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Project ID: FY06-HO-138

FY05 ARS Agreement #: 59-0790-4-106

Research Area: EC/HQ

Duration of Award: 1 Year

Project Title: Multi-State Barley Winter Nursery - FY06 (05/06).

PROJECT 1 ABSTRACT

(1 Page Limit)

Each year, the Barley Improvement Program at the North Dakota State Agricultural Station (NDAES) makes over 300 crosses in the hope that a new variety will be developed. From the time of crossing to variety release, 10 to 12 years of extensive testing are done on experimental lines to evaluate their agronomic, malting, and brewing quality traits. One component in the development of new varieties is the use of winter nurseries at a southern location. The NDAES has made good use of this southern increase for nearly 40 years with the assistance of the American Malting Barley Association and the Malting Barley Improvement Association. For the past seven years, funds in addition to those from AMBA have been used to support the nursery near Yuma, Arizona. These funds have been provided by the US Wheat and Barley Scab Initiative (USWBSI), the North Dakota Barley Council (NDBC), and the Western Malting Barley Project (WMBP). NDBC funds are used to support materials being increased for the "Feed Barley" component of the program, and the USWBSI and WMBP funds are used to support the remainder of the nursery entries.

The purpose of our winter nurseries are: 1) to increase seed volume of experimental lines of barley to allow sowing of these lines in yield trials one or two years earlier than would be possible otherwise, 2) to grow F₂ and F₃ populations of selected crosses for more rapid development, and 3) to grow head rows of selected advanced lines for purification prior to release as varieties. Use of a winter nurseries decreases the time from making the cross to variety release by two or three years.