

WESTERN COORDINATING COMMITTEE PETITION

NUMBER: WCC-

TITLE: Enhanced use of barley for feed and food.

DURATION: 5 years, Oct. 1, 1999 to Sept. 30, 2004

DESCRIPTION AND JUSTIFICATION:

The role of barley in cropping systems in the Northwestern and Northern Plains states promotes sustainability because of its relatively low water and nutrient use requirements. In addition, using barley in crop rotations where winter wheat is a major crop, conserves soil, and breaks the life cycle of pests such as weeds and pathogens, resulting in reduced herbicide and fungicide use. Barley is also one of the best adapted crops to saline and alkaline soil conditions and can be useful in reclamation efforts of soils made saline by natural processes or irrigation. Therefore, barley production helps to conserve soil and water resources in the Western region.

Barley is well adapted and productive in the semi-arid, cool season crop production zones which dominate the Northwest and Northern Plains states. Approximately two-thirds of the barley grown in this region is ultimately utilized as animal feed. Current cultivars of barley are classified as either malting- or feed-type, with barley breeding programs focused on agronomic characteristics and/or malting quality in cultivar development. The limited understanding of barley characteristics associated with variation in feed utilization by animals has prevented the selection of feed barleys based on feed quality. Barley varieties used for animal feeding are rarely evaluated for feed quality until after they are introduced into agronomic production. Cooperative efforts between animal nutritionists and barley breeders are necessary to develop barley varieties with improved feeding characteristics.

By-products of barley used for pearling, malting, brewing (872,000 metric tons dry matter of brewers grains in 1993 in the US), and distilling are important animal feed components, and would significantly increase the industrial waste stream without inclusion in animal diets.

The focus of this proposed Western Coordinating Committee is to interpret and extend the considerable research data and information on feeding value of barley to end users and research scientists working on the development and utilization of barley as feed. The continued communication and collaboration among scientists and others working in this area, fostered by WCC activity, will lead to a more rapid development and transfer of new knowledge about barley feed quality characteristics.

OBJECTIVES:

1. To promote dialog and exchange of ideas and information among all relevant North American participants in the development and use of barley and barley-based by-products, including animal scientists, plant genetics/breeders, animal feed industry representatives, livestock and crop

extension specialists, animal feeding managers, the National Barley Growers Association, state barley growers associations, US Grains Council, and representatives from the malting and brewing industries.

2. To educate end users about variation in nutritional or feed quality of barley, including research information that has not been previously summarized and disseminated.

3. To identify critical new research issues, including new and/or improved products and processes, for the use of barley as feed and food.

EXPECTED OUTCOMES:

1. A Barley Web site, linked to sites such as NABGMP, and the US Grains Council.

2. A Barley Feed Quality workshop with focus papers summarizing research to date on barley varietal differences in feed quality for ruminants and non-ruminants, and feed quality criteria for barley. The workshop entitled “Barley Feed Quality Conference” will be held in conjunction with the Pacific Northwest Nutrition Conference, Boise, Idaho in October, 2001. The target audience will include dairymen, feedlot managers, livestock producers, animal industry technical service representatives, animal industry nutritionists, and scientists that work with barley feed quality. Topics addressed in the workshop include: Current state of the barley feed industry, Variability in barley nutritional value, Feeding programs for individual species, Barley product identity and sourcing, Future barley research needs, Barley co-product utilization opportunities, and Barley feed quality as defined by barley users.

3. A proceedings publication of the focus papers from the Barley Feed Quality workshop.

4. A cohesive outline of present and potential uses of barley for feed and food.

5. A definition of suggested selection criteria for barley feed quality.

EDUCATIONAL PLAN:

Development of a coordinated web site for the dissemination of information on barley utilization for end users, researchers, growers, extension personnel, educators and other stakeholders.

Organize a workshop on Barley Feed Quality to enhance coordination and communication among animal and plant scientists, and representatives of the barley production and utilization industries. The proceedings of the workshop will be published.

Cooperate with industry groups to develop an educational publication on barley improvement and use.

Administrative Advisor

Date

Chair, Western Director's Association

Date