FACT SHEET

Selection OR 3920036
Winter Durum
PROPOSED NAME: **CONNIE**
Warren Kronstad, Karim Ammar, and Ottoni Rosa Filho

Description

Selection OR3920036 is a winter durum. It is semi-dwarf with white, stiff straw. The spike is awned, oblong, dense and nodding. Glumes are glabrous, white, midlong, midwide; shoulders narrow, wanting; beaks narrow, obtuse, 1 to 2 mm. Awns 6 -18 cm long. Kernels are amber, midlong, hard, and elliptical; germ midsize, crease midwide, shallow; cheeks angular; brush short.

Pedigree and History

Selection OR3920036 is an exclusive release; thus the pedigree must remain confidential. Plant Variety Protection application is being filed with the appropriate agency. OR3920036 was selected as an individual F_2 plant with future selections being made in the F_3 and F_4 generations. Following bulking of phenotypically similar lines, yield trials were conducted. Two hundred head rows grown in isolation for breeder seed in 1995. A second bulk sample of 30 pounds was evaluated on 1/3 acre plots at the Rugg's site during 1996. The latter increase allowed for large-scale evaluation for milling and pasta quality. In addition to yield trials, a further large-scale test was conducted on a circle on the Kent Madison's farm in 1997. The Washington Crop Improvement Association is currently growing breeders' seed of the selection for possible release.

Area of Adaptation

Selection OR3920036 has been developed and extensively evaluated in North Central Oregon within a radius of 50 miles of Pendleton. Trials are also being conducted in Central Washington in 1997. The selection is in the statewide cereal variety trials this year. Pendleton Flour Mills and Quaker Oats Company provided the funding for the program; hence, due to transportation costs, the material was developed for the region where Pendleton Flour Mills purchases their durum wheat.

Selection OR3920036 is unique, being the first winter durum released in the United States. Previously, all durum cultivars have had a spring growth habit.

Disease Resistance

Selection OR3920036 has appeared to be resistant or has escaped all the major diseases observed in North Central Oregon. It has also reflected a similar reaction pattern to diseases observed in Western Oregon.

Agronomic Data

OR3920036, since it is the first winter durum, must be compared with winter wheats or spring durums. To be accepted by the growers it must be close to the yields of Stephens (the most commonly grown winter wheat). The only quality check for pasta will be with spring type durums. In Table 1 it can be observed that OR3920036 is similar to Stephens in heading date, is shorter, tends to be more susceptible to lodging, and is less winter hardy. However, the level of winter hardiness has been satisfactory for the Pendleton area.

Yield Data

In Table 1a, grain yield comparisons of Stephens, with Selection OR3920036 are provided for the years 1995, 1996, and 1997. Yield wise, OR3920036 is competitive, this is true economically especially when taking into account the price differential which favors durum wheats.

Quality Data

Enclosed is the *North American Durum Quality Report* identified as Table 1b and Charts 2 -14. In this analysis, Selection OR3920036 is identified as "Connie". The comparison made involves OR3920036 patterns with the average of spring durum cultivars currently in commercial production in three regions in the U.S. and the check variety Westbred 881. The latter is regarded as the current standard for pasta quality in the U.S. Based on these results, there is considerable excitement about Selection OR3920036 (Connie). It appears that the potential for winter durum in the Pacific Northwest is real and that quality attributes can be equal to or superior to the current spring durums grown in the United States.