

array of germplasm. Selections from this polycross were subsequently combined and progeny tested in various polycross and synthetic combinations. In 1955, four of the five parent clones of Fox were selected from this material; the fifth clone, 23-29, was selected from 'Fisher' after two generations of selfing.

In Minnesota, Fox is similar to 'Lincoln' in time of maturity. It is superior to other brome grass cultivars in seedling vigor, seedling resistance to *Rhizoctonia solani*, root rot, and resistance to certain races of leaf spot disease (*Helminthosporium* spp.). Forage yield is equal to that of Lincoln. Tests indicate that Fox is adapted throughout Minnesota. It is probably adapted in adjacent states and Canada.

One generation each of breeder seed, foundation seed and certified seed classes is recognized for Fox. The Syn 1 generation of the five clones constitutes breeder seed which is maintained by the Minnesota Agricultural Experiment Station.

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## REGISTRATION OF TILLMAN WHITE CLOVER<sup>1</sup>

(Reg. No. 4)

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'TILLMAN' white clover (*Trifolium repens* L.) is a 6-clone synthetic variety developed cooperatively by the South Carolina Agricultural Experiment Station and the Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture. The parent clones, from Ladino white clover of diverse origins, were selected for profuse branching of stolons, sparse flowering, persistence of stands, general disease resistance, and improved forage production in South Carolina. Progeny evaluations were made in polycross and clonal cross tests.

Tillman was tested as S.C. Expt. Var. The probable areas of adaptation are the areas in the Southern States adapted to Ladino.

Plants and seed of Tillman and Ladino are indistinguishable, but Tillman is superior in persistence of stands and in forage production.

Seed production of Tillman will be limited to three generations of increase from breeder seed; namely, one each of foundation, registered, and certified. Foundation and registered Tillman seed will be produced in Idaho, Oregon, or Washington. Only two successive seed crops will be permitted from a foundation or registered seed field. Certified Tillman seed may be produced from foundation or registered seed. The six parent clones and breeder seed will be maintained by the South Carolina Agricultural Experiment Station. Breeder seed will be an equivalent of viable seeds from each of three clonal crosses 269 × 462, 2682 × 3757, and 4384 × 4736.

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## REGISTRATION OF WESTBURN COTTON<sup>1</sup>

(Reg. No. 53)

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'WESTBURN' cotton (*Gossypium hirsutum* L.), 36A17, OK 253, originated as an F<sub>4</sub> progeny row from a single F<sub>3</sub> plant selected from a cross between 'Auburn 56' and 'Western Stormproof' and was developed by the Oklahoma Agricultural Experiment Station. The breeding objective was to combine the stormproof boll of Western Stormproof with the resistance of Auburn 56 to the fusarium wilt-root knot nematode disease complex, caused

by *Fusarium oxysporium* f. *vasinfectum* (Atk.) Synder and Hansen, and *Meloidogyne incognita* var. *acriti* Chitwood, 1949.

F<sub>2</sub> plants were selected for resistance to the disease complex and for the stormproof boll type. The F<sub>3</sub> progenies of these selected plants were grown in Mexico without artificial selection. Westburn descends from an F<sub>4</sub> progeny row of a single F<sub>3</sub> plant. The progeny row was selected for the stormproof boll, resistance to the fusarium wilt-nematode complex, and fiber length. In tests conducted in Oklahoma, Texas, and Alabama, Westburn's yield and resistance to fusarium wilt and nematodes has compared well with those of 'Auburn M' (Table 1). In addition, Westburn has performed favorably compared to Auburn M and 'Lankart 57' under conditions where fusarium wilt and nematodes are not a problem (Table 1).

Westburn is fairly early, has a somewhat spreading growth habit, and has a stormproof boll. Its fiber length generally averages slightly longer than most other stormproof varieties, while its fiber strength and micronaire are similar to most stormproof varieties presently available.

The primary agronomic advantage of Westburn is the combination of its stormproof boll and its resistance to fusarium wilt and nematodes. These characters were not previously available together in a commercial variety before the development of Westburn.

Table 1. Average performance of Westburn and two check varieties in tests conducted on fusarium wilt and nematode infested and noninfested soils.

Variety	Lint yield, kg/ha	Pulled lint percent	2.5% span length, inches	Micronaire, units	T <sub>1</sub> stielometer strength, grams/tex	Percent first harvest
On infested soils*						
Lankart 57	298	23.8	1.04	3.8	18.1	—
Auburn M	434	21.5	1.09	3.7	19.6	—
Westburn	427	22.8	1.04	3.6	18.4	—
On noninfested soils†						
Lankart 57	667	25.8	1.04	4.0	34.8	61.0
Auburn M	708	25.2	1.10	3.8	37.8	64.8
Westburn	734	25.2	1.07	3.5	37.7	60.4

\* Data from five tests conducted at two locations over 3 years. Tests were harvested only once. Therefore, percent first harvest could not be estimated. † Data from five tests conducted at four locations over 2 years.

Westburn was released in 1967 to certified seed growers. The Oklahoma Agricultural Experiment Station is responsible for the maintenance of breeder seed.

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## REGISTRATION OF NORSTAR FLAX<sup>1</sup>

(Reg. No. 30)

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'NORSTAR' flax, *Linum usitatissimum* L., C.I.2290, was developed at the University of Minnesota Agricultural Experiment Station, St. Paul, by the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, and the Department of Agronomy and Plant Genetics, University of Minnesota. It was released as a variety in April 1969.

Norstar is the progeny of a single F<sub>4</sub> plant selected in 1958 from a bulk population of 'Redwood' × 'Crystal.' Evaluation of Norstar in local and regional trials from 1962 to 1968 has

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