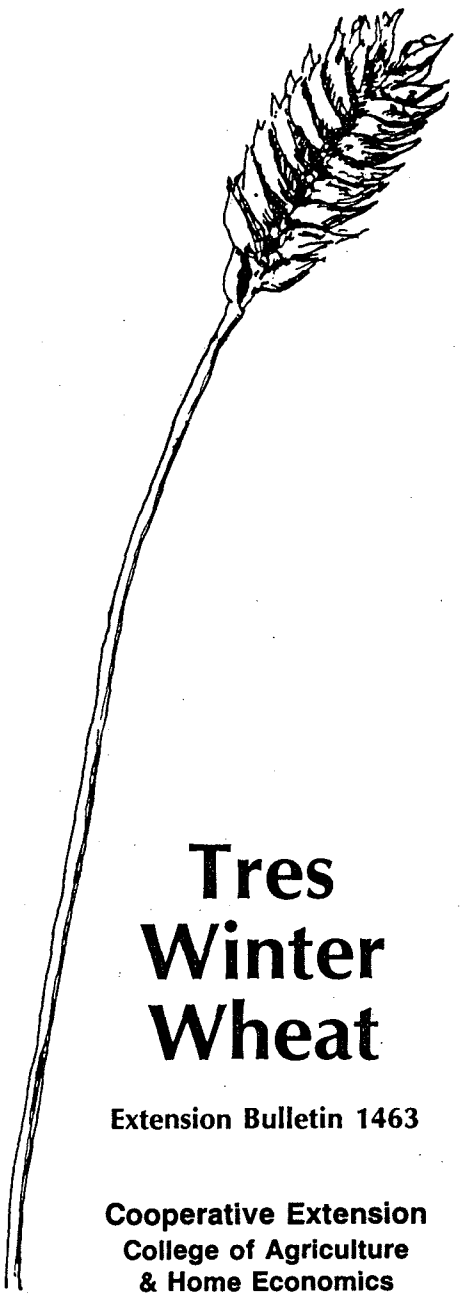
Tres

Tres is the newest club wheat variety available to Pacific Northwest growers. Its name means "three," signifying its resistance to three foliar diseases--stripe and leaf rust, and powdery mildew. Tres is one of the ten component lines found in Crew. It appears to have a similar yield potential to Crew but has none of the heterogeneities found in Crew. Moro is a standard height, brown chaffed club wheat released by OSU in 1965. It is best adapted to the driest winter wheat-producing areas of eastern Oregon. Moro is susceptible to lodging and leaf rust and is moderately susceptible to stripe rust.



Tres Winter Wheat

Extension Bulletin 1463

Cooperative Extension
College of Agriculture
& Home Economics
Washington State University
Pullman

Tres Winter Wheat

Tres (CI17917) is a semidwarf winter wheat developed for production in the 11- to 18-inch rainfall areas of Washington, Oregon and Idaho. It has a club-type spike with awnleted compact spikes, white glumes, and straw. The kernels are white, short, soft, with a small germ and short brush. The variety, medium in maturity, is comparable to Tyee. The heading date is similar to Tyee but is 1 to 2 days later than Moro and 2 to 3 days later than Faro.

Tres is about 1 inch taller than Tyee and Crew and is 2 to 5 inches taller than Lewjain. Tres is 4 to 5 inches shorter than Moro. Tres is comparable to Lewjain and Crew for resistance to lodging. It is much more resistant to lodging than Moro.

The variety has test weights heavier than all currently grown club wheat varieties, and at about 60 pounds per bushel is 1 to 2 pounds heavier than most. Tres may equal the test weight of some common white wheat varieties (Table 1).

Stand establishment capabilities of Tres have been generally better than Daws but not as good as Paha or Moro.

Coldhardiness of Tres appears to be the same as that of Crew and Tyee. It is more hardy than Faro, Stephens or Paha, but it is less winterhardy than Jacmar or Daws. Tres has high yield potential, as it has shown increased yields over varieties Tyee, Faro, Barbee, Jacmar and Paha. Regional data has indicated Tres has high grain yield in other states.

Disease Resistance

Tres is the first Pacific Northwest club wheat variety to have combined resistance to leaf rust, stripe rust, and powdery mildew. It has resistance to some races of stripe rust, but is susceptible to others. It has an intermediate to moderately susceptible adult plant reaction to races that attack it. Tres should reduce losses in areas where these diseases are prevalent. Tres is susceptible to flag smut. It is more tolerant to Cephalosporium stripe than Stephens, but more susceptible than Nugaines, Lewjain and Tyee. It is more susceptible than Faro, Barbee, Moro and Tyee to common bunt, and it is susceptible to dwarf bunt.

