



Current Report

Cooperative Extension Service • Division of Agriculture • Oklahoma State University

Guidelines For Spring Sown Oats

by

Roy A. Johnston and Tom Peeper

Approximately 250,000 acres are sown to oats each year in Oklahoma. Most of this acreage is sown in the fall but each year there is a significant portion that is spring sown. In this report, we will discuss some of the guidelines and practices necessary for successful spring oat production.

PLANT QUALITY SEED

There are three categories of oats that are commonly used as seed sources for spring planting. They are oats that were originally intended for feed, tagged but uncertified oats and certified classes of oats.

Certified seed is the preferred source. It guarantees varietal identity and purity and must have met inspection standards in the field and laboratory. The standards for each class of certified seed are defined in the Official Handbook of the Oklahoma Crop Improvement Association.

Certified oats are sometimes hard to find in the spring in Oklahoma. In this case, the next best choice is seed that has been inspected and tagged by the Oklahoma Seed Laboratory at the State Department of Agriculture. Even though the labelling standards are less than that required for certification, the seed analysis printed on the label does provide the grower some protection. It is unlawful to sell seed that has not been inspected and tagged by the State, with the exception of the farmer

exemption. A brief comparison of the labeling standards for certified and tagged but uncertified seed is provided in Table 1.

It is important to make sure the laboratory analysis printed on the label meets the quality standards you desire for seed oats. Growers should also be aware that the state and certification standards from other states differ. Always read the tag or label so you will know what you are getting.

Unfortunately, it is not uncommon for feed or unlabeled oats to be used for planting in Oklahoma. In this case, the grower has no protection and should be aware of the following areas in which problems may be encountered. (All of the following are controlled for certified seed and described on State labels).

Weed Contamination. The most potentially critical problem associated with sowing feed oats is weed contamination. The effect can be long term and potentially create a new weed problem for other farmers. For instance, it is believed that one of the major avenues for wild oats into Oklahoma was through feed oats. So, here is a case where an entirely new weed species was introduced into the state (ie a new problem for farmers to contend with) and it is hard to control (ie long term effects).

It can be safely assumed that feed (as opposed to seed) oats from other states will have weed contamination.

For instance, surveys in North Dakota have shown that over 70% of their oat production fields have wild oats and over 10% have field bindweed. In addition, several other weed species and ecotypes, not common to Oklahoma, may be present. Feed oats from Arkansas may contain wild garlic and annual ryegrass. Even though these are found in Eastern Oklahoma, they are presently not common to the western half of the state. These are only a couple of the many examples that could be given.

Since wild oats are the most common and serious oat contaminant, the ability to identify it is very important. They can be distinguished from common oats by their darkly colored awn which is twisted and bent at a 45-90° angle and by a concave disc-like structure at the base of the seed.

Varietal Identity and Purity. Since there are great differences among oat varieties for grain or hay production potential, it is important to know what you are getting. Most times the identity of feed oats is lost and they are usually a mixture of several varieties. Lack of varietal purity can result in decreased yields due to differences in plant maturity height, and other characteristics.

Germination and Cleanliness. If the feed oats have been improperly stored or cared for, germination can be reduced. Germination percent is included on the label of all certified and state tested seed. Cleanliness is important in that foreign material can present problems in planting and you are paying for it.

VARIETIES

Table 2 provides a brief description of several oat varieties that can be spring sown in Oklahoma. In general, the early to medium maturity, short stature oat varieties are best for grain, whereas the tall, late varieties are better suited for hay.

Fertilization. Adequate levels of soil nutrients are essential for profitable spring oat production. The soil should be sampled and tested to identify nutrient deficiencies and fertilizer applied accordingly. See OSU Fact Sheet No. 2225 "OSU Soil Test Calibrations" for assistance in deriving fertilizer rates.

Planting Dates and Rates. In general, oats should be sown in February for maximum production. Planting after March 1 will delay maturity and usually result in lower test weights and yield. Seeding rates between 2½ to 3 bushels per acre (1 Bu = 32 lbs) are recommended.

