

Washington Agricultural Research Center
Washington State University
Pullman, Washington

FILE -
HILLER

and

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Oregon Agricultural Experiment Station
Oregon State University
Corvallis, Oregon

and

Idaho Agricultural Experiment Station
University of Idaho
Moscow, Idaho

and

United States Department of Agriculture
Agricultural Research Service
Washington, D.C.

RELEASE OF HILLER (PI [requested]) A SOFT WHITE CLUB
WINTER WHEAT CULTIVAR

The Washington Agricultural Research Center, Idaho Agricultural Experiment Station, Oregon Agricultural Experiment Station and the Agricultural Research Service, U.S. Department of Agriculture announce the joint release of 'Hiller' a soft-white club winter wheat (*Triticum aestivum* L.) cultivar. Hiller was developed by the cooperative State-Federal research program at Pullman, Washington.

Hiller was developed by C.J. Peterson, Jr., Washington State Univ. Agronomist (retired). It is being released primarily to enhance the overall quality of the SWW club wheat market class in the U.S. Pacific Northwest.

Hiller (WA7729, VA087001) was an F₅-derived selection from the cross CI13438/Odin//CI13645/Sel 101/M722712/4/Tres. It is a one-gene semidwarf with an elliptical-dense spike having awnless to awnletted white glumes and kernels that are white, short, soft, ovate; germ small; crease midwide, shallow; cheeks rounded; brush midshort to short.

Hiller has both race specific and nonspecific resistance to stripe rust (*Puccinia striiformis* Westend). It is resistant to some biotypes of common bunt (*Tilletia tritici* [Bjerk.]) and has partial resistance to leaf rust (*Puccinia recondita* Roberge ex Desmaz.) and to powdery mildew (*Blumeria graminis* [DC]). It is moderately susceptible to stem rust (*Puccinia graminis* Pers.)

and dwarf bunt (*Tilletia controversa*). Hiller is susceptible to strawbreaker foot rot (*Pseudocercospora herpotrichoides*) and fungus stripe (*Cephalosporium gramineum* Nis. & Ika.).

The grain yields of Hiller have usually equalled or exceeded other semidwarf club wheat cultivars. In 27 state of Washington tests (1989 to 1995) Hiller, Hyak, Rohde and Tres had mean yields of 5920, 5590, 5320 and 5110 kg/ha, respectively. In 28 regional trials during 1992 to 1994 in Idaho, Oregon, Montana and Washington mean yields of Hiller, Tres, Moro and Stephens were 6480, 6060, 4800, and 6680 kg/ha, respectively.

Hiller has a mean grain volume weight that is similar to Hyak but is 15 and 30 g/L less than Tres and Rohde, respectively. Hiller is similar to Hyak and Tres for plant height. Hiller is an early season cultivar similar to Hyak. It is less prone to lodging and cold injury than most semidwarf club cultivars. Hiller has emergence characteristics similar to other semidwarf cultivars and may emerge poorly when sown deeply.

Based on quality evaluations conducted during 1988 to 1994, Hiller has excellent milling properties. It has flour and baking properties superior or equal to all currently grown club cultivars. The USDA-ARS Western Wheat Quality Laboratory rates the overall quality of Hiller superior to Moro and Hyak and similar to high quality club cultivars such as Elgin and Omar.

Hiller was named to honor Ed and Henry Hiller, Garfield County, Washington farmer cooperators with the WSU-USDA winter wheat cultivar development for more than 30 years. Hiller may be grown in the traditional club wheat production areas of northwestern USA.

Breeder and foundation seed of Hiller will be maintained by the Washington State Crop Improvement Association under supervision of the Department of Crop and Soil Sciences, Washington Agricultural Research Center. The proposed release date for publicity shall be on the date of final signature of the release notice.