

# WASHINGTON STATE FARM and HOME NEWS

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RELEASE ON RECEIPT

## New WSU Barley Variety Released: A First in Mutation Plant Breeding

WASHINGTON STATE UNIVERSITY, Pullman, September \_\_\_\_\_ --A first in mutation plant breeding -- creation of a new crop variety with the aid of a chemical -- was announced today by Washington State University.

The new variety, a chemically induced mutant or sport, is a high-yielding, lodge resistant winter feed barley. It was produced by a breeding shortcut, seed-treatment with diethyl sulfate, a mutagenic or gene-changing chemical.

The new variety was named Luther and released jointly today by the Colleges of Agriculture of WSU and the University of Idaho.

Dr. Mark T. Buchanan, WSU's director of agricultural research, said Luther is the first new crop variety to be developed with the aid of a mutagenic chemical as far as can be determined. Some 30 new crop varieties have been created by the use of radiation, he added.

Luther, a short-strawed mutant of Alpine, is recommended for production in the winter barley areas of eastern Washington and northern Idaho. Planting seed for grain growers in the two states will be available next fall -- 1967.

The new 6-rowed winter feed barley was developed by Dr. R. A. Nilan and Carl Muir, WSU barley breeders. It was released only 6 years after the first Alpine mutants were produced by chemical seed treatment, Dr. Buchanan said.

The selection released today has been tested extensively for the last four years in eastern Washington and to a lesser extent in Idaho and Oregon.

Test data show that Luther outyields Alpine, White Winter and Hudson from 5 to 15 bushels per acre in eastern Washington, especially under high fertilization.

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New WSU Barley Variety Released: A First in Mutation Plant Breeding -- cont.

In test plots, Luther averaged more than 100 bushels or 2½ tons of feed barley per acre in two years of testing in the 20- to 25-inch rainfall area of the Palouse. Comparable yield of Alpine was 91.6 bushels and for White Winter, 83.9 bushels.

In test plots fertilized with 60 pounds of nitrogen per acre, Luther produced 122 bushels to the acre compared to 111 bushels for Alpine and 93.3 for White Winter.

The new feed barley has the stiffest straw of any winter barley variety now grown in the Pacific Northwest and does not lodge even under heavy fertilization.

The straw is 5 to 7 inches shorter than Alpine or White Winter and 3 to 5 inches shorter than Hudson. Luther's average plant height is 32 inches compared to 41 inches for Alpine.

It is slightly more winterhardy than either Alpine or White Winter.

The new variety was named Luther in honor of the late Dr. Luther Smith, WSU plant geneticist from 1946 to 1952. Dr. Smith initiated research at WSU on artificially induced permanent changes in plants.

Dr. Buchanan said 16,000 pounds of Foundation seed are being distributed this fall to specialized growers for the production of Certified seed. Allocation of seed to individual growers in Washington is being handled through the Washington State Crop Improvement association and affiliated county associations.

The resulting supply of Certified seed will be available to growers for commercial production next fall, Dr. Buchanan added.

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