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Table 1. Identification and agronomic characteristics of four pairs of greenbug-resistant vs. susceptible near-isolines and two check cultivars of winter barley.†

Reg. no.	Selection no.‡	PI or CI no.	Heading date§	Plant height	Test wt.	Grain yield
				cm	kg m^{-1}	kg ha^{-1}
GP-97	OK87851S	518635	0	81	605	4294
GP-98	OK87851R	518636	−1	84	595	4146
GP-99	OK87852S	518637	−2	82	616	4038
GP-100	OK87852R	518638	−1	85	601	3999
GP-101	OK87853S	518639	−4	81	624	3523
GP-102	OK87853R	518640	−3	78	613	3273
GP-103	OK87854S	518641	−3	80	620	3688
GP-104	OK87854R	518642	−2	80	619	3852
–	Rogers	9174	0	81	577	3546
–	Will	11652	0	76	541	3748

† Date collected in Stillwater, OK, and averaged across 3 (heading date and test weight) or 4 (plant height) yr. Grain yield data collected from replicated plots (3.7 m^2) in Stillwater and Woodward, OK, in 3 yr over five experiments.

‡ Near-isoline pairs share a common selection number, but each line differs in character suffix according to its response to greenbug biotypes C and E (S = susceptible and R = resistant).

§ Days earlier than Rogers, the recurrent parent.

¶ LSD (0.05) = 427 kg ha^{-1} for comparing grain yield means between near-isoline pairs.

greenbug. Each line was homogeneous for resistance or susceptibility and consistent for responses to both biotypes. Small amounts of seed of each line are available for research purposes upon written request to B.F. Carver, Department of Agronomy, Oklahoma State University, Stillwater, OK 74078.

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REGISTRATION OF MISCOT T8-27 COTTON GERMPLASM

A GERMPLASM line of cotton (*Gossypium hirsutum* L.), Miscot T8-27 (Reg. no. GP-353) (PI 518655) developed by the Mississippi Agricultural and Forestry Experiment Station was released in 1987. Miscot T8-27, tested as T8-27-8-7, was developed from a cross between 'DES 56' (2) and 'TAMCOT SP37' (1).

Miscot T8-27 is resistant to all known USA races of *Xanthomonas campestris* pv *malvacearum* (Smith) Dye, the causal agent of bacterial blight. It is also as resistant as 'McNair 235' to fusarium wilt [caused by *Fusarium oxysporum* f. sp. *vasinfectum* (Atk.) Snyd. and Hans.]. Miscot T8-27 was more resistant than 'Stoneville 213' to tobacco budworm, *Heliothis virenscens* F. Yields of Miscot T8-27 were 62% higher than Stoneville 213 in larvae infested plots and 20% higher in larvae controlled plots of tests conducted at the USDA-ARS Crop Science Laboratory, Mississippi State, MS in 1985 and 1986.

Miscot T8-27 yielded 8.4% more lint and matured slightly earlier than 'DES 422' in tests at Mississippi State and Stoneville, MS from 1984 to 1986. Lint percentage of Miscot T8-27 was 1.9 units greater than DES 422 but fiber length was 1.8 mm shorter. Micronaire and strength of Miscot T8-27 were equal to those traits in DES 422. Tested in a composite with two sister lines, Miscot T8-27 produced higher yields than Stoneville 213 in regional Heliothis tests conducted at locations from North Carolina to Texas.

Seed (25 g) of Miscot T8-27 may be obtained from the Department of Agronomy, P.O. Box 5248, Mississippi State, MS 39762.

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References and Notes

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3. F.M. Bourland, Dep. of Agronomy, Univ. of Arkansas, Fayetteville, AR 72701 (formerly, Dep. of Agronomy, Mississippi State Univ., Mississippi State, MS 39762); and R.R. Bridge, Delta Branch, Mississippi Agric. For. Exp. Stn., Stoneville, MS 38776. Registration by CSSA. Accepted 3 Apr. 1988. *Corresponding author.

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REGISTRATION OF EIGHT SUB-OKRA COTTON GERMPLASM LINES

EIGHT germplasm lines (Stoneville 825S, DES 422S, DPL 26S, DPL 5540S, SC-1S, DES 210S, Tamcot Camd-ES, and MD 65-11S), designated GP-354 through GP-361, PI 518761 through PI 518768, of sub-okra upland cotton (*Gossypium hirsutum* L.) were released cooperatively by USDA-ARS and the Delta Branch of the Mississippi Agricultural and Forestry Experiment Station in 1987. These sub-okra strains were produced by crossing HYC 79-6, a sub-okra germplasm release (3) with the respective six cultivars and two germplasm lines by selecting sub-okra plants in the BC_4F_4 generation.

Sub-okra leaf 2(L_2^u) is a mutant leaf type of the multiple allelic series at the L_2 locus on chromosome 15 of the D genome. Normal leaf cottons, 2 (l_2), have either wider leaf lobes and/or less indentation between the major lobes than does sub-okra leaf. Visual differences among these genotypes have been fully described previously (1,4).

In 1984 and 1985, the integrated canopy apparent photosynthesis for sub-okra averaged about 7% higher than that of normal leaf (4). Comparisons with near isogenic F_3 normal vs. sub-okra populations indicated that sub-okra had a potential for increasing cotton yields at Stoneville by about 5% in 1982 (1). In 1985, sub-okra (BC_4F_3) lines were compared with their eight recurrent parents at three locations near Stoneville (2). The lint yield results indicated that sub-okra leaf averaged significantly higher yields, about 3%, but the yield difference ranged from −2.4 to 10.5%, depending on the genetic background of the comparison. Yield comparisons in 1986 with MD 65-11, Stoneville 825, and DES 422 showed sub-okra lines produced significantly higher yields, about 7% higher than their normal leaf recurrent parents.