Forage Crops
Production Technology

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ALFALFA VARIETIES FOR OKLAHOMA, 2003

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The choice of which variety to plant is an important question alfalfa producers must resolve before establishing new stands. Thousands of varieties have been developed during the last 40 years. The purpose of the Alfalfa Variety Evaluation Program at OSU is to help alfalfa producers decide which varieties to consider and to assist alfalfa breeders to choose which varieties to market in this area.

Normally 10 to 20 new alfalfas are submitted annually for testing in Oklahoma. We also include in these tests some varieties that are well tested to give a sound basis of comparison among varieties.

The table below summarizes data collected for many years (through plantings in 2001). Those wanting detailed information about alfalfa variety performance should visit http://alfalfa.okstate.edu/var-test/alf-var.html on the Internet. Currently, detailed results for the 1999-2002 harvest years in Oklahoma are available and can be printed from that site. If anyone desires older data, email the authors at jlc@mail.pss.okstate.edu

Varieties listed in Table 1 are well-tested. That is, they have been in several tests, representing diverse alfalfa production areas in the state. The more a variety is tested, the more confidence we have in its performance.

Relative Yield is the relative ranking of a variety's yield, compared to others in a particular test. A Relative Yield score of 100% indicates a variety's yield performance is average among those in a test.

The **Minimum** and **Maximum** relative yields indicate how widely a variety's yield varies. All the varieties in Table 1 have produced yields well above average in test. The "Maximum" column shows how much above average each variety has yielded. Most have fallen below average one or more times. The column labeled "Minimum" shows the lowest relative yield we have recorded. When varieties are tested as much as OK 49 and Garst 630 (included as checks in many tests), there will be some failures.

Table 1. Performance summary of the proven varieties

	Relative Yield			1st year	Number of
	Average	Maximum	Minimum	tested	test-years
Magnum V	104.1	106.3	101.2	1998	16
OK 200	103.3	108.0	97.2	1996	36
Garst 630	102.6	110.6	93.2	1987	154
Garst 6420	102.1	110.6	95.5	1999	20
OK 49	101.7	110.7	93.3	1991	62
Magnum IV	101.1	106.3	93.9	1994	26
Garst 631	100.4	106.3	94.7	1996	39

Relative Yield is the relative ranking of a variety's yield, compared to others in a particular test. A Relative Yield score of 100% indicates a variety's yield performance is average among those in a test.

With very few exceptions varieties that perform well in "high yield" tests (deep fertility soil, irrigated), also perform well in other tests (moderate fertility, shallow soils, rainfed). We have checked to see if some varieties are only well suited for irrigated sites and others are only good in rainfed sites, but we have found no such trend in alfalfa.

Other good varieties are marketed in Oklahoma, but they have not been tested (for whatever reason) or have been in only one or two tests which is not good enough for us to "recommend" a variety. The varieties in Table 2 have been fairly well to very well tested, but may not be available. These tests include old alfalfas such as oklahoma common and/or Buffalo. Otherwise few "bad" varieties are entered into our tests indicating that the competition among entries is keen.

Table 2. Varieties that show promise

	Relative Yield			1st year tested	Number of test-years
	Average	Maximum	Minimum		
OK 199	102.7	106.0	96.1	1998	24
OK 169	103.7	110.6	100.0	2001	9
Reward	103.8	109.2	100.1	1996	32
Enhancer	103.0	106.8	100.2	1997	20
Abilene+Z	100.9	102.5	97.7	2000	12

Other Factors In Choosing Alfalfa Varieties

Disease and insect resistance along with winter hardiness are things that should be considered in addition to forage yield when purchasing a alfalfa seed. Disease and insect resistance scores and fall dormancy are available for several hundred alfalfa varieties at http://www.alfalfa.org/pdf/02ALFC011_variety_leaflet.pdf This information is compiled by The National Alfalfa Alliance (formerly the Alfalfa Council) from information supplied by the developers. **Forage quality** varies a little among alfalfa varieties, and timing of harvest is much more important than variety in determining forage quality.

Seed of Good Varieties is Expensive

To reduce establishment costs, try: 1) making a good seedbed; 2) buying clean seed that has good germination; and 3) reducing planting rate to 10 to 12 pounds/acre. Buying "cheap" seed usually costs more from the standpoint of reduced yields, shorter stand life, and increased insecticide. Establishing alfalfa is an investment. Go with the best!!

Additional Information: Alfalfa forage yield for a particular variety varies from year to year and from one site to another; however, a variety's Relative Yield Scores vary much less. For this reason (and to conserve space), Relative Yield Scores are presented. This is the total yield for a variety in a test divided by the average of all varieties in the test and multiplied by 100. Detailed yield data for each harvest in every trial are on the Internet at http://alfalfa.okstate.edu/var-test/alf-var.html.