GA-SRT is a spring-type triticate selected from the cross PI 429220/PI 434889. PI 429220 was developed in California; the origin of PI 434889 is unknown (1). Both parents are complete hexaploid triticales and express long latent periods of infection (1). Transgressive segregation for length of latent period (T_{50}) of GA-SRT indicates that some of the genes conferring long latent period differ between the parents (2). Individual F_{2}, F_{3}, and F_{4} progeny were successively selected for long T_{50} after inoculation in the greenhouse at Purdue University. Individual F_{4} plants were selected in the greenhouse at Tifton, GA, and grown as F_{4} seed at Athens, GA, and Redland, NC. Selection for seed quality and fertility, as estimated by low ergot infection, caused by Claviceps purpurea (Fr.:Fr.) Tul., were made on F_{4} bulked seed. Eighteen selections with long latent period were evaluated at Tifton in 1989 and 1990 and at Plains, GA, and Quincy, FL, in 1990 for agronomic performance in comparison with agronomic checks, parental lines, and leaf rust susceptible checks. GA-SRT yielded significantly less on parental lines. The T_{50} performance in comparison with agronomic checks, parental lines, and leaf rust susceptible checks.

In field evaluations, all selections with long latent period resistance exhibited some heterogeneity for plant type, height, and maturity due either to outcrossing or segregation. GA-SRT was identified as the long latent period selection with the most desirable agronomic characteristics. Heading date and height of GA-SRT at Tifton were 79.6 d and 113 cm, as compared to 77.1 d and 107 cm for 'Beagle 82'. GA-SRT yielded significantly less (2765 kg ha^{-1}) than the cultivars Beagle 82 (3165 kg ha^{-1}), 'Sunland' (3535 kg ha^{-1}), and 'Florida 201' (3875 kg ha^{-1}), but greater than the parental lines PI 434889 (2160 kg ha^{-1}) and PI 429220 (1695 kg ha^{-1}) in four location-years of evaluation. Test weight of GA-SRT (614 kg m^{-3}) was greater than that of Beagle 82 (599 kg m^{-3}), but significantly less than that of Sunland (695 kg m^{-3}) and Florida 201 (650 kg m^{-3}).

In field trials, rust severities on all selections except the susceptible controls were negligible, so final severities on GA-SRT were not significantly less than on parental lines. The T_{50} latent period of the F_{4} selection was at least 30 d, whereas the means of PI 434889 and PI 429220 in the same greenhouse evaluation were 19.3 and 18.5 d respectively. Mean T_{50} values determined from a replicated test in 1992 of GA-SRT, PI 434889, and PI 429220 were 27.2, 19.0, and 15.7 d respectively [LSD (0.05) = 1.7]. The latent periods for the parents from these tests are longer than those previously reported (1); therefore, the reported latent period of GA-SRT may also be slightly longer than is characteristic. However, because the T_{50} of GA-SRT was significantly longer than either parent in 1992, it is comparable to the commercial standards. These germplasm clones appeared resistant to the spread of sugarcane mosaic virus and smut (caused by Ustilago scitaminea Syd. & P. Syd.). Small quantities of seed can be obtained for research and breeding purposes.

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References and Notes
5. Legendre, B.L., and W.H. White, USDA-ARS, Sugarcane Res. Unit, Houma, LA 70360; J.D. Miller, USDA-ARS, Sugarcane Production Res. Unit, Canal Point, FL 33438; and J.W. Dunckelman, Florida Sugar Cane League, Inc., Clewiston, FL 33440 Contribution of the USDA-ARS. Registration by CSSA. Accepted 30 Sept. 1992. *Corresponding author.

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Registration of GA-SRT Slow Leaf-Rusting Triticate Germplasm

TRITICALE (x Triticeosecale Wittmack) germplasm GA-SRT (Reg. no. GP-13 [PI 561844] with slow-rusting resistance to leaf rust, caused by Puccinia recondita Roberge ex Desmaz. f. sp. tritici, was developed and jointly released by the USDA-ARS and the University of Georgia Agricultural Experiment Stations in 1992. GA-SRT was selected for slow rusting resistance at Purdue University and for agronomic performance at the University of Georgia Coastal Plain Experiment Station.