NORTH DAKOTA
Farm Research
Bimonthly Bulletin

Vol. 30, No. 4 March-April, 1973

New Beacon Barley . . . Page 3

From the Director

A. G. HAZEN

This issue of Farm Research carries information relative to a new hard red spring wheat variety, Olaf, recently released by the North Dakota Agricultural Experiment Station.

The variety Olaf marks a change in the tradition of the kinds of hard red spring wheats which have been named and released by this Station with respect to the several factors involved in a judgment of wheat quality. Briefly stated, the objective of this Station has been to name and release varieties which "equal or exceed" previously named varieties in the overall judgment of wheat quality as determined by the Department of Cereal Chemistry and Technology in collaboration with USDA and industry cereal chemists. In a situation of surplus supply, and with price approximately equal, the higher quality wheats would normally be preferred to lesser quality wheats. This tends to assure movement in the market of the higher quality wheats.

Observation of this objective has made available to North Dakota producers recommended wheat varieties known for their quality and acceptable in the market, both domestic and foreign. These wheats have often been sought for blending and strengthening of lesser quality wheat. If these and similar varieties were the only varieties of wheat being grown in North Dakota, the tradition of high quality North Dakota hard red spring wheat could be expected to remain unquestioned. Ideally, it would be preferable to have available from North Dakota only very high quality wheat, sought in the marketplace for this factor alone, and resulting in a price to the producers which would reflect economic equality for them when compared with producers of lesser quality wheats in other geographic areas. While there has been considerable evidence of this ideal situation being approached, nevertheless other factors have caused the economics to be less than ideal for many North Dakota producers.

North Dakota producers for several years have been marketing hard red spring wheats from varieties released by other than the North Dakota Agricultural Experiment Station, and which have not been recommended by this Station for major acreages of production due to quality deficiencies as

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In This Issue

On The Cover: Dr. Glenn Peterson, at right, in charge of the barley breeding program at the North Dakota Agricultural Experiment Station, shows P. E. Pawlisch, executive director of the Malting Barley Improvement Association, Milwaukee, Wisconsin, field samples of new Beacon barley variety, the first barley approved for malting before release.

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Vol. 30, No. 4 **March-April, 1973**

A BIMONTHLY progress report published by the
Agricultural Experiment Station, North Dakota State University of Agriculture and Applied Science
Fargo, North Dakota 58102

This is because the export standard is an average quality for the grade and depends in part on the quality of the crop for the year and on the quality of any carryover from previous years.

The export standard of No. 1 C.W.R.S. for the first (and current) year is as follows:

Test Weight Per Imperial Bushel — 63.4 pounds (61.4 pounds U. S.)

Total Foreign Material (including other cereal grains) — 0.4 per cent, including 0.15 per cent other seeds.

Wheats of Other Classes, and Varieties Not Equal to Marquis — 1.5 per cent, including 0.2 per cent contrasting classes.

The most important change to overseas customers is offering No. 1 C.W.R.S. on a protein-guaranteed basis. A "certificate final" issued by the Canadian Grain Commission guarantees the buyer that the quality of the grade stated is equal to or better than the export standard. It also guarantees the minimum protein content and the amount of grain contained in the cargo. An extensive informational effort was made to introduce overseas customers to these changes.

To evaluate the effect of these changes, the NDSU Department of Agricultural Economics sent a questionnaire to leading milling firms and importers in Western Europe and Japan. Questions were raised regarding any overall change in the physical properties of Canadian wheat, milling and baking properties, and dependability of the protein guarantee.

From the responses to the questionnaire, concensus was that:

1. The guarantee of protein was the most important change in the new Canadian grain grading system for wheat. Buyers found that the actual protein level of the shipments was equal to that "guaranteed" and in many cases was better. Only rarely did protein fall below the specified level. This change is important because of advances in milling and baking technology, which have resulted in a demand for more exact knowledge of the protein level of wheat purchased.
2. Millers have noticed a small decline in the nonmillable portion of C.W.R.S. shipments. This difference in the physical characteristics of the wheat is no doubt due more to the characteristics of the crop year or the "export standard" specification for the year rather than the change in the grades.
3. In general, however, millers and laboratories have noticed no significant differences in the milling and baking characteristics in the new grade. The wheat mills and bakes essentially similar to the old grades of the same protein content.
4. All respondents emphasized that further experience with the new grades would be necessary.
5. Generally, United States No. 2 DNS was considered to be equal to C.W.R.S. of similar protein content in milling and baking properties. Several respondents indicated that the United States could improve its grading standards by reducing the amount of clean-out or nonmillable material. Millers reported that United States shipments have a lower moisture content, but that C.W.R.S. has a higher test weight.

In summary, the reaction of overseas wheat buyers to the changes in the Canadian grain grading and handling system is favorable. The most important aspect of the change is the delivery of protein on a guaranteed basis. It appears that the overall impact will be to make Canadian hard spring wheats more competitive with North Dakota's spring wheat in the export markets of the world. This move by the Canadian government makes it increasingly important for the United States to continue to strive for shipments of uniformly high quality spring wheat in export markets. As market needs and production practices change, we must continually adjust our market and grading system to meet the needs of the more and more demanding import buyers throughout the world.

This report is the result of the first phase of a study of the impact of the change in Canadian grain standards on the United States spring wheat market.

FROM THE DIRECTOR

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measured by the quality standards established and in use. The principal reason for this production of less desirable quality wheats has been a demonstrated capacity to achieve greater yields from certain of these varieties during recent years than from those recommended for production on the basis of quality.

As yet, no single variety of hard red spring wheat named and released by any individual or organization represents an "ideal" wheat. This suggests there will always be room for improvement. Decisions for naming and release, therefore, in-

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Publication

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FROM THE DIRECTOR

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volve many and varied factors, some of which can and do change with time. Among these factors is the major one of quality.

This Station has never taken the position of attempting to influence producers beyond a point of recommendation based upon data developed in our laboratory and field tests, and also taking into account data from other sources. The producer has in the final analysis always been, and should continue to be, the one who actually makes the decision as to his choice of variety or varieties to grow. With these facts in mind, the new semi-dwarf type hard red spring wheat, Olaf, has been named and released.

The cereal chemists recognize and label Olaf as inferior when judged by the quality standards used in their evaluation for high quality wheats. For this reason, the cereal chemists have not endorsed this variety for release and recommendation for production in any quantity or large acreage in North Dakota.

The variety, Olaf, has been named and released primarily because of its potential capacity to yield and other desired agronomic characteristics including disease resistance, awned heads, strong straw, and straw height.

At this time, the wheat variety, Olaf, is not recommended for planting on extensive acreages in North Dakota, but should be considered as one of the alternate choices if a producer is inclined toward the single objective of maximum yield, knowing that production of varieties with similar or poorer levels of quality in our total wheat crop can or may ultimately result in market discrimination.

During the more than eight years that have elapsed since the original cross of parents resulting in the variety Olaf, there has been a continuing question relative to the correct position of this Station with respect to wheat variety development, testing, naming and releasing. Among these discussions of position, significant numbers of producers have recommended and requested that the North Dakota Agricultural Experiment Station name and release varieties such as Olaf, and allow the producers more freedom of choice, knowing in advance what the potential market risks may be.

Only time and experience will indicate whether this present decision to name and release the variety Olaf will be in the best long-term interests of the wheat producers in North Dakota. And this will in large measure be determined by the quantities of these lesser quality wheats which enter into the total market stream from our geographic area compared with the traditional higher quality wheats.