seed fields are limited to 3 and 6 yr, respectively.

Alfagraze was favorably reviewed by the National Alfalfa Review Board in January 1990. An application has been made for Plant Variety Protection. Production and marketing rights were exclusively assigned by the Georgia Seed Development Commission to Agripro Bioresources, Inc.

REGISTRATION OF ‘Haymark’ ALFALFA

‘Haymark’ alfalfa (Medicago sativa L.) (Reg. no. CV-165, PI 542995) was developed by FFR Cooperative in 1988. The cultivar was tested experimentally as 86A44.

Haymark is a 190-clone synthetic with parental clones selected for resistance to Phytophthora root rot (caused by Phytophthora megasperma (Drechs.) f. sp. medicaginis T. Kuan & D.C. Erwin). Germplasm sources (1) included 9% M. falcata, 2% ‘Ladak’, 15% M. varia, 11% Flemish, 6% Chilean, and 55% unknown sources. All clones trace to the cultivars ‘Hi-phy’ and ‘Classic’, and several FFR breeding populations.

Haymark is similar in fall dormancy to ‘Ranger’ with high resistance to anthracnose (Race 1) (caused by Colletotrichum trifolii Bain & Essary), and fusarium root rot. Haymark has been tested for forage yield in the Midwest, Northeast, and Midsouth of the United States. Flower color is ≈90% purple and 10% variegated trace of yellow, cream, and white.

Seed increase is limited to one generation for breeder and foundation classes, and two generations (Syn 1) of the certified class. A maximum of 3, 3, and 6 harvest years is permitted on stands producing breeder, foundation, or 3) of the certified class. Application will not be made for Plant Variety Protection.

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6. Agriculture Dep., Univ. of Georgia, Athens, GA 30602. Registration rights were exclusively assigned by the Georgia Seed Development Commission to Agripro Bioresources, Inc.

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