

TEXAS AGRICULTURAL EXPERIMENT STATION
Route 3, Lubbock, TX, 79401

1) A sterile mutant in progeny of a Forrest x Kent cross (Glycine max L.).

Sterile plants were found in an F₅ single-plant progeny row from a cross of 'Forrest' x 'Kent'. This sterility was observed in Row 15177 of the 1977 soybean breeding nursery grown at the Texas Agricultural Experiment Station, Lubbock, TX. Such sterility has not been previously reported in progeny of Forrest x Kent.

The single row segregated 35 fertile to 17 sterile plants. Sterile plants grew vigorously, developed small, seedless pods, and retained their leaves until frost. Although no cytological examinations of the sterile plants were made, the sterility closely resembles the st series reported by Hadley and Starnes (1964), Palmer (1974), and more recently by Winger, Palmer and Green (1977). The sterility is controlled by a single gene in the homozygous recessive condition. Two nonallelic asynaptic or desynaptic mutants, st₂ and st₃, were documented by Hadley and Starnes (1964), and st₄, a third nonallelic mutant, was reported by Palmer (1974). The fourth mutant reported by Winger, Palmer and Green (1977) was found to be allelic with st₂.

Seeds have been harvested from the 35 individual fertile plants, and a progeny test will be carried out to determine if segregation occurs. Until suitable tests for allelism can be completed, the mutant has been designated the "TAES Lubbock sterile".

References

- Hadley, H. H. and W. J. Starnes. 1964. Sterility in soybeans caused by asynapsis. *Crop Sci.* 4: 421-424.
- Palmer, R. G. 1974. A desynaptic mutant in the soybean. *J. Hered.* 62: 280-286.
- Winger, C. L., R. G. Palmer and D. E. Green. 1977. A spontaneous mutant at the st₂ locus. *Soybean Genet. Newsl.* 4: 36-40.

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