Registration of Crop Cultivars

REGISTRATION OF LEED SAFFLOWER
(Reg. No. 5)

D. E. Zimmer and A. L. Urie

'Leed' safflower (Carthamus tinctiorius L.) originated as a single F₂ selection of a cross between U-1421, a rust- and root-rot resistant line, and Gila. Leed was developed by the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, in cooperation with the Utah Agricultural Experiment Station, Logan, Utah. Prior to release it was identified by the number U-153. Leed appears particularly well-adapted to irrigated production in the Intermountain Region, and has performed well in irrigated trials in California. It has not performed well on dryland or in irrigated trials in Arizona.

When grown in 13 competitive yield trials in Utah, Idaho, and California, Leed out-yielded 'Ute,' 'Gila,' and 'Frio' (varieties which comprise the bulk of the commercial acreage) by 7.0, 18.1, and 24.5%, respectively. Its oil percentage exceeded that of Gila and Ute by approximately 1%, and was nearly equal to that of Frio. Leed was higher in test weight than Frio, and equal to Gila and Ute. It was slightly taller than Gila and matured slightly later.

Leed is somewhat variable in height. Its flowers are primarily orange, but with a trace of red and yellow. It branches as profusely as Ute but has larger heads and seed size. It exhibits secondary branching, a characteristic not present in other varieties. This character results in a greater depth of flowering canopy and may contribute to the increased yield of Leed over other varieties.

Although Leed resulted from a cross involving U-1421, a rust and root-rot resistant line, it does not possess the level of rust resistance of U-1421. However, it is more resistant than Frio and Gila to rust and root rot. It is less tolerant to cold than Frio, and cannot be grown in areas where plants are exposed to frost after they have advanced from the rosette stage.

Leed was released to seed growers in California, Utah, and Idaho in 1968. The Utah Agricultural Experiment Station will be responsible for maintenance of breeder seed.

REGISTRATION OF AGENT WHEAT
(Reg. No. 471)

E. L. Smith, A. M. Schlehuber, H. C. Young, Jr. and L. H. Edwards

'Agent' hard red winter wheat (Triticum aestivum L. em. Thell.), CI. 13523, was developed by the Oklahoma Agricultural Experiment Station and released in 1967. It originated as an F₂ head row selection from the cross: 'Triumph' × Triticum spp.-Agropyron elongatum. The variety is the result of a program initiated in Oklahoma in 1947 for the purpose of transferring leaf rust resistance from Agropyron to common wheat. The Triticum-Agropyron parent was a leaf rust-resistant selection obtained from Kansas which was designated KS 464708. This selection resulted from an intergeneric cross made earlier by W. J. Sando, ARS, USDA. The final cross involving Triumph was made in 1950 at the Oklahoma Agricultural Experiment Station for the specific purpose of combining the leaf rust resistance of KS 464708 with the desirable characteristics of Triumph. The leaf rust resistance of Agent was derived from Agropyron and behaves as if controlled by a single dominant gene. Cytological analysis (E. E. Sebesta, unpublished data) indicates that the variety represents a natural translocation involving wheat chromosome 3D (XVI).

Agent has winter growth habit, is midseason in maturity, and midtall in plant height. The stem is white and strong; the spike is awned, oblong to fusiform, middense, and erect to inclined; the glumes are glabrous, white, long, and narrow; the shoulders are narrow and apiculate; the beaks are midwide, acuminate, and vary from 7 to 16 mm in length; the awns are white and 4 to 10 cm in length; the kernels are

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