The Situation
Camas County is an agriculturally based county with major commodities produced including alfalfa hay (43,100 harvested acres) and cereal grains (14,800 harvested acres). Cereal grains, for the most part, are grown only as a rotation for alfalfa. Many producers grow certified organic hay and grain. Camas County is located at a high elevation (5,100 feet) the average annual precipitation is 14 to 20 inches, and the average growing season is 60 to 80 days. Production on these fields are either irrigated or non-irrigated with the majority (87%) being non-irrigated. In dry land situations timing is critical, especially under drought conditions. A challenge to growers is the varying soil types that hold different amounts of moisture, which extends planting and makes harvesting difficult due to plants being at different maturities. Many growers wait until they can plant the wet spots located in the field, which may be one to three weeks later than the optimum time. This time being as soon as the soil and environment is warm enough to start and continue plant growth. Normal dryland yields in the county (20-30 bushel/acre) could drop as much as 16% (5 bushel/acre) costing producers a potential income of $60 per acre if cereal grains are not plated at the optimal time. Considering the above environmental limitations, growers must identify which varieties will produce better under Camas County’s diverse growing conditions and which will achieve production goals. Growers also need to gain knowledge on a variety of management practices in order to sustain production.

Our Response
The Camas County Extension Cereal Crop Program included three forms of educational activities: 1) Cereal Variety Field Trials, 2) Field Tours and 3) Cereal Winter Schools.

Cindy Kinder, Camas County Extension Educator in cooperation with Larry Robertson, retired University of Idaho Extension Crop Management Specialist, and area landowner and grower Max Wilson, coordinated a cereal grain trial for three years (1999, 2000, 2001) in order to provide growers practical information on cereal grain varieties (wheat, triticale, barley and oats) and understand how varieties produce under Camas County’s growing conditions. These crops were planted in dry land fields in an organic cropping situation. Field tours were conducted in July of 1999 and 2000. The tours, planned by Cindy Kinder and Ivan Hopkins, retired University of Idaho Extension Educator, were organized to inform growers of the varieties of small grains that were grown in the local trial. Interested growers attended the tour and had the opportunity to meet with state extension specialists and ask questions. Multiple joint cereal winter schools were conducted in Blaine and Camas Counties in 2001, 2002, and 2003. Cindy Kinder and Jo Ann Robbins, former Blaine County Extension Educator, organized the schools. Topics were presented by a
variety of people including DEQ, Idaho Power, University of Idaho, Extension Educators, University of Idaho, Specialists, Idaho Department of Water Resources and Idaho Department of Agriculture. The schools were held in order to increase knowledge of local growers about cereal grain management. Topics covered in the cereal schools included: nutrient management of barley and wheat, variety update, cereal disease update, niche cereal markets—marketing organic grain, commodity group updates, water quality standards, wild oat control in grain and weed management, grazing cereals as forages, certified straw program, stain and color control in malt barley, and malt barley update.

**Program Outcomes**

The Camas County Cereal Crop Production Program had many positive impacts on local growers. Drought conditions were seen in 1999, 2000 and 2001. The 1999 trial was planted two weeks earlier than the rest of the field due to scheduling conflicts. The visual appraisal of growth in the fields, and yields in some cases, illustrated to the sponsoring grower that planting earlier has some major advantages. The following two years the grower planted at the earlier time. This was two to three weeks earlier than he planted prior to 1999. However, economic advantages were not seen due to other environmental factors, grasshoppers in particular.

Establishing the variety trials for growers in Camas County allowed them to determine varieties that could achieve local production goals. Field tours provided hands on opportunity in understanding the relationships between environmental growing factors and varieties of grains in the field trial. One hundred percent of the repeat participants in the winter cereal schools stated the information provided to them the past three years was useful. Seventy-five percent stated they tried to implement at least one of the variety of management practices conveyed. Producers stated they implemented some forms of production management including:

- Pesticide Application (25%)—using tank mixes and better timing of applications
- Weed Management (66%)—using wild oat control, knowledge of pesticide availability and use
- Cereal Production (16%)—understanding of seed varieties, and using seed treatments
- Irrigation (58%)—became more aware of and monitored soil water content, timing of last irrigation and ET requirements for crops
- Markets (16%)—malt barley production, and producing for organic hay and grain markets
- Organic Production (16%)—better understanding of soil issues

Producers also stated that for the most part the new practices were successful on their operation. One producer stated in a survey of the winter schools that he learned “how to scout for problems before they created uncontrollable problems and lower yields” he also went on to state that he applied a herbicide at a “better time and had excellent weed control and used less water.” These kinds of changes can help many growers sustain and improve their production.

Future programming efforts for Camas County producers will include the continuation of the winter school that will provide information on disease control, weed management and organic production and management.

**For More Information**

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