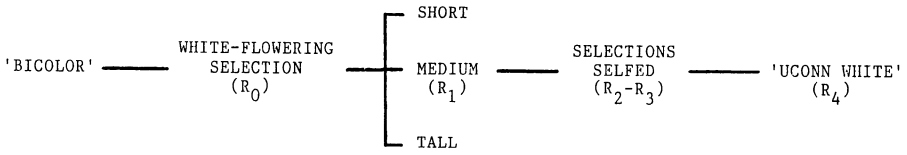

Fig. 2. Pedigree of *Torenia fournieri* 'UConn White'.

Table 1. Performance documentation of *Torenia* 'UConn White'.

Date	Population[z]	Procedure	Plant mean height (cm)
Jan. 1986	Bicolor leaf explants	Callus initiated	---
Oct. 1986	White-flowered variant	Selected from R_0 somaclones	---
Jan. 1987	R_0	Seeds collected	---
July–Aug. 1987	R_1	Seeds collected	12 (small) 20 (medium) 33 (tall)
Sept. 1988	R_2	Seeds collected	21
Nov. 1988	R_3	Seeds collected	20

[z]All flowers of R_1, R_2, and R_3 were white.

growth chamber. The white plant was grown to flowering in 9-cm plastic pots containing Fafard No. 2 growing mix under natural light conditions with weekly fertilization of Peter's 20N–20P–20K at 200 ppm N. The original somaclonal variant, from which 'UConn White' was derived, was the only white-flowering somaclone in the R_0 generation.

Description

The R_1 generation, from which 'UConn White' was selected, had three types of growth habit: an open, spreading form that attained a height of 30 to 35 cm; an upright, bushy type that grew to 20 cm; and a dense, compact form with short internodes that reached 12 cm in height. The original 'Bicolor' torenia grew to a height of 30 cm and typically had long internodes and an open appearance. 'UConn White' was selected from the 20-cm plants (Table 1, Fig. 2).

'Bicolor' flowers had a white upper lip and a three-lobed blue (purple–blue) lower lip with a yellow blotch at the base of the middle lobe. Both lips on 'UConn White' flowers are white; however, the lower lip is faint violet when flowers open but fades to white as the flowers mature. All 'UConn White' flowers have a yellow blotch on the middle lobe of the lower lip and a pale yellow tint in the center of the side lobes. Flower sizes are similar between 'Bicolor' and 'UConn White' plants. *Torenia* flowers typically have two pairs of stamens of unequal length (1). 'Bicolor' and 'UConn White' exhibit this characteristic; however, the compact form from the R_1 generation frequently had flowers with a fifth stamen. This characteristic has not appeared in the sexually propagated generations of 'UConn White'. Other characteristics of 'UConn White' are similar to 'Bicolor'. 'UConn White' produces viable seed and maintains its growth habit and white flower color when sexually or asexually propagated.

Availability

Seeds of 'UConn White' have been collected from plants grown under 23C greenhouse conditions. The initial presence of three growth habits demonstrated the potential for morphological characteristics to segregate in the R_1 generation. The selection of a single growth characteristic and its persistence for three more generations demonstrate genetic stability.

For further information regarding seed availability for either trial or experimental purposes, contact M.P.B.

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'TexSprout' Mungbean

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Additional index words. *Vigna radiata*, sprouting

The mungbean [*Vigna radiata* (L.) Wilczek] is an important short-duration annual grain legume. Mungbean is grown principally for its edible dry seeds, which are high in protein, easily digested, and prepared in numerous forms for human consumption; e.g., as a green vegetable and for sprouts. Other attributes of the crop include drought tolerance, high lysine content as compared to cereal grains, low production of flatulence, and wide adaptability. Commercial production occurs throughout Asia, Australia, the West Indies, South America, and tropical and subtropical Africa. In North America, production is centered in northern Texas and Oklahoma. Annual world mungbean production is estimated at 1.4 million t harvested from ≈3.4 million ha (1). In the United States >50 million kg of bean sprouts are produced annually from 8.3 million kg of mungbean seeds (4).

The mungbean industry in Texas is centered in Vernon, close to the Oklahoma border, with a secondary production area near San Antonio. The crop frequently is planted in rotation with wheat (*Triticum aestivum* L.) and can account for up to 8000 ha. The Texas crop is grown for the Oriental food industry, primarily for bean sprout production. In recent years, Texas producers have been challenged by foreign imports, indicating a need for a new cultivar possessing many improvements over 'Berken', the standard in the United States. Therefore, a mungbean im-

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Table 1. Performance summary for 'TexSprout' mungbean, College Station, Texas, 1981–87.[z, y]

Entry	Days to first flower	Days to first ripe pod	Seeds per pod	100-seed wt (g)	Plant height (cm)	Lodging[x]	Shattering[w]	Yield (kg·ha^{-1})
TexSprout	36 a	52 a	12 a	7.8 a	46 a	1 a	1 a	1158 a
Berken	40 b	57 b	10 b	7.0 b	50 b	2 b	3 b	1045 a
Lincoln	41 b	57 b	12 a	6.6 c	57 c	2 b	3 b	817 b

[z]Rows were spaced 1 m apart, and within-row spacing was 8 to 10 cm.
[y]Means within columns separated by Duncan's multiple range test, $P = 0.05$.
[x]1 = Little or no lodging to 3 = severe lodging. Lodging not evaluated in 1985 or 1986, as it was not a problem.
[w]1 = Little or no shattering to 3 = severe shattering.