Weed Control. Most of the winter annual weeds (ie cheat, henbit, mustards) will be controlled when the seedbed is being prepared. Broadleaf weeds that may present problems in the late spring are Kochia, pigweeds, slim leaf lambsquarter, sunflower, and wild buckwheat. These and other broadleaf weeds can be controlled with one or a combination of MCPA, 2,4-D, bromoxynil and Banvel (dicamba). Bromoxynil or Banvel alone or in combination with MCPA or 2,4-D will be required for wild buckwheat control. For other broadleaf weeds, it may be advisable to use MCPA instead of 2,4-D. Oats are more sensitive to the damage by 2,4,-D than MCPA. A brief condensation of the label recommendations and guidelines for each chemical is provided in Table 3. It should be noted that this table is not authoritative and should not be used in place of the label. The proper use of any herbicide requires that the actual label be read and followed.

Some of these herbicides are produced and sold in many different formulations with only certain ones being approved for use in spring oats. If a formulation is approved for this use, spring oats will be mentioned on the label; otherwise do not use it.

Table 1. A Brief Comparison of the Standards Required For Oat Seed to Pass Certification and State Inspection.

Factor	Certified Oats	State Labeled Only
Varietal Purity	98.00 %	90.00 %
Inert Matter (Maximum)	2.00 %	10.00 %
Germination (Minimum)	85.00 %	70.00 %
Noxious Weeds:		
Wild oats	none	9/1b
Bindweed	none	none
Wild garlic	none	27/1b
Cheat	none	500/1b
Wild buckwheat	none	18/1b
Jointed goatgrass	none	9/1b

Table 2. Oat varieties that may be spring sown in Oklahoma.

Variety	Maturity	Height	Test Wt.	Diseases* and Comments
Cimarron	Early	Short	Good	Victoria Blight (R) Soil Borne Mosaic (T)
Okay	Medium	Med. Tall	Good	Barley Yellow Dwarf (T)
Chilocco	Medium	Med. Tall	Excellent	Soil Borne Mosaic (T) Barley Yellow Dwarf (R)
Nora	Med. Early	Short	Good	Barley Yellow Dwarf (VS)
Bob	Med. Early	Short	Good	
Coker 422	Early	Short	Good	
Lang	Early	Short	Medium	Smut (MS)
Larry	Early	Short	Good	
Bates	Med. Early	Short	Good	Smut (R) Crown Rust (MR)
Lodi	Late	Tall	Poor	Hay Oat
Lyon	Late	Tall	Poor	Hay Oat
Walken	Late	Tall	Poor	Hay Oat

* MR = Moderately Resistant, R = Resistant, T = Tolerant, MS = Moderately Susceptible
S = Susceptible, VS = Very Susceptible

Table 3. Rates and Guidelines for the Use of MCPA, 2,4-D, bromoxynil or Banvel in Sown Oats.

Chemical	Rates (Product/Acre)	Comments**
MCPA ester	½ - 1½ pints	Treat in spring when grain is fully tillered and 8-10 inches tall. Do not spray grain in the boot to dough stage.
2,4-D	½ - 2 pints	Apply after grain is fully tillered (about 4-8 inches tall), but not forming joints in the stem. Do not spray during boot to dough stage. Use only formulations approved for spring oats.
Brominal or Buctril (bromoxynil)	1-1½ pints	Apply after oats emerge until boot stage begins. Weeds must not be past the 3-4 leaf stage or 1½ inches in diameter. Do not apply when crop is under moisture stress or has a full canopy. Wild Buckwheat should not be past the 5 leaf stage.
Banvel* (dicamba)	4 ounces	Must be applied before spring seeded oats exceed the 5 leaf stage. Damage may occur if oats are under stress.
Banvel + MCPA	2-4 ozs Banvel + 8-12 ozs MCPA	For use only when phenoxy resistant weeds such as wild buckwheat are present.

* Based on 4 lbs/gal formulations of Banvel and MCPA

** Check each herbicide label for grazing restrictions other information pertinent to effective and safe usage.