Fact Sheet
Ill62-19/J-126//WA1245///Steptoe
Selection ORW-6
Winter Feed Barley

Strider

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Description

Strider is a six-row winter feed barley. It is a standard height selection with rough awns and a semi-compact spike. The grain has white aleurone. The distinguishing features of this variety are tolerance of barley stripe rust and a combination of high test weight and high yield in a broad range of environments.

Pedigree and history

Strider is a doubled haploid line produced from the single cross of two inbreds: Ill62-19/J-126//WA1245 and Steptoe. The former is an experimental line 6-row winter barley that was tested under the designation "1860164". Steptoe is a facultative 6-row. ORW-6 was tested for yield potential throughout Oregon and in the Pacific Northwest, in the Western Regional Winter Barley Nursery in 1993/94 - 1995/96, and for stripe rust reaction in Bolivia. Since Strider is a doubled haploid, any genetic diversity in this selection is due to mutation or mechanical mixture. One-hundred head rows were selected from a phenotypically uniform block at Corvallis in 1994. These head rows were planted in the fall of 1995 at Corvallis. Five hundred heads were selected. These heads were planted in the fall of 1996 by the Washington Crop Improvement Association. This Breeder's seed will be used for the production of Foundation seed by the Washington Crop Improvement Association in 1997/1998.

The name Strider has been cleared by the USDA/ARS National Small Grains Germplasm Center.

Area of adaptation

Strider has shown excellent adaptation throughout the winter barley growing regions of the Pacific Northwest. Although derived from a winter x spring cross, this selection displays typical winter growth habit. It will not flower, or will flower very late, under spring planted conditions. During the time Strider has been tested, there has only been one report of winter injury. In a dryland experiment at Idaho Falls in 1996, Strider and Scio received winterkill ratings of 8, compared to winterkill ratings of 3 for Kold, and 2 for Eight-Twelve and Hundred.

Disease reaction

Strider is tolerant of barley stripe rust, as measured by repeated trials in Mexico and performance in the USDA/ARS screening nurseries in Bolivia. There is limited symptom development on adult plants, indicating that it may have quantitative, adult plant resistance. This type of resistance may be more durable than immune resistance. Strider will show some symptom development of the more common Pacific Northwest foliar pathogens, such as scald and net blotch. Selection for plump seed at the disease-prone Corvallis location may have indirectly

selected for tolerance of these pathogens. Stripe rust reactions of Strider and other genotypes are summarized in Table 1.

Table 1. Stripe rust severity data for selected winter barley varieties .

Variety	*Bolivia 1991-1992*	*Bolivia 1992 - 1993*	*Bolivia 1993-1994*	*Bolivia 1994 - 1995*	*Mexico 1996*	*Medford Oregon 1996*	*Hermiston Oregon 1996*	*Corvallis Oregon 1996*
Scio	80	40	40	80	-	55	<10	70
Hundred	80	40	40	80	-	60	<10	60
Kold	10	Trace	5	10	5	Trace	Trace	5
Eight-twelve	80	60	60	40	-	-	-	
Strider	20	10		20	10	5	<10	5

Yield and agronomic traits

Strider has been tested in Breeder's nurseries in Oregon, Washington, and Idaho since 1991. Based on performance in these nurseries, it was advanced to the Western Regional Winter Barley Nursery in 1993 and to Extension trials at various locations in Oregon, Washington, and Idaho in 1995 and 1996. Data from these tests are attached. Complete WRWBN summaries have not been received from the nursery coordinator. Overall, Strider is a high yielding, high test weight barley with good kernel plumpness. The stripe rust resistance of Strider will be advantageous under conditions such as those that produced the data shown in Table 2.

Table 2. Agronomic traits and stripe rust severity for winter barleys in the Statewide Extension plots at Corvallis, Oregon, 1996. The spray treatment was Tilt (4oz/acre).

Variety	Yield lbs/acre		Test weight lbs/bushel		Stripe rust severity %
	unsprayed	sprayed	unsprayed	sprayed	unsprayed
Gwen	260	489	-	25.4	92
Hesk	3353	3955	40.8	40.8	52
Hesk + Baytan	3712	4648	43.5	47.2	30
Hundred	2525	4014	33.1	37.0	57
Kold	5318	5387	47.6	46.2	5
Scio	3951	4616	41.6	43.5	70
Steptoe	3219	3923	41.6	41.6	78
Strider	6230	5884	48.9	48.2	5
Sunstar Double	2458	2730	34.0	34.3	78
SDM204	1856	2443	42.4	39.4	80