

**Project Title: Managing nitrogen for yield and protein in hard winter wheat**

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**Abstract:**

The economic viability of Oregon wheat production depends on highly productive varieties and cost-effective sustainable management practices. The production of non-traditional market classes such as hard red and hard white winter wheat may increase grower profitability compared to soft white winter wheat production. However, management issues with hard red winter and hard white winter are complex, as growers must meet market expectations for grain protein and quality. The OSU cereal extension program is proposing to continue a study started in the 2006-2007 crop year. The study objectives were to develop management guidelines to optimize nitrogen applications for both yield and protein of hard red winter and hard white winter wheat. Trial sites would be located in the projected adaptation area of eastern Oregon, and would utilize potential release candidates from the OSU wheat breeding program. These hard red and hard white winter wheat release candidates have high yield potential as well as improved grain quality characteristics. The study site may also be used in field days and demonstrations to increase grower awareness of these new varieties and management practices. This research study is designed to compliment much of the on-going research at OSU and will be a collaborative effort with the OSU Wheat Breeding Program, OSU Wheat Quality Improvement Program, Oregon's agricultural experiment stations, and local extension personnel. The research will provide growers with important new information and management recommendations for optimizing their production practices for new varieties.