Registration of ‘Tamcot Pyramid’ Cotton

‘Tamcot Pyramid’ cotton (Gossypium hirsutum L.) (Reg. no. CV–120, PI 617042) was developed by the Texas Multi-Adversity Resistance (MAR) Genetic Improvement Program, Department of Soil and Crop Sciences, Texas Agricultural Experiment Station (TAES) and released in 2000. The TAES-MAR cotton genetic improvement program utilizes techniques and selection procedures for the simultaneous genetic improvement of resistance to abiotic and biotic stresses in addition to yield, earliness, fiber, and seed quality (Bird, 1982; El-Zik and Thaxton, 1989).

Tamcot Pyramid combines high yield potential, earliness, and excellent fiber properties with wide adaptation over the diverse growing and environmental conditions in Texas. Tamcot Pyramid was derived by crossing ‘Tamcot Sphinx’ (El-Zik and Thaxton, 1996) and CD3HGCBU87S-1-91, an unreleased MAR strain. CD3HGCBU87S-1-91 was the result of cross between CD3HCAUGH-2-88 (El-Zik and Thaxton, 1998) and CABIUCAG8HUS-1-88, an unreleased MAR strain. On the basis of visual selection for yield potential, bolls from individual plants were bulked within an F2 row for advance to the F3 generation. By means of the MAR procedures (Bird, 1982; El-Zik and Thaxton, 1989), a single F3 plant was selected on the basis of boll set in the greenhouse for subsequent field evaluation. The resulting F3 progeny row was selected in the field on the basis of apparent yield potential, overall plant conformation, and fiber quality in comparison with commercial checks in 1995, was hand harvested and given the strain designation MAR-SPXCDUG8H-1-95.

Tamcot Pyramid is early maturing, has pubescent stems and leaves, is galled, possesses normal leaves and bracts, is nectariferous, and has dark green leaves. It has a cylindrical shaped growth habit, flowers with cream-colored pollen, and storm resistant bolls. On the basis of measurements from yield trials conducted at College Station and Chillicothe, TX, in 1999, plants of Tamcot Pyramid are of medium height, averaging 4 cm taller than Tamcot Sphinx and 2.5 cm shorter than ‘Paymaster 330’ (Calhoun et al., 1997).

Tamcot Pyramid is highly resistant to bacterial blight [caused by Xanthomonas campestris pv. malvacearum (Smith) Dye]. Tamcot Pyramid has similar levels of resistance to aphids (Aphis gossypii Glover), thrips (Thrips and Frankliniella spp.), fleahopper [Pseudatomoscelis seriatus (Reuter)], boll weevil (Anthonomus grandis Boheman), tobacco budworm [Heliothis virescens (F.)], bollworm [Helicoverpa zea (Boddie)], and sweetpotato whitefly (Bemesia argentifolii Bellows & Perring), plus pathogens causing seed-seeding diseases (Pythium ultimum Trow and Rhizoctonia solani Kühn), Vorticillium wilt (Vorticillium dahliae Kleb.), Fusarium wilt-root-knot nematode [Meloidogyne spp.], and other pests affecting cotton as Tamcot Sphinx. was made in 1989. Falcon (PI 59612) (Helm et al., 1996) was developed at the Crop Development Centre (FCDC) of Alberta Agriculture, Food and Rural Development (AAFRD), and was granted the designation MAR-SPNXCDUG8-1-95.

Lint fraction was similar to Tamcot Sphinx and Paymaster 330. On the basis of 17 yield trials in Texas during 1999, upper half mean (UHM) length, fiber uniformity index of Tamcot Pyramid was 1% larger than Paymaster 330. The UHM length of Tamcot Pyramid averaged 10% higher lint yield and 3% shorter and strength was 7% lower than Paymaster 330. Micronaire reading of Tamcot Pyramid averaged 4.4 for Tamcot Sphinx and Paymaster 330.

The Registration of ‘Tyto’ barley

‘Tyto’ barley (Hordeum vulgare L.) (Reg. no. CV-110, PI 632403) was released in 2002. Tyto was developed by Crop Development Centre (FCDC) of Alberta Agriculture, Food and Rural Development (AAFRD), for full registration (Reg. no. 5496) in 2002 by the Canadian Food Inspection Agency, Ottawa, ON, Canada. Tyto was supported in part by grants from the Texas Food and Fibers Commission, and Cotton Incorporated, USDA/ARS. Tyto was released on the state of Texas and in Oregon.

References


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