



Irrigated Soft White Wheat

(Eastern Oregon)

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Soft white wheat is grown in a variety of rotations and landscape positions throughout eastern Oregon. Recommendations in this fertilizer guide apply to spring or winter varieties of soft white wheat grown with irrigation in Baker, Crook, Deschutes, Jefferson, Malheur, Umatilla, Morrow, Wallowa, and Union counties on silt loam, sandy loam, loamy sand, and sand soil textural classes with less than 3 percent organic matter.

The most yield-limiting nutrient for wheat is nitrogen. Recommendations for nitrogen (N), phosphorus (P), potassium (K), sulfur (S), and micronutrients are included in this guide. Amendments for salt-affected, acidic, and alkaline soils are also discussed.

The production area covered by this guide is geographically large and diverse. Soil type, soil depth, crop rotation, management, and climate differ widely across this area. This publication provides information and recommendations suitable for the soil and climatic conditions across the region. Use these recommendations as a guide, rather than a prescription. Take into account your own experience with your fields when making nutrient management decisions.

Recommendations for Washington and Idaho differ from those in this guide. For example, the N recommendations in the *Southern Idaho Fertilizer Guide for Irrigated Winter Wheat* are lower than those in this guide. In some areas of eastern Oregon, conditions are similar to those in Washington or Idaho. If you know from experience that this is the case for your field or farm, use the recommendations for the appropriate area. Use the N rate recommendations from the Idaho guide if your experience and grain protein level show that the lower rates are sufficient for your situation.

Pest-free plants with adequate root systems are required to obtain the greatest return from your fertilizer investment. The nutrient recommendations in this guide assume that weeds, insects, and diseases are controlled. Lack of pest control cannot be overcome by the addition of nutrients.

This guide is organized chronologically for a cropping season. Common fertilizer forms of nitrogen, phosphorus, potassium, and sulfur are 100 percent plant-available at the time of application. For this reason, most nutrients are best applied shortly before they will be needed.



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Management decisions before planting

Variety selection

Nutrient recommendations in this guide assume that an appropriate variety is selected for the site. Wheat varieties are available that have agronomic and quality characteristics needed to optimize production for your location. In eastern Oregon irrigated production, growers should consider varieties with high yield potential, suitable milling quality, good disease resistance, and lodging resistance. Information on the performance, agronomic, and quality characteristics of winter and spring wheat varieties in Oregon can be found at http://cropandsoil.oregonstate.edu/wheat/state_performance_data.htm

Planting date

Winter wheat is typically planted from late September to November. Planting is delayed until this time to reduce the level of aphid infestation and the risk of barley yellow dwarf virus, which is transmitted by aphids. When planting earlier, an insecticidal seed treatment is recommended to reduce the risk of aphid-borne diseases. Wheat planted in November will have reduced fall growth. Late planting can reduce winter kill in some varieties. For late plantings, increase the seeding rate and consider applying a “starter” fertilizer with or near the seed (see pages 4–7).

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