

FW301

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A PROPOSAL TO NAME AND RELEASE WINTER WHEAT
W-301, syn. FW81-454-301, Sm-4/Daws//Sm-11/
MCDermid 'W-301', PI 559718.

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PURPOSE

FW-301, PI 559718, Triticum aestivum, L., soft white winter wheat was developed as a co-operative effort between the Oregon Agricultural Experiment Station and Wulff Farms, Flora, Oregon to provide an early maturing soft white winter wheat which survived the winters at the 3000 foot plus elevation in Wallawa County.

JUSTIFICATION

Available common soft white winter varieties such as 'Stephens', 'Malcolm', and 'Dusty' have poor winter survival rates under snow-cover near Flora, Oregon.

'John', 'Luke', 'Lewjain', and 'Madsen' survive the winters, but have weak straw and tend to lodge. They are slow to ripen, consequently they are vulnerable to late August rains which cause sprout damage.

*Benchmark of
Basin -*

HISTORY

W-301, Triticum aestivum L., is derived from a cross of Sm-4/Daws//Sm-11/Mcdermid. Snowmold-4/Daws and Snowmold-11/McDermid were included in a series of plant selections from Dr. Robert Metzger's common bunt project, and planted in 1979 as plant plots at the Hermiston Agricultural Research and Extension Center, (HAREC). The cross was made in 1980. The F-1 was grown in row 454 in 1981. F-3 head-rows were planted as part of the annual evaluation and selection trials on the Wulff Ranch near Flora. Several head-rows were harvested and bulked, three of these bulks were planted in drill plots on the Wulff Ranch. Bulk -301 was the most favored by Kenneth and Doug Wulff. Their evaluations were based on relative earliness, plant height, lodging resistance, ease of threshing, clean grain in the truck-box, their estimate of relative yield, and grain appearance.

In 1985 heads were selected from the bulk and selection purification began. The entry was entered into regional testing. During the ensuing years lines were discarded for Dwarf Bunt susceptibility via the common smut trials. Unfortunately the lines having the best resistance did not have the desired kernel characteristics. ie. not pure white.

The Wulff Ranch, in the meantime, continued evaluating the line in fields, as orally reported during the 1989 and 1990 Wheat Commission-OSU research reviews. (The fields in the Flora-Paradise area are surrounded by trees. Soil depths range from zero to 6 feet depending on the undulation of the underlying lava flow and soil deposition: variation is the only uniformity encountered)

The author's impression of the Wulff's observations is: W-301 is earlier maturing than Dusty, a week earlier than Lewjain. W-301 yields better than Lewjain and survives like Lewjain. Head size is desirable. In 1990 it yielded 65 bushels per acre versus 50 bushels per acre for Lewjain. In 1991 it yielded near 70 bushels per acre versus common 50 to 60 bushels per acre for other fields.

Head-rows selected from plant plots were planted at HAREC in the fall of 1990. During 1991 'off-type' head-rows were destroyed prior to anthesis. A number of head-rows were selected, threshed separately, seed type was examined, and the "keepers" planted in long four row plots at HAREC.

DESCRIPTION

W-301, Triticum aestivum, L., is a soft white winter mid-tall, (90 to 110 cm), mid-early wheat, with a white chaffed linear to fusiform lax awned (20 to 80 mm long) spike. Awns tend to spread. Spike tends to nod. Winter habit is semi-prostrate. Glumes: glabrous, mid-long, wide with mid-wide acuminate beaks 2 to 5 mm long. Beak shoulder is narrow, oblique. Kernel: mid-long, ovate to elliptical, shallow narrow crease, cheeks rounded, germ mid-size, brush mid-size short, germ mid-size. Rachilla: short hairy. Good to excellent bake and mill quality.