Table 2. Performance summary for 'TexSprout' mungbean, Lubbock, Texas, 1985–87.[z, y]

Entry	Yield (kg·ha^{-1})	100-seed wt (g)
TexSprout	1245 a	8.4 a
Berken	953 b	7.6 b
Lincoln	858 b	7.2 c

[z]Rows were spaced 1 m apart, and within-row spacing was 8 to 10 cm.
[y]Means within columns separated by Duncan's multiple range test, $P = 0.05$.

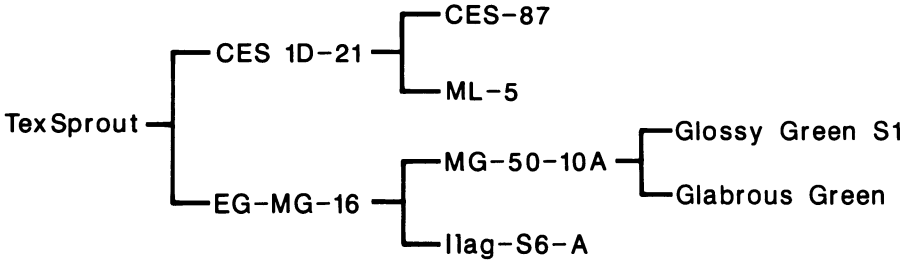

Fig. 1. Pedigree of 'TexSprout' mungbean.

provement program was initiated by the Texas Agricultural Experiment Station (TAES) in 1980 as an adjunct to the vegetable legume improvement program and involves participation in the International Mungbean Nursery Trials of the Asian Vegetable Research and Development Center (AVRDC) (3).

In 1988, TAES and AVRDC announced the joint release of the 'TexSprout' mungbean. The major advantages of 'TexSprout' include high seed and sprout yields, wide adaptability (3), synchronous flowering and fruiting, lodging and shattering resistance, erect growth habit, and large seeds. 'TexSprout' can be sensitive to pendimethalin (Prowl) herbicide. While it is adapted to all growing areas of Texas, it is temperature-sensitive; i.e., days to flowering are increased by low temperatures (2).

Origin

'TexSprout' was selected from a cross of V3476 (CES ID–21 or Pag-asa 1) x V1400 (EG-MG-16), both of Philippine origin, made at AVRDC in 1977. The pedigree of 'TexSprout' is shown in Fig. 1. It was tested both as the AVRDC line VC1973A and TX1973A, a single plant selection from VC1973A, and was first entered in Texas yield trials in 1981. From 1981–87 TX1973A was evaluated in 16 trials in five locations in Texas. It was released to the Texas A&M Univ. Foundation Seed Service for increase in 1986.

Description

'TexSprout' displays an erect growth habit with a determinate growth pattern and green hypocotyl. Leaf, petiole, and leaf blade joint are green. Leaves are pubescent. The terminal leaflet shape is deltoid. Flowers are yellowish-green. Peduncles are medium to long (14–18 cm) with raceme postition mostly above the canopy. Immature pods, including ventral suture, are light green. The semiflat mature pods are black with pendant attachment. Pod pubescence is intermediate between glabrous and heavy pubescent. Seeds are shiny green and oval with a concave hilum.

'TexSprout' possesses moderate resistance to *Erysiphe polygoni DC.* (powdery mildew), *Cercospora spp.* (cercospora leaf spot), *Cydia spp.* (pod borer), and *Aphis spp.* (aphid) and is highly resistant to both shattering and lodging. 'TexSprout' is earlier flowering, earlier maturing, and generally higher-yielding than 'Berken' or 'Lincoln' (Tables 1 and 2). It usually produces ≥12 seeds per pod and with its larger seeds (Table 2), produces superior sprouts in both size and yield. Both preliminary laboratory and commercial evaluations (William Huie and Joe Paetzold, personal communications) have indicated that 'TexSprout' possesses superior sprouting characteristics; i.e., thick, long, very white hypocotyls, with sprout weight to seed weight ratio of 9:1.

Availability

Foundation seed of 'TexSprout' is available from The Foundation Seed Service, Texas Agricultural Experiment Station, College Station, TX 77843–2581.

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