Southern Regional Plant Introduction Stn. The wild parent was probably *A. monnica* Krup. et Rig., since no other wild species are known to produce highly fertile hybrids with *A. hypogaea*. The cross was made in 1961 at the Tex. A&M Univ.-Tarleton Exp. Stn., and subsequent selections were made at that field station. Single plant selections were made through the F2, followed by selection within progeny rows in the F3 and F4, preliminary testing in F5 and F6, and a mass selection in the F7.

Average yield of Tamnut 74 exceeded all of the commercial Spanish cultivars of similar seed size (35 to 34 g/100) and maturity range (120 to 130 days) during the 1969-73 testing period. In 39 tests conducted throughout Texas, Tamnut 74 exceeded the commercial cultivars in average yield as follows: 'Spancross,' 5%; 'Spanhoma,' 6%; 'Starr,' 7%; 'Comet,' 8%; 'Tifspan,' 8%; and 'Spantex,' 22%. Tests conducted in Oklahoma and Georgia in cooperation with the USDA have given similar results.

Pods of Tamnut 74 are more symmetrical than Starr; the enlargements within individual pods are near equal in average size. Also, less variability in diameter among pods has been observed in Tamnut 74 than in Starr. The pod diameter at the constriction averages 9% larger than Starr; whereas the pod length is equal.

Quality and organoleptic evaluations indicated Tamnut 74 is similar to other Spanish cultivars. Chemically, Tamnut 74 has averaged 48.5% oil and 28.1% protein (N × 5.67) with an oil/bread weight of 1.28.

The reactions of Tamnut 74 to pathogens and insects have been similar to that of other commercial Spanish cultivars. However, damaged kernels have averaged significantly lower than Starr in 5 years of testing.

Registration of Rugby Durum Wheat

(Reg. No. 557)

J. S. Quick, D. E. Walsh, K. L. Lebock, and J. D. Miller

'Rosary' (*Triticum turgidum* L. var. durum), CI 17294, is a spring durum wheat developed cooperatively by the N.D. Agric. Exp. Stn. and the ARS, USDA. It was selected from the cross 'Langdon'/3/Ld357/CI 7780/Ld362/4/Brl80/'Wells.' 'Langton' and Wells were important North Dakota durum cultivars and CI 7780 is a source of stem rust resistance from Ethiopia. LD 357 and LD 562 have 'Heidi,' 'Stewart,' 'Carleton,' 'Mindum,' and 'Nugget' in their pedigrees. Be180/Wells is a selection derived from the same F2 plant as 'Leeds.' The final cross was made in 1963 into combine stiff straw with high yield, large kernels, and high test weight, and to combine stem rust resistance from several sources. Rugby was bulked in the F2 generation as a single F3 derived line and first entered in preliminary yield trials in 1968 as selection D6722. It has been tested in the Uniform Regional Durum Nursery (URDN) since 1970, and in North Dakota drill strips since 1971. Rugby has mid-summer white culms that may show purplish coloration under some conditions. The spike is awned (dehisce at maturity), oblong, dense, and erect. The glumes are glabrous, yellow, midling to long, and wide; the glume shoulders are narrow and elevated; and the beaks wide, acuminate, and 3 to 4 mm long. The awns are yellow and 6 to 16 cm long. The kernels are amber, hard, midling, and elliptical; the germ mid-sized; the crease midwide and shallow; the cheeks angular to rounded; and the brush very short (essentially none).

In 40 URDN tests during 1970-73 in North Dakota, South Dakota, Minnesota, Montana, and Manitoba, Rugby has been slighly higher in yield over the commercial cultivars in average yield as follows: 'Spancross,' 5%; 'Spanhoma,' 6%; 'Starr,' 7%; 'Comet,' 8%; 'Tifspan,' 8%; and 'Spantex,' 22%. Rugby has been equal to Ward in grain yield and about 11% higher than USD. Rugby has a slightly higher kernel weight and a slightly lower test weight than USD grown in regional tests.

Rugby has been equal to Ward in resistance to stem rust, leaf rust, leaf spot diseases, height, and lodging in North Dakota. Rugby was one day later in heading. Rugby had the highest level of resistance to stem rust of all 810 wheats tested in the International Spring Wheat Rust Nursery. The overall quality of Rugby is excellent compared with other North Dakota cultivars. The protein quality and quantity, milling performance, and spaghetti firmness of Rugby were good. The average spaghetti color of Rugby was higher than any other North Dakota variety in tests during 1971-1973.

Rugby was named and released by the N.D. Agric. Exp. Stn. and the ARS, USDA, Dec. 27, 1973. Breeder seed will be maintained by the Seedstocks Project, N.D. Agric. Exp. Stn., Fargo, ND 58102. The National Small Grain Variety Review Board has approved Rugby for certification. Rugby is described further in N.D. Farm Res. 51 (4), 1974.

Registration of Germplasms

REGISTRATION OF ALFALFA GERMLASM POOLS NC-83-1 AND NC-83-2

(Reg. Nos. GP 45 and GP 46)

W. R. Kehr1, D. K. Barnes1, E. L. Sorensen1, W. H. Skrdla2, C. H. Hanson1, D. A. Miller1, T. E. Thompson, L. J. Elling1, R. L. Taylor1, M. D. Rumbaugh, E. T. Bingham, D. E. Hanson, and M. K. Miller1

Members of the NC-83 Regional Project developed two alfalfa (*Medicago sativa* L) germplasm pools in order: i) to provide broad-based populations that could be used as sources of disease, insect, and stem nematode, *Ditylenchus dipsaci* (Kühn) Filipjev, resistance plus desirable agronomic traits for alfalfa improvement programs in the North Central region of the United States, ii) to provide plant breeders with large quantities of seed from which they could select plants with favorable combinations of traits, and iii) to preserve germplasm.

**GP 45 (NC-83-1).** NC-83-1 has two main sources of parental germplasm. One source contained 94 cultivars, experimental synthetics, breeding populations, and released germplasms adapted to the northern alfalfa growing areas of the United States. Most of these entries had resistance to one or more important pests.