REGISTRATION OF DT369 HIGH-YIELDING, SEMIDWARF DURUM WHEAT GERMPLASM

DT369 SPRING DURUM WHEAT, *Triticum turgidum* L. var. *durum* Desf. (Reg. no. GP-329, PI 546362), was developed at the Agriculture Canada Research Station at Swift Current, SK, as part of the South Saskatchewan Wheat Breeding Program. DT369 is a high-yielding, strong-gluten, semidwarf durum wheat. DT369 was released in 1984 because of its potential value as germplasm for durum breeding programs.

DT369 derives from an F₅ plant selected from the cross between Wascana (1), a Canadian cultivar having medium-strong gluten, and ‘Quilafen’, a semidwarf introduction from Chile possessing very strong gluten characteristics. It was developed by a modified pedigree method in which leaf- and stem-rust resistant plants were selected in the F₂. Testing and selecting were done for grain yield, rust resistance, and pasta quality in the F₃, F₅, and F₇ generations under the designation 7267-90D2H. The F₄ and F₆ generations were grown in a winter nursery in Brawley, CA, or Ciudad Obregon, Mexico.

It was tested in the Canadian Durum Wheat Cooperative test as DT369 during 1980 to 1983. In 22 location-years of testing in the aridic haploboroll and mesic boroll soil zones of Saskatchewan and Alberta, the grain yield of DT369 was 105% of ‘Wakooma’ and ‘Medora’, the highest-yielding check cultivars. In the udic boroll soil zone of Manitoba and Saskatchewan, DT369 yielded 95% of Medora, the highest-yielding check cultivar in 19 location-years of testing. DT369 is similar in maturity to Wakooma and Wascana. DT369 has the *RhtI* gene and its height ranges from 80 to 85% of that of Wakooma and ‘Coulter’, respectively. DT369 has higher resistance to lodging than Wakooma and Wascana but is not as resistant as Medora. The test weight of DT369 is equal to Wascana and is slightly less than other check cultivars. The kernel weight of DT369 is on average 3 mg less than that of Wascana. The spikes of DT369 have glabrous, buff-colored glumes. The awns are long, white, and spreading at maturity. The straw of DT369 has hollow internodes with little or no anthocyanin coloration. DT369 is resistant to the prevalent races of rust (caused by *Puccinia recondita* Roberge ex Tul. & C. Tul. and *P. graminis* Pers.: Pers.) and loose smut (caused by *Ustilago tritici* (Pers.) Rostr.). It is moderately susceptible to kernel smudge and common root rot (caused primarily by *Cochliobolus sativus* (Daesch.) Drechs. ex Dastur) and to septoria leaf spot (caused by *Septoria* spp.).

In 4 yr of testing in the Canadian Durum Wheat Cooperative Test, the protein content of DT369 was lower than that of ‘Hercules’, the statutory standard. DT369 had very good milling and cooking quality, very strong gluten, good pigment level, and low pigment loss. It was faulted for its low protein content.

DT369 seed stock is maintained by the Agriculture Canada Research Station, Swift Current, SK S9H 3X2. Small quantities can be obtained for research and breeding purposes.

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References and Notes
