

REGISTRATION OF ANZA WHEAT

'ANZA' hard red spring wheat (*Triticum aestivum* L.), CI 15284, (Reg. no. 687) was bred and selected in Mexico by N.E. Borlaug and associates in the Mexico-Rockefeller Foundation prior to the formation of CIMMYT, (International Maize and Wheat Improvement Center) and sent to California in 1964. It was evaluated at Davis in 1964 and in statewide tests in 1965 under the designation D6413. It was reintroduced to California in 1969 in the CIMMYT International Spring Wheat Yield Nursery and subsequently tested throughout California as D6923. The cultivar was named and released by the California Agricultural Experiment Station in 1971. Subsequently or simultaneously very similar or identical cultivars were released in New Zealand ('Karamu'), Sudan ('Mexicani'), South Africa ('Turpin 4'), Chile ('SNA-1'), and Iran ('Moghan-1'). The same or a very similar line was used in Australian breeding programs as WW15, but not released in that country as a cultivar.

Anza was selected from the cross ('Lerma Rojo' × 'Norin 10'-'Brevor') × [('Yaktana 54' × Norin 10-Brevor) × 'Andes'³]. Its hybrid and selection number in Mexico is II8739-4R-1M-1R. Anza was selected for uniformity at Davis and the cultivar was released as a bulk of about 250 head-row-derived lines from II8739-4R-1M-1R.

Anza is widely adapted in regions throughout the world

where cultivars with spring growth habit are planted in the fall and winter. At the time of release, the yield performance of Anza was about 20% higher than commercial cultivars in California (1). Performance data from the International Spring Wheat Yield Nursery showed that Anza was high-yielding in a large number of countries. Typically, Anza has low grain protein concentration and does not perform well in breadmaking tests at high or low protein levels. It is well-accepted in California for general purpose (family) flour use. Flour yield is high and milling performance is generally very satisfactory.

Anza has resistance to stripe rust (caused by *Puccinia striiformis* West.) and to the barley yellow dwarf virus, both of which attribute to its good performance in California. Anza has been the dominant cultivar in California since 1975 and was a major contributor to expanded wheat area (3-fold since 1970) and yield per hectare (two-fold since 1970). It is also widely grown in Spain and Portugal.

Anza is short-statured (80 to 90 cm in irrigated production fields), having the *Rht-1* gene from Norin 10. It has excellent lodging resistance and is midseason to medium late in maturity. Shatter resistance is excellent. Spikes are fully awned, middense, and erect with a tendency to nod at maturity. Glumes are short-awned, cream to white in

color. The peduncle tends to S-shape. Anza is distinctly bimorphic in height. About 0.5% or fewer of the plants are about 10 cm taller than the general population. This instability in height has not been removed by repeated rigorous head-row selection. Kernels are red, medium in size, tending toward soft texture, and, rather low in protein content; hectoliter weight is excellent.

Breeder and foundation seed are maintained by the Foundation Seed and Plant Materials Service, Dep. of Agronomy and Range Sci., Univ. of California, Davis CA 95616.

C.O. QUALSET, H.E. VOGT, AND N.E. BORLAUG (2)

References and Notes

1. Qualset, C.O., J.D. Prato, J.A. Rupert, H.E. Vogt, M.A. Khalifa, W.F. Lehman, and W.H. Isom. 1973. Anza—a new high-yielding, short-statured wheat variety. *Calif. Agric.* 27(2):14–15.
2. Professor of agronomy, staff research associate, Agronomy and Range Science Dep., and former director, Wheat Program, CIMMYT, respectively. Registration by the Crop Sci. Soc. of Am. Joint contribution, from the Dept. of Agronomy and Range Science, Univ. of California, Davis, CA 95616 and the Int. Maize and Wheat Improvement Ctr. (CIMMYT) Mexico. Accepted 12 Mar. 1984.