

COLLEGE OF AGRICULTURE AND HOME ECONOMICS
AGRICULTURAL RESEARCH CENTER
WASHINGTON STATE UNIVERSITY
PULLMAN, WASHINGTON

AND

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
WASHINGTON, D.C.

AND

OREGON AGRICULTURAL EXPERIMENT STATION
OREGON STATE UNIVERSITY
CORVALLIS, OREGON

RELEASE OF BUCHANAN, A HARD RED WINTER WHEAT FOR
PRODUCTION IN THE DRY LAND, SUMMER FALLOW AREA
OF WASHINGTON

Buchanan, previously known as WA007523 (N8402101), was selected by Edwin Donaldson in 1982 from a field cross. Buchanan is a high tillering cultivar with medium spikes, awns and white glumes. It is one inch taller and anthesis (flowering) is one day later than "Hatton." Winterhardiness of Buchanan is equal to that of Hatton. Straw strength is somewhat weak. Emergence and stand establishment of Buchanan is much better than Hatton or "Weston" under stress conditions and may be equal or superior to "Moro" under certain stress conditions. The coleoptile length of Buchanan is longer than Weston or Moro.

Buchanan is moderately susceptible to stripe rust, showing mature plant resistance similar to "Wanser" or "Gaines." It is moderately susceptible to leaf rust and susceptible to both strawbreaker (*Cercospora*) and dry land (*Fusarium*) foot rots. It has moderate resistance to snowmold damage. Buchanan is moderately susceptible to common bunt and susceptible to dwarf bunt.

The yield performance of Buchanan in the less than 10 inch annual rainfall area has been equal to Hatton and Weston where stands of all three are adequate. The test weight of Buchanan is about two pounds per bushel less than Hatton or equal to the test weight of "Batum."

The USDA-ARS Western Wheat Quality Laboratory at Pullman, Washington, has shown the flour percentage and mill score of Buchanan is equal to Hatton and Weston, and the loaf volume is intermediate. The bread crumb structure is poorer than either Hatton or Weston. Flour protein averages one-half to one percent lower than Hatton where grown under similar conditions.

Breeder and Foundation seed of Buchanan will be maintained by the Washington State Crop Improvement Association, Yakima, Washington,

under the supervision of the Crop and Soil Science Department,
College of Agriculture and Home Economics Agricultural Research
Center, Washington State University, Pullman, Washington, 99164.
Small amounts of seed for breeding purposes may be requested from
the Curator, USDA Small Grains Collection, P. O. Box 307, Aberdeen,
ID 83210.

M. E. Carter
Administrator
Agricultural Research Service
for U.S. Department of Agriculture

NOV 13 1991
Date

A. H. Torgerson
Director
Agricultural Research Center
Washington State University

10/27/91
Date

V. W. Volk
for Director
Agricultural Experiment Station
Oregon State University

10/21/91
Date



Winter Wheat

Stephen S. Jones
Winter Wheat Breeder
Department of Crop and Soil Sciences
Washington State University
Pullman, WA 99164-6420

Phone: (509) 335-6198
Lab: (509) 335-4877
Shop: (509) 335-3081
FAX: (509) 335-8674
Email: jones@wsu.edu

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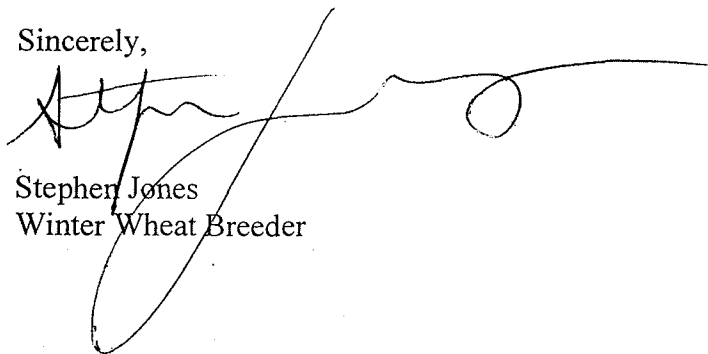
September 21, 1999

Greg Vollmer
WSCIA, campus

Dear Greg,

As developers of the hard red winter wheat variety Buchanan, over the years we have observed up to eight white seeds per pound. We have found this to be characteristic of this variety but neglected to include this description in the original varietal release documents.

Sincerely,



Stephen Jones
Winter Wheat Breeder