

REGISTRATOIN OF 'TEMPLE' WHEAT  
**Selection 92CL0054**  
Soft White Winter Club Wheat

'Temple' (Reg. NO. \_\_\_\_\_, P.E. 599665) is a soft white winter club wheat (*Triticum aestivum* var. *Compactum*, L.), cultivar developed by the Oregon Agricultural Experiment Station in cooperation with the Agricultural Experiment Stations at Washington State University and the University of Idaho. Seed was released to the Washington Crop Improvement Association for the production of Foundation Seed in 1998.

Temple resulted from the cross Tres/VPM/(*Aegilops ventricosa*/*Triticum persium*//Moisson//Moisson 951 and was tested as Selection 92CL0054. Temple was named after the late Joe Temple in recognition of his continuing interest in club wheat production in Oregon.

Temple is standard height with moderately stiff straw. The spike is awnless, elliptical, dense, and erect. Glumes are glabrous, white, short; shoulders are narrow, rounded; beaks are obtuse, 1 to 2 mm. Kernels are white, short, soft, ovate, with hump. The germ is midsize with a narrow, shallow crease with rounded cheeks. Based on kernel morphology, the Federal Grain Inspection Service has consistently graded Temple as a club wheat.

The breeding history of Temple involved a modified bulk method. The cross was made at the Hyslop Crop Science Laboratory with individual F<sub>2</sub> plants selected at the same site. The F<sub>3</sub> generation was grown in three, 3 meter rows at the Rugg's Experimental site near Pendleton, Oregon. Twenty spikes were selected from the center of the desired populations, bulked and planted in a similar manner as the F<sub>3</sub> to generate the F<sub>4</sub> populations. Subsequently, the advanced generations were grown on the Columbia Basin Research Center site with Temple resulting as an F<sub>4</sub> derived F<sub>6</sub> line. Yield trials were conducted at the Columbia Basin Research Center, the Sherman Branch Experiment Stations near Moro, Oregon and in state wide yield trials. Temple was also grown in the Western Regional Soft White Uniform Nursery. Its area of adaptation is in the lower rainfall areas of the Pacific Northwest.

Temple is resistant to Stripe Rust (*Puccinia striiformis*) and Columbia Basin Strawbreaker (*Pseudocercospora herpotrichoides*). These are the two major diseases limiting club wheat production in the Pacific Northwest. It is also moderately tolerant or resistant to the other major diseases observed in the region.

When compared to other commercial club wheat varieties, Temple is similar for lodging, height and heading date. Some shattering and lodging have been observed at the Moro and Pendleton sites, respectively.

When compared to Rohde (highest yielding commercial club wheat), Temple averaged 739 Kgha<sup>-1</sup> more for the period 1990-1994 at the Moro site. During the same period, Temple yielded 1209 Kgha<sup>-1</sup> more than Rohde. In 1995 and 1997 yields were similar between the two cultivars.

Grade yields for Temple when grown in the Western Regional Uniform Soft White Nursery in 1995 and 1997 were 403 Kgha<sup>-1</sup> and 201 Kgha<sup>-1</sup> above the highest common to club check entries at 8 and 11 locations, respectively.

Temple exceeded the milling attributes of the Club wheats Paha, Omar, and Rohde in test weight, flour yield and mill score. For baking scores Temple was superior in cookie diameter, however it was lower in the cake volume. The Western Soft White Quality Laboratory found the overall end-use quality characteristics of Temple to be acceptable to the milling and baking industry. The Washington State Crop Improvement Association (WSCIA) at Pullman, Washington, provided foundation seed to qualified seed producers in 1999. The generation system of Breeder, Foundation, Registered, and Certified will be followed. Seed samples of Temple can be obtained from the WSCIA.

P. Zwer \_\_\_\_\_ and C. Morris, USDA/ARS Wheat Quality Lab, E-202 FSHN Facility East, Washington State University, Pullman, WA 99164-6394 and USDA Soft White Quality Laboratory, Pullman, WA.

Seed/registration of Temple 92CL0054  
2/28/00