Polara is basically a low coumarin form of 'Arctic' sweetclover. The main objective of this breeding program was to incorporate the low coumarin gene \( cu \) into the superior and well-adapted Arctic cultivar. The backcross method of breeding was employed, using low coumarin selections and high coumarin Arctic as the recurrent parent. Three consecutive backcrosses were made using honeybees and large plant populations. After the third backcross, low coumarin \( \text{BC}_3 \text{F}_2 \) segregates were intercrossed and the resultant polycross (PC) seed was harvested from each plant. A total of 302 PC progenies were established in replicated tests at Saskatoon, Lacombe, and Brandon. On the basis of these tests, approximately 20% of the PC progenies were rogued prior to flowering from a spaced-plant breeder plot which had been concurrently established at Melfort. Breeder seed of excellent quality was harvested in 1967 and was subsequently used for uniform regional tests.

From test results across Western Canada, Polara yielded 10% less forage than the cultivar Arctic, which was the recurrent parent. This lower yield has been attributed to the low coumarin gene (1). Seed yield is also correspondingly less. However, Polara is equal to Arctic in features such as seedling vigor, relative maturity, and most other agronomic characteristics. A more detailed description of Polara and its performance has been published (2).

Polara is adapted to the same general area as other sweetclovers currently grown in Western Canada. Polara is a low coumarin cultivar and will not cause hemorrhaging or Sweetclover Disease in farm livestock. It should serve a useful and special role in providing a sweetclover forage which is completely safe and free from any danger of causing sweetclover disease in cattle.

Seed of Polara is increased through Breeder, Foundation, and Certified seed classes. Breeder seed is maintained by the Agriculture Canada Research Station, Saskatoon, Saskatchewan. The multiplication and distribution of Foundation and Certified seed is being handled by SeCan Assoc., 885 Meadowlands Dr., Suite 512, Ottawa, Ontario. K2C 3N2.

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References and Notes

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REGISTRATION OF ARKAN HARD RED WINTER WHEAT

'ARKAN' HARD RED WINTER WHEAT ('Triumph' maturity) (Reg. no. 676), PI 475771, KS79H69, was developed cooperatively by the Kansas Agricultural Experiment Station and USDA-ARS. Its pedigree is 'Sage'/'Ark' x 'Scout' but superior to Newton. It has a tendency to shatter when grown in western Kansas. Arkan is awned, short strawed, and early maturing ('Triumph' maturity). Spikes are oblong, middense, and erect. Glumes are white, mid-long, and narrow. Shoulders are narrow and oblique. Beaks are narrow, acuminate, and less than 1 to 2 mm long. Awins are white and 3 to 4 mm long. The kernel is red, hard, mid-long, and ovate; the brush is mid-sized; the crease is midwide and middeep; the cheeks are angular; and the brush is mid-sized and somewhat angular. The seed weight is 250 kg/ha and $0.06/kg, respectively. VA 182 produced 150 kg/ha and $0.06/kg, respectively. VA 182 is highly resistant to black shank caused by Phoma tracheiphila, wilt caused by <i>Pseudomonas syringae</i>, and bacterial wilt caused by <i>Serratia solanacearum</i>. It flowers later and is taller than either parent (NC 95 = 94 cm, Coker 319 = 100 cm, and VA 182 = 115 cm). The leaf type resembles that of Coker 319, but leaves are attached at a more upright angle than either NC 95 or Coker 319. VA 182 has met the chemical, physical, and physiological standards of the Regional Flue-Cured Tobacco Committee and was approved for release by the Virginia Polytechnic Institute and State University Release Committee. A 3-year average for performance in the Virginia Official Variety Test shows that yield and quality exceed that of the high parent, Arkan. Breeder’s seed of VA 182 will be made available to seed producers and seed certification agencies by the Virginia Polytechnic Inst. and State Univ., Piedmont Ctr., Blackstone, VA 23824.

B. P. GOPLEN (3)

REGISTRATION OF VA 182 TOBACCO

'VA 182', a flue-cured tobacco cultivar (<i>Nicotiana tabacum</i>) ('Arkwood' maturity), PI 475771, VA 182, was developed by the Virginia Tobacco Improvement Program at the Virginia Polytechnic Institute and State University at the Ft. Hays Branch Experiment Station during the winter of 1970-71 by Dr. R. W. Littrell. Breeder’s seed of VA 182 will be made available to seed producers and seed certification agencies by the Virginia Polytechnic Inst. and State Univ., Piedmont Ctr., Blackstone, VA 23824. Contributions from the Agric. Exp. Stn. Registration by Crop Sci. Soc. of Am. 1983.

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