

Current Report

Cooperative Extension Service • Division of Agriculture • Oklahoma State University

Spring Wheat and Spring Oats

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Traditionally spring wheat or spring oats are not planted on a large acreage in Oklahoma. A few farmers plan to grow spring oats for one of several reasons such as a market contract or priority to produce oats to feed on the farm, a rotational crop for cheat control or a rotational crop in a double-crop soybean system. Special circumstances, frequently related to weather occasionally bring about the need to consider spring wheat or oats. A producer who has not planted winter wheat by mid January should not plant winter wheat, unless grazing is his only goal. Grain yields will be reduced to 10 to 15 percent of normal or lower due to lack of vernalization. Spring wheat or oats are two alternatives to late planted winter wheat. Spring wheat may be chosen by some farmers because of desire to maintain the deficiency payment or base acreage in the farm program.

Regardless of the reason for growing spring oats or spring wheat, the producer should evaluate his marketing opportunities especially if on farm storage is not available. Many local elevators will not be prepared to purchase oats or spring wheat. Spring wheat should not be mixed with hard red winter wheat because of dockage. Wheat with more than 10% wheat of other classes is sold as sample grade which reduces the price.

Spring Wheat Production Practices

Once a producer has decided to plant spring wheat, the following are some production guidelines. Spring wheat should be planted in February and at the very latest by mid March. Planting should be done, as early as the last week of January if the soil is dry enough and not frozen. Spring wheat varieties which have been tested in Oklahoma are listed in table 1 along with planting dates and yield. Wheat should be sown at 2-2.5 bushel per acre. Very

little tillering occurs in spring wheat therefore a higher seeding rate is required. Treated seed should be used to decrease the potential for seed decay or seedling diseases resulting from planting in cold, wet soils.

Fertilizer should be used to supply nutrients which are deficient as identified by a soil test. Nitrogen should be supplied at the rate of two pounds for each bushel of expected yield. Nitrogen should be applied preplant, at planting or prior to tillering because high nitrogen promotes tillering and the limited tillering period for spring small grains increases the need for other factors to be optimal.

Herbicides and insecticides should be applied as needed. Herbicides for winter annual grasses and broadleaf weeds are probably not necessary because of the late planting date, but may be needed more frequently for summer annuals because of the later harvest date.

The yield potential for spring wheat in Oklahoma under exceptionally good weather conditions is 75% of winter wheat. Much more commonly, spring wheat yields are 50% or less of winter wheat yields. The main reasons are that hot, dry weather reduces yield in spring wheat more than in winter wheat because of heat and drought stress occurring during grain filling in the later maturing spring wheat. Diseases may also be a problem more frequently in the later maturing spring varieties.

Even though the yield potential is reduced compared to winter wheat planted in October or even December, spring wheat will typically produce some grain when planted in February. Therefore, a farmer who feels he needs to plant wheat after mid January and hopes to obtain grain should plant spring wheat instead of winter wheat. One reason a farmer may feel he needs to plant wheat is because of the farm bill. Current Report 498 gives some of the options of the farm bill which might be helpful.

Spring Oat Production Practices

Spring oats should be planted from the last week of January through mid March, with a February planting date preferred. A seeding rate of 70 pounds per acre is recommended.

Variety selection is quite important with spring oats. There is a significant varietal difference in both yield and test weight. A farmer may select a variety only on the basis of yield, or on test weight or a combination depending on the market or use of the oats. Tables 2 & 3 contain data on spring oat yields and test weight for varieties evaluated in Oklahoma in 1986.

Fertilizers should be applied to supply nutrients identified as deficient based on a soil test. No more than 50 pounds of nitrogen per acre should be applied. Oats are quite susceptible to lodging and higher than 50 pound nitrogen increases the lodging potential.

Harvesting may be done by direct cutting when the oats are mature or if there is considerable green material, they may be swathed and then combined with a pickup attachment. Delaying harvest to wait for all the green to disappear may result in considerable shattering loss.

TABLE 1. YIELD OF SPRING WHEAT VARIETIES IN 1986

Variety	Location					Average
	<u>Altus</u>	<u>Haskell</u>	<u>Lahoma</u>	<u>Perkins</u>	<u>Stillwater</u>	
	----- bu/acre -----					
Oslo	13.2	31.7	22.6	13.6	19.9	20.2
Wheaton	7.4	36.4	14.8	11.4	21.2	18.4
Marshall	7.3	28.4	18.4	10.9	19.4	16.9
McKay	15.4	23.2	14.5	7.8	15.0	15.2
Tammy 325	11.8	26.2	11.1	8.7	16.9	14.9
Matadorus	8.7	18.0	14.2	8.7	12.5	12.4
WS-3	9.5	8.6	10.8	6.4	15.8	10.2
NAPB-175	---	---	13.0	10.5	18.6	---
NAPB-55	---	---	14.5	10.9	14.9	---
Guard	---	33.8	---	---	---	---
Borah	---	8.8	---	---	---	---
LSD .05	5.92	2.35	4.86	2.02	3.13	
Planting Date	2/18	2/25	1/31	2/1	2/1	

TABLE 2. SPRING OAT YIELD 1986

Variety	Location				
	<u>Altus</u>	<u>Haskell</u>	<u>Lahoma</u>	<u>Vinita</u>	<u>Average</u>
	----- bu/acre -----				
Ogle	41.5(1)*	61.4(1)	31.7(4)	70.3(3)	51.2
Harpool 833	31.0(2)	53.4(2)	36.3(1)	58.2(7)	44.7
Harpool 422	29.7(4)	52.4(3)	31.7(5)	56.5(8)	42.6
Larry	30.0(3)	41.2(7)	32.3(3)	66.6(4)	42.5
Lang	28.8(5)	38.9(10)	35.5(2)	65.4(6)	42.2
Mesquite	25.4(6)	38.7(11)	29.1(6)	71.6(2)	41.2
Big Mac	18.2(10)	40.0(9)	25.5(7)	75.3(1)	39.8
Coker 820	16.1(11)	52.3(4)	22.4(9)	50.7(9)	35.4
Nora	23.8(8)	40.5(8)	24.4(8)	49.0(10)	34.4
Coker 716	19.9(9)	20.1(13)	16.6(12)	66.4(5)	30.8
Bob	13.7(12)	46.4(6)	19.2(11)	43.2(11)	30.6
Okay	25.2(7)	29.5(12)	21.2(10)	42.2(12)	29.5
Coker 8415	---	51.9(5)	---	---	---
LSD .05	6.5	4.5	6.7	22.3	---

*Rank among the varieties at that location

TABLE 3. SPRING OAT TEST WEIGHT (lb/bu) 1986

Variety	Location			
	<u>Haskell</u>	<u>Lahoma</u>	<u>Vinita</u>	<u>Average</u>
Bob	29.8	35.0	36.1	33.6
Big Mac	25.5	36.1	37.4	33.0
Coker 820	28.7	33.9	36.4	33.0
Harpool 422	27.6	35.1	34.8	32.5
Harpool 833	26.5	33.7	34.1	31.4
Larry	23.7	34.8	35.1	31.2
Nora	24.3	32.8	35.1	30.7
Lang	24.6	33.1	33.2	30.3
Mesquite	23.0	33.8	33.8	30.2
Ogle	23.7	31.8	32.6	29.4
Okay	19.4	31.9	30.8	27.4
Coker 716	15.2	33.9	32.2	27.1



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