Like most club wheats, Tres has some tolerance to foot rot, but less than Tyee.

Recommended Areas

Tres is recommended where other club varieties are being grown and emergence, stand establishment, and cold injury problems are infrequent. Tres is not expected to replace Moro where stand establishment is a major problem. The table compares Tres yield and test weight with those of Crew and Lewjain.

Management

Management for Tres should be the same as other club wheat varieties. It requires good soil moisture for germination and emergence. Seed Tres at the same rate as other club wheats. The seed should be treated with a recommended fungicide to control common bunt, dwarf bunt and flag smut.

Fertilizer

It should receive the same fertilizer rates as other club wheat varieties. Overfertilization can cause excessively high protein levels that are not desirable in club wheat.

Weed Control

Tres requires good weed control practices. It appears to have a tolerance to herbicides similar to that of other club wheats.

Milling and Baking

The variety has very satisfactory club wheat quality. It has been rated as showing particular promise in overall quality traits by the USDA-ARS Western Wheat Quality Laboratory.

Development of Tres

Tres was developed by R. E. Allan, Research Geneticist, Agricultural Research Service, U.S. Department of Agriculture, in cooperation with the College of Agriculture and Home Economics, Washington State University. Primary field tests of Tres were made by Agricultural Research Service and Washington State University Cooperative Extension, with supplemental tests conducted by Washington, Oregon and Idaho Agricultural Experiment Stations. The USDA-ARS Western Wheat Quality Laboratory at Pullman, Washington carried out extensive quality tests on Tres. Disease characteristics of Tres were determined by the USDA-ARS Cereal Disease Laboratory at Pullman, Washington, and by J. A. Hoffmann, Agricultural Research Service Plant Pathologist (retired), University of Utah, Logan, Utah. Tres was derived from a cross of Suweon 92/Omar *Triticum spelta*/Coastal/Omar.

Table 1. Test Weight and Yield of Tres, Compared with Crew and Lewjain at 12 Locations in Washington.

Location	Variety					
	Tres		Crew		Lewjain	
	Test Wt. lb/Bu	Yield* Bu/Ac	Test Wt. lb/Bu	Yield* Bu/Ac	Test Wt. lb/Bu	Yield* Bu/Ac
(1983–1986)						
Bickleton	59.5	29.9	57.2	30.1	60.9	30.8
Goldendale	60.8	41.0	59.3	40.8	62.5	44.8
Reardan	60.9	77.2	61.1	72.0	63.7	76.8
Asotin	58.9	41.6	57.5	39.9	59.8	35.6
Wilbur	60.1	90.3	59.5	83.9	63.6	83.3
Lamont	57.6	69.7	57.0	73.8	56.1	70.3
Yield Average		58.3		56.7		56.9
(1982–1986)						
Pullman early sown	59.4	77.2	59.3	84.8	61.3	85.5
Pullman late sown	59.6	77.5	58.4	76.6	62.3	78.4
Pomeroy	59.2	63.8	58.6	66.5	60.8	68.2
Walla Walla	61.4	89.6	59.9	88.7	61.9	90.0
Lind	59.8	27.6	59.2	24.6	60.5	27.4
Harrington	59.9	47.1	58.4	48.3	60.5	46.7
Ritzville	57.5	56.7	57.5	59.3	58.7	62.4
Yield Average		62.8		64.1		65.5
1986 Test Wt. Ave. lb/Bu	59.5		58.8		60.9	

*Mean yields for Extension trials are based on 1983, 1985 and 1986 for all locations except Wilbur, which is based on 1983 and 1986.

Authors of this publication are K. J. Morrison, Extension Agronomist, Department of Agronomy and Soils, Washington State University, Pullman; R. E. Allan, Research Geneticist, Agricultural Research Service, U.S. Department of Agriculture; C. J. Peterson, Research Agronomist, Agricultural Research Service, U.S. Department of Agriculture; R. F. Line, Research Plant Pathologist, Agricultural Research Service, U.S. Department of Agriculture; G. L. Rubenthaler, Research Food Technologist, Agricultural Research Service, U.S. Department of Agriculture; and P. E. Reisenauer, Research Technician, Department of Agronomy and Soils, Washington State University, Pullman.

Issued by Washington State Cooperative Extension, F. L. Poston, Director, and the U.S. Department of Agriculture in furtherance of the Acts of May 8 and June 30, 1914. Cooperative Extension programs and policies are consistent with federal and state laws and regulations on nondiscrimination regarding race, color, religion, national origin, sex, age, or handicap. Trade names have been used to simplify information; no endorsement is intended. Published August 1987. 25¢

EB1463