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Golden Plains Area Extension

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For Immediate Release August 8, 2016

(Burlington, Colo.)

WHEAT PLANTING

The first step to planning for a wheat crop is observation of last year's crop. Observing different fields, attending wheat field days and reading about varieties will provide you with information to look at the newer wheat varieties and find varieties that fit your farming operation.

As you plan ahead, there are several things you can use as a guide that can affect your wheat yields: planting date; seeding rate; and seed size.

* Planting date. Wheat has a wide window for optimum planting dates across Colorado. In this part of the world, we like to start planning early to mid-September with September 10 being optimum most years.

Many producers favor early planting to ensure good stand establishment. But early planting can also increase the risk of Hessian fly infestations, wheat streak mosaic and barley yellow dwarf. Waiting until later will greatly reduce these problems. Early planted wheat is also more likely to have excessive fall growth that uses valuable soil moisture.

Wheat planted too late may have a higher risk of winterkill and poor fall growth and tillering, which can lead to increased wind erosion. Delaying planting dates past the optimum time can reduce yields, too. Studies at Garden City, KS show a 22 percent reduction in yield by delaying the planting date from October 1 to November 1, and another 18 percent by delaying to December 1.

As the planting date is delayed past the optimum, the seeding rate should be increased to compensate for the reduced tillering potential.

* Seeding rate. Seeding rates vary across the state. For our dryland plantings 30 to 60 pounds per acre is common, with most using 45 to 60 pounds per acre (500,000 seeds per acre is optimum). Seeding rates in Colorado have been increasing the past 10 years, possibly because more semi-dwarf varieties are being planted.

Wheat plants can adjust to low plant populations by increased tillering. However, some varieties respond to increased seeding rates more than others. For example, from a study in Western Kansas, Tam 107 responded to higher seeding rates while Larned did not.

As planting dates are delayed, seeding rates should be increased. In recent studies at Hutchinson and in Northwest Kansas, high seeding rates were necessary to maximize yields when wheat was planted late. Medium seeding rates (in the recommended range) resulted in maximum yields at normal planting dates but not from later planting dates. Therefore, when planting later than October 1, increase seeding rates.

* Seed size. Large seed has been noted to increase wheat grain yields in Kansas. Large seed increases vigor, tillering and fall forage production compared to small seed.

However, increased grain yields cannot be guaranteed every year or with every variety when planting large seed. For example, there were no differences in yield between light- and heavy-test weight seed of Karl, which has excellent tillering capability. Varieties that tiller well can compensate for small seed size.

In mid-fall weather, the effect of large seed may be reduced because seedlings from small seed have more time to tiller and become established. Also, when planting by volume (as many of us do), more seeds per acre will be planted when using small seed, which may negate the effect of large seed.

Although the large seed does not necessarily result in higher grain yields every year, large seed is good insurance and may show yield advantage under adverse growing conditions.

Last, current wheat trial (and other trial) information is available at www.csucrops.com.

Source: KSU

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