germ is midsized; the crease is midwide and shallow; the cheeks are rounded; and the brush is midsized and midlong.

Nicoma has dark, hard kernels. It is similar to Triumph in maturity, plant height, test weight, and winterhardiness, but has stronger straw than Triumph. Nicoma apparently carries the “Triumph Type” resistance to loose smut. Although susceptible to leaf rust in the seedling stage, Nicoma has some degree of adult plant resistance. In field tests, it has consistently averaged 15% less leaf rust than Triumph. During 5 years (1967 to 71) of testing in Oklahoma, Nicoma exceeded Triumph in grain yield by an average of 12% and was slightly better than “Scout 66” and “Danne.” Nicoma is markedly superior to Triumph in milling and baking quality. It has a long mixing time and a high mixing tolerance of the dough, and hence, should be useful in blending with mellow-gluten wheats in the production of bread flour. The replacement of part of the acreage by Nicoma would tend to improve the grain of the wheat crop in Oklahoma.

Breeder seed, which initially resulted from 1000 300 head rows, will be maintained by the Oklahoma Experiment Station.

Variety protection has been applied for Variety Protection Act, Public Law 91-577, and it may be sold only as a class of certified seed as a protected variety.

*H. Pass, E. L. Smith, and L. H. Edwardson; 1973. Texas Agricultural Experiment Station, College Station, and now at Plant Genetics and Breeding Laboratory, USDA, and the University of California, Davis, California 95616. Published September, 1973.

The ciliates at the apex of the anthers, previously fork-like stylar branches in marked contrast to stigmas of normal pearl millet, have no margin hairs or scabroid surface. The pistil is normal trichome development is characterized by short hairs smooth to the touch in contrast to the normal Tift 23B. The lack of leaf-blade margin barbs causes the leaves to be very thin in Tift 23B. The tuberances of the epidermal cells of the shoot. Tift 23B is thought to be present in all pearl millet stocks, are completely suppressed in Tift 23B.

The ciliates in this stock are nonvillous, and groups of prominent hairs which often ring the nodes are completely absent. No woolly hairs are present below the base of the panicle in Tift 23B tr plants, nor are the hairs present on the main stem, the rachis, and cultured on artificial medium. Seedling plants were treated with colchicine to produce the amphidiploid UC-38. UC-38 is moderately tall (about 100 cm) with stiff straw. It has spring growth habit, but is late-maturing under field conditions at Davis. The spikes are awned, and show tolerance to the barley yellow-dwarf virus.

UC-38 is resistant to stripe rust, and shows resistance to the barley yellow-dwarf virus.

Selections were made for cytological stability in the fifth and sixth generations after synthesis. UC-38 which regularly form 20 to 21 bivalents and stable pollen. Fertility under field conditions is good with 50 to 66% fertile florets and 1 to 3 spikelets in the field at Davis in 1972.


Registration of Germplasm

REGISTRATION OF TIFT 23B tr PEARL MILLET GERMPLASM

(Reg. No. GP 4)
Jerrel B. Powell and Glenn W. Burton

Tift 23B tr (Reg. No. GP 4) pearl millet (Pennisetum typhoides (Burm.) Stapf and C. E. Hubb.) inbred was developed cooperatively by the Southern Region, Agricultural Research Service, U.S. Department of Agriculture, and the Georgia Coastal Plain Experiment Station, Tifton, Georgia, and was released December 20, 1972.

Tift 23B tr is an inbred line of pearl millet with the trichome-suppression trait (tr). The tr trait suppresses virtually all protuberances of the epidermal cells of the shoot. Tift 23B tr is homozygous recessive for a single gene controlling trichome suppression. The absence of surface hairs on the leaf blade and lack of leaf-blade margin barbs causes the leaves to be very smooth to the touch in contrast to the normal Tift 23B. The normal trichome development is characterized by short hairs and claws on veins of upper and lower surfaces of the blade. The sheath, which is normally rough and moderately hairy in Tift 23B, is very smooth in Tift 23B tr. The ciliate ligule characteristic of 23B is modified into a ligule without cilia in Tift 23B tr. The culms in this stock are nonvillous, and groups of prominent hairs which often ring the nodes are completely absent. No woolly hairs are present below the base of the panicle in Tift 23B tr plants, nor are the hairs present on the main stem, the rachis, and cultured on artificial medium. Seedling plants were treated with colchicine to produce the amphidiploid UC-38. UC-38 is moderately tall (about 100 cm) with spring growth habit, but is late-maturing under field conditions at Davis. The spikes are awned, and show tolerance to the barley yellow-dwarf virus.

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Registration of UC-38 TRITICALE GERMPLASM

(Reg. No. GP 1)
J. P. Gustafson, Earlene A. Rupert, and J. L. McDonald

UC-38 hexaploid triticale (X Triticeae 17266) resulted from a cross of the durum wheat (Secale cereale L. (durum group)) Chile var. '24' and diploid rye (Secale cereale L.) No. 3081-la made at the University of California, Davis. The rye parent, a tall line in the collection of wild rye made in California by the U.S. Department of Agriculture, was a female in the cross. The durum parent, a dwarf obtained from Chile in 1968. The UC-38 triticale were obtained from embryos excised 14 days postanthesis and cultured on artificial medium. Seedling plants were treated with colchicine to produce the amphidiploid UC-38. UC-38 is moderately tall (about 100 cm) with spring growth habit, but is late-maturing under field conditions at Davis. The spikes are awned, and show tolerance to the barley yellow-dwarf virus.

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