was grown in the USDA Uniform Regional Hard Red Spring Wheat Performance Nursery from 1972 to 1977.

Angus was selected from the cross 'Thatcher'/'2*Supreza'/3/'Frontana'/5/5'Kenya 58'/Newthatch'/6/'Pembina'/5*Thatcher/5/Mida'/6/Kenya 117A/2*Thatcher/3/4*Frontana/5*Thatcher/5/MIII-58-4/5/Kenya 58'/Newthatch'/5*Lee'. The semidwarf character was introduced through a selection obtained from Montana and labelled MN III-58-4.

Angus is bronze chaffed, midseason to late in maturity, and is adapted for planting in the northern areas of the North Central spring wheat region of the United States. It has good lodging resistance. The spike is awned, fusiform, and middense. Kernels are red, hard, and medium in length. Angus is resistant to the prevalent races of stem rust (incited by *Puccinia graminis* f. sp. *tritici* Eriks. and E. Henn.) and to most other virulent isolates found in low frequency in the recent stem rust surveys. The cultivar has a different leaf rust (incited by *P. recondita* Rob. ex Desm. f. sp. *tritici* Eriks.) gene(s) than 'Chris' and 'Era'. It is also tolerant of powdery mildew (incited by *Erysiphe graminis* De. f. sp. *tritici* E. Marshall) and ergot (incited by *Claviceps purpurea* [Fr.] Tul.). The hectoliter weight for Angus is similar to that of 'Polk', Chris, and Era, but better than 'Kitt', 'Olaf', and 'Waldron'. Angus yields more grain than Chris and Waldron. Registration performance trials show that Angus is similarly lower than Era in yield in Minnesota, North Dakota, and Montana.

Milling performance, mixing characteristics, and making quality of Angus are satisfactory. It is superior to Chris and superior to Era in bake absorption, but has a longer mixing time than Chris and will be maintained by the Minnesota Agricultural Experiment Station.


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**Registration of Germplasms**

**REGISTRATION OF AZMFA-1 NON-DORMANT MULTIFOLIOLATE ALFALFA GERMPLASM**

*(Reg. No. GP102)*

M. H. Schonhorst, A. K. Dobrenz, R. K. Thompson, and Mark Brick

AZMFA-1 alfalfa (*Medicago sativa* L.) germplasm was developed by personnel of the Arizona Agriculture Experiment Station. This germplasm represents the third cycle of selection for genotypes which displayed more than three leaflets per leaf and a non-winter-dormant growth habit.

A plant having many leaves with more than three leaflets per leaf was found in 'Ladak-65' grown at the USDA, SCS, Plant Materials Center, Tucson, Ariz. Ladak-65 is a very winterhardy and winter-dormant cultivar. The multifoliolate plant was used as the maternal parent in a cross with a vigorous plant selected from 'Mesa-Sirs' a non-winter-dormant cultivar. Approximately 8% of the progeny from this cross expressed the multifoliolate characteristic. Ten of the most highly multifoliolate and high seed setting progeny were selected, vegetatively propagated, and established in an isolated seed production plot. Four of the 10 clones were subsequently used in a detailed study of the transmittability of the multifoliolate leaf characteristic into a non-winter-dormant alfalfa. 3 Syn-1 seed of the 10-clone polycross was identified as Cycle-1, Syn-1. This seed was planted in rows 75 cm apart at Marana, Ariz. on a 1½-ha plot at the rate of 1 kg/ha. Plants not displaying the multifoliolate characteristic 2 months after establishment were removed. Approximately 3,000 plants which strongly expressed the multifoliolate characteristic were used to produce Cycle-2, Syn-1 seed. The same experimental procedures were used to produce Cycle-3, Syn-1 seed.

Seed stocks of AZMFA-1 will be maintained by the Arizona Agriculture Experiment Station, Arizona, Tucson 85721. Fifty grams of seed will be made available upon request. Registration of AZMFA-1 with the Crop Sci. Soc. Am. is requested.

**REGISTRATION OF BARLEY COMPOSITE CROSS XXXV, XXXV-A, -B, AND -C**

*(Reg. Nos. GP27 to GP30)*

J. G. Moseman and P. S. Baenziger

Four spring barley (*Hordeum vulgare* L.) composite crosses, XXXV, XXXV-A, -B, and -C, were identified by their resistance to 1½% percentage points higher than Minnesota checks. The leaf to stem-petiole ratio for these entries was significantly higher than for the check cultivars for the last portion of the growing season. However, the seasonal mean petiole length for this characteristic was not significantly different from that of the check cultivars in any entries.

Seed stocks of the composite crosses will be maintained by the Minnesota Agricultural Experiment Station, St. Paul, Minn. at a rate of 1 kg/ha, and 10 kg of seed will be made available upon request. Registration of the composite crosses with the Crop Sci. Soc. Am. is requested.

**REGISTRATION OF BARLEY COMPOSITE CROSS XXXV, XXXV-A, -B, AND -C**

*(Reg. Nos. GP27 to GP30)*

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