Nekota is a semidwarf wheat that is 6 cm taller than Vista and 2 cm shorter than Alliance in Nebraska. In South Dakota, Nekota is 2.5 cm taller than TAM 107 and 2.5 cm shorter than Alliance. Nekota (79 mm) has an intermediate length coleoptile, which is longer than Alliance (66 mm) and similar to TAM 107 (80 mm). The straw strength of Nekota is superior to Arapahoe, but less than that of Redland, Siouxland, or 'Thunderbird'. The winterhardiness of Nekota is adequate for Nebraska and South Dakota growing conditions, superior to 'Vona', TAM 200', and Rawhide, and similar to 'Scout 66'. Nekota is a medium-early maturity wheat, with a similar anthesis date as Alliance in Nebraska but 1 d earlier than Alliance in South Dakota. In both states, Nekota is approximately 2 d later than TAM 107 and 2 d earlier than both Arapahoe and Redland.

Nekota is heterogeneous for scalins encoded by the Sec-1 locus, which is indicative of the Amigo translocation (1A/1R). Nekota has exhibited moderate resistance to stem rust (caused by 

Puccinia graminis
Pers.:Pers.). It carries Sr6 and is heterogeneous for the Amigo gene. Nekota is moderately susceptible to leaf rust (caused by 

Puccinia recondita
Robere ex Desmaz.) and is susceptible to the Great Plains biotype of Hessian fly (Mayetiola destructor
Say), soilborne wheat mosaic virus, and wheat streak mosaic virus (determined in greenhouse tests using mechanical inoculation). The Amigo translocation is reported to confer nonpreference to the wheat streak mosaic virus vector (wheat curl mite: Eriophyes tulipae
Keifer; syn. 

Aceria tulipae
) (1); hence, field infections of Nekota may be less than other susceptible wheat cultivars.

Nekota's grain volume weight (75.6 kg hL

−1
) in Nebraska is superior to Siouxland (74.5 kg hL

−1
), Redland (73.4 kg hL

−1
), Arapahoe (73.8 kg hL

−1
), Vista (73.6 kg hL

−1
), and Alliance (73.8 kg hL

−1
). Nekota exhibited exceptional grain volume weight characteristics in South Dakota (78.4 kg hL

−1
), superior to 'Abilene' (77.9 kg hL

−1
), Arapahoe (76.5 kg hL

−1
), Vista (76.2 kg hL

−1
), and Alliance (76.0 kg hL

−1
). The milling and baking properties of Nekota were determined using 6 yr of testing by the Nebraska Wheat Quality Laboratory, with Arapahoe and Scout 66 as check cultivars. The average wheat and flour protein content of Nekota is heterogeneous and is only acceptable in some environments. Nekota is lower than Arapahoe, but higher than Scout 66. The baking absorption of Nekota was similar to Arapahoe and less than Scout 66, with a lower gluten content. The dough mixing properties were weaker than Arapahoe and similar to Scout 66. While the baking absorption of Nekota was similar to Arapahoe and less than Scout 66, average loaf volumes were greater than Scout 66 and less than Arapahoe. The external appearance and internal attributes of the baked bread loaf indicated generally acceptable quality characteristics.

Breeder seed of Nekota will be maintained by the South Dakota and Nebraska Agricultural Experiment Stations. Nekota will not be submitted for U.S. plant variety protection. Foundation, registered, and certified seed will be commercially available.

References and Notes


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Registration of 'AC Sunset' Safflower

'AC Sunset' safflower (Carthamus tinctorius L.) (Reg. no. CV-20, PI 592391) was developed at the Research Centre, Agriculture and Agri-Food Canada, Lethbridge, AB, Canada. The experimental designation for 'AC Sunset' was Lefas 273. Registration no. 4201 was issued for AC Sunset on 16 Nov. 1995 by the Variety Registration Office, Plant Products Division, Food Production and Inspection Branch, Agriculture and Agri-Food Canada. AC Sunset is the third safflower cultivar registered in Canada and the second dual-purpose birdseed and oilseed cultivar. 'Saffire' (1), which was released in 1985, 'AC Stirling' (2), which was released in 1991, and S-208, a standard U.S. cultivar, were used for comparison.

AC Sunset has orange to orange-red flowers, produces plants of relatively short height, has spiny leaves. Relatively few spines are found on the outer involucral bracts. It is as early maturing as Saffire (Table 1). Oil quality is similar to that of Saffire, with an iodine value of 151.2 and linoleic acid (C18:2) and oleic acid (C18:1) concentrations of 829 and 82 g kg

−1
 of oil, respectively.

AC Sunset resulted from modified pedigree selection from the cross 'Mexican Dwarf R/H4'/'Gila'/3/'Saffire' *2/5/'S-208'. Mexican Dwarf is a dwarf mutant of Indian origin selected from the USDA World Collection in the 1972-1973 season in Valle del Fuerte, Sinaloa, Mexico (3). The parental line RH-4, was developed at Logan, UT, for its reduced hull percentage (4). Gila was developed in Arizona and has been grown continually in the southern USA and abroad. Saffire is an early-maturing cultivar developed at Lethbridge, AB (1), S-208 is a standard U.S. cultivar, developed in the late 1960s in California. The fifth-level cross, named LKSAF 68, was designed for earliness and improved oil; the cross was made in 1983. Single F2 plants were screened in 1984 for early maturity, high oil content, bright achene color, and absence of pappus. Single-plant selections were made in F3 and F4 progeny rows. An F4 plant selected in 1986 was planted as an F3 progeny row in 1987 and harvested in bulk. This bulk, having the highest oil level of that cross, was designated as Lefas 273. In 1988 and 1989, dryland and irrigated replicated yield tests were conducted in Lethbridge in southern Alberta. In both years, Lefas 273 was also evaluated for resistance to sclerotinia head rot [caused by 

Sclerotinia sclerotiorum