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REGISTRATION OF TAMCOT SP37H COTTON¹

(Reg. No. 75)

L. S. Bird²

'TAMCOT SP37H' cotton (*Gossypium hirsutum* L.) was developed in the Texas A&M Multi-Adversity Resistance (TAM-MAR) program of the Texas Agricultural Experiment Station and was released in October 1977. The new cultivar was developed from parent strains of the Tamcot SP21 (Reg. No. 61) and Tamcot SP37 (Reg. No. 63) families (2, 6). The cross (66N, B.V.65), \times (526, B.V.65), was made and individual plant selection began in the F_1 of the single cross. Individual plant selection was based on seed coat resistance to mold and a reduced rate of germination when held for 8 days on 1.5% water agar at 13.3 C. This was followed by selection for seedling cotyledon resistance to a mixed inoculum of races 1, 2, 7, and 14 of the bacterial blight pathogen [*Xanthomonas malvacearum* (E. F. Sm.) Dowson]. Selecting to the F_7 gave strains H²-45-74, H²-46-74, and H²-47-74. Tamcot SP37H is a composite of these strains and was evaluated under the name TX-CAMD-H. The described levels of resistance used for representing relative differences with respect to departure from a susceptible type have been given (4).

SP37H has high resistance to bacterial blight (conditioned by the B₂, B₃, and B₇ genes); resistance to the *Fusarium* wilt root-knot nematode complex [caused by *Fusarium oxysporum* f. sp. *vasinfectum* (Atk.) Snyder and Hans. and *Meloidogyne incognita* (Kofoid and White) Chitwood] and *Verticillium* wilt (incited by *Verticillium albo-atrum* Reinke and Berth., MS). SP37H has partial resistance to the seedling disease complex, seed rot and seed deterioration, and intermediate resistance to early season cold conditions. It has the same delay-kill resistance (plants dying at a reduced rate) to *Phymatotrichum* root rot [caused by *Phymatotrichum omnivorum* (Shear) Dug.] as Tamcot SP37.

Tamcot SP37 is tolerant to fleahoppers [*Pseudatomoscelis seriatus* (Reuter)] which has been demonstrated by Tamcot SP37H yielding significantly higher than the equally pubescent Tamcot SP37 in the presence of fleahoppers (3, 5, 6, 7). Earliness of Tamcot SP37H is a trait that aids in evading late season damage from *Heliothis* spp. and the boll weevil (*Anthonomus grandis* Boh.).

Tamcot SP37H has the same degree of earliness as Tamcot SP37 (2, 3, 7). The yield potential for Tamcot SP37H is equal to that of Tamcot SP37 but is significantly higher than that for Stoneville 213. The bolls of Tamcot SP37H are storm resistant and the plant type and fruiting habit are suitable to both machine picking and stripping.

The average characteristics of Tamcot SP37H fiber are estimated to be: length 26.7 mm, strength 566 MPa, and micronaire

4.19. Average boll weight is 5.0 g seed cotton and lint percent is 39.5.

The Foundation Seed Service of the Texas Agricultural Experiment Station will produce foundation seed which will be sold to producers of registered and certified seed. Application for plant variety protection with title V, which requires that Tamcot SP37H be sold only by cultivar name as a class of certified seed, has been made.

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REGISTRATION OF CRAWFORD SOYBEAN¹

(Reg. No. 125)

C. D. Nickell and F. W. Schwenk²

'CRAWFORD' soybeans [*Glycine max* (L.) Merr.] originated as an F_4 selection from a cross, 'Williams' \times 'Columbus', made at the Kansas Agricultural Experiment Station. Before its release in 1977, Crawford was designated K1019.

Crawford was in preliminary tests in 1975 and uniform tests in 1976 and 1977 conducted by federal and state research workers at releasing experiment stations in Illinois, Kansas, and Missouri. It also was tested in Delaware, Indiana, Iowa, Kentucky, Maryland, Nebraska, New Jersey, Ohio, Oklahoma, Pennsylvania, Texas, Virginia, and Mississippi.

Crawford is of Group IV maturity, averaging 10 days later than 'Cutler 71' and the same as Columbus. It is best adapted to southern Illinois, Kansas, and the High Plains of Texas. It is similar to Cutler 71 and Columbus in growth type, seed appearance, and chemical composition. It also has purple flowers, tawny pubescence, and brown pods. Seeds are light yellow with shiny coat luster and black hila. Crawford's chief advantage is that it yields more than Cutler 71 or Columbus.

Crawford is moderately resistant to races 1 and 2 of *Phytophthora megasperma* (Drechs.) var. *sojae* A. A. Hildeb.

Foundation seed of Crawford was produced in 1977 and released to certified seed producers in 1978. The Kansas Agricultural Experiment Station will maintain breeder seed. Additional information on Crawford has been published.³

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