wheatgrass. It competes successfully with winter annual weeds and will crowd out cheatgrass when properly managed.

Sherman is recommended in range reseeding for early spring grazing and for hay either alone or in mixture with alfalfa in dryland areas where one hay cut is made annually. It is also used for conservation purposes and for reseeding burned-over areas and forage lands in plains zones of Western States. Beef cattle have gained more weight on Sherman than on other seeded or native species in Colorado studies.

Seed yields of Sherman have ranged from 224 to 360 kg/ha depending on seasonal rainfall, culture, and age of stand.

Four classes of seed (breeder, foundation, registered, and certified) are recognized for Sherman. Breeder and foundation seed are maintained by Plant Materials Center, Soil Conservation Service, Pullman, Washington.

REGISTRATION OF TIBBEE CRIMSON CLOVER

W. E. Knight

'Tibbee' crimson clover, Trifolium incarnatum L., is an early maturing, reseeding variety. It was developed cooperatively by the Plant Science Research Division, Agricultural Research Service, U.S. Department of Agriculture, and the Mississippi Agricultural and Forestry Experiment Station, State College, Mississippi. The variety was released in 1970 for use in the Southeast for fall, winter, and early spring grazing.

Tibbee is a result of selection from PI 238812 received from Italy in 1955. This introduction also produced 'Frontier', a soft-seeded crimson clover released in 1962. Tibbee possesses the desirable characteristics of Frontier, i.e. early maturity, superior seedling vigor, greater fall and winter growth, high forage and seed yields, and large seed. It also possesses the ability to reseed under the environmental conditions of the lower Southeastern United States. The hard seed characteristic was obtained by seven generations of natural selection requiring establishment of volunteer stands annually during late summer and early fall.

The new variety has been evaluated in the Southeastern region since 1967 as an experimental strain. Forage yields from reseeding stands of Tibbee indicate that the level of hard seed is adequate to furnish good stands and forage production. Results from forage trials in the region indicate much higher fall and winter forage production from Tibbee than from any other winter-hardy legume tested. Tibbee is about equal to other crimson clover varieties in total forage production.

Measurements of seed characteristics over a 5-year period indicate that large seed size has been maintained as the percentage hard seed increased. The average seed weights in grams per 1,000 seed were 2.88, 2.90, 2.92, and 3.53 for varieties 'Autauga', 'Dixie', 'Chief', and Tibbee, respectively. Retention of large seed size contributes to the superior seedling vigor and early fall growth of Tibbee. Large seed size and superior seedling vigor contribute to better stands and earlier growth of forage. These characteristics can best be exploited by early seeding on a prepared seed bed, for initial stands, and by practicing summer fallow for reseeding stands. However, satisfactory establishment can be obtained in perennial grass sod without seed bed preparation provided the grass residue is removed in September. Performance data and a description of the variety have been published.

Tibbee is the earliest maturing reseeding crimson clover variety. Maturity is about 7 to 10 days earlier than the early varieties such as Autauga and 14 to 18 days earlier than the late varieties such as Chief and Experiment Station.

Seed production of Tibbee is limited to three generations from breeder seed; namely, foundation, registered, and certified. The Mississippi Agricultural and Forestry Experiment Station, State College, Mississippi maintains breeder seed.

REGISTRATION OF DELCOT 277 COTTON

W. P. Sappenfield, T. Kerr, and W. M. Bugbee

'Delcot 277' cotton (Gossypium hirsutum L.), Mo. 63-277D, was developed cooperatively by the Missouri Agricultural Experiment Station and the Plant Science Research Division, Agricultural Research Service, U.S. Department of Agriculture, and released in 1970.

Delcot 277 originated from the cross 'Rex' × (TJ × EF 310)F₂. Rex is early maturing, tolerant to fusarium and verticillium wilts, and resistant to Race 1 of bacterial blight. (TJ × EF 310)F₂, noted for superior fiber properties, was a selection from the following series of crosses:

F₁ (TH 108 × Hopi Acala 6-1-4) × (Cook × Empire) × Tanguis

F₁ × F₁ (Pandora × Early Fluff 310) × Early Fluff 310

F₂ Selection phase

F₃ Selection phase

F₄ Selection phase

F₅ Selection designated (TJ × EF 310) TH 108 originated from the trispecies hybrid G. hirsutum — arboreum — thurberi. 'Tangus' is a variety of G. barbadense.

The early generations of the cross, Rex × (TJ × EF 310), were grown at Portageville, Missouri, under conditions permitting identification of early-maturing plants with resistance to verticillium and fusarium wilts and superior lint quality. A single plant, selected in 1959 from the F₂ generation, gave rise to the strain later designated Mo. 63-277 which proved to have superior resistance to verticillium wilt. Reselections from Mo. 63-277 made in the F₂ generation were evaluated 1965-69 separately and as a composite under the designation Mo. 63-277C in the 1967 Regional High Quality test. Two of the reselections, 865-391 and 865-396, were increased at Iguala, Mexico, 1967-68, and blended 1:1 for production of breeders seed of Mo. 63-277D in 1968. Performance of Mo. 63-277D in local and regional tests has been reported previously.

The outstanding characteristics of Delcot 277 are resistance to verticillium wilt (Verticillium albo-atrum) Reinke and Berth.

1 Registered by the Crop Science Society of America. Received Cooperative Investigations of the Plant Science Research Division, Agricultural Research Service, U.S. Department of Agriculture, and the Mississippi Agricultural and Forestry Experiment Station Journal Paper No. 29, Mississippi Agricultural and Forestry Experiment Station, State College, Mississippi. Received Sept. 24, 1971.


