

Ok102

Total Variety from Wheat . . .

Ok102 is a hard red winter wheat variety released in 2002 by the Oklahoma Agricultural Experiment Station and the USDA-ARS. Its targeted production area extends throughout Oklahoma, with greatest potential in the central corridor and for irrigated areas of the High Plains.

Experimentally tested as OK97508, Ok102 has exceeded the mean yield of 2174, Custer, 2137, and Jagger (the four most widely grown varieties in Oklahoma) by 2.4 bu/acre (Table 1). It has moderately large kernels with excellent test weight, averaging 60.0 lb/bu compared to 60.3 lb/bu for 2174 in 48 comparisons since 1997. Ok102 has excellent standability with plants 2 to 4 inches shorter than most varieties. Its heading date is a couple days later than Ok101, Custer, and Jagger, but equal to 2174. Acid soil tolerance is intermediate.

Ok102 is suitable for both grain-only and dual-purpose management systems. Germination is highly temperature-sensitive; therefore, it is not recommended for very early seeding in hot soils. Two characteristics that lend Ok102 to a dual-purpose system include an above-average coleoptile length and a relatively late dormancy release to circumvent early spring freezes and allow extended winter grazing. Fall forage potential of Ok102 is about average (Table 2).

Ok102 is resistant to wheat soilborne mosaic virus. Seedlings are susceptible to wheat leaf rust, but Ok102 has a high level of adult plant resistance to leaf rust. Ok102 has at least an intermediate reaction to barley yellow dwarf virus, similar to its parent 2174, and an intermediate reaction to wheat streak mosaic virus. Insect reactions include susceptibility to greenbug, and to Russian wheat aphid, and a heterogeneous response to Hessian fly.

. . . to Flour

Ok102 has performed very well for milling and baking. Wheat protein of Ok102 is similar to 2174 and Jagger, which are among the best varieties grown in Oklahoma. The Wheat Quality Council rated Ok102 as above-average for overall baking quality and complimented it for strong mixing tolerance and internal loaf characteristics. Bake absorption and loaf volume were deemed acceptable. In summary, Ok102 combines good protein levels and good protein strength.

GENETIC BACKGROUND

The pedigree of Ok102 is 2174/Cimarron. The original cross and selections were made by Dr. Ed Smith, retired OSU wheat breeder. Dr. Brett Carver, current OSU wheat breeder and Wheat Genetics Chair in Agriculture, made the final selection and purification.

SEED AVAILABILITY

Foundation Seed of Ok102 is available from Oklahoma Foundation Seed Stocks for planting the fall of 2002.

For Seed Directory:

OCIA, 368 Ag. Hall
Oklahoma State Univ.
Stillwater, OK 74078

OR

www.okcrop.com

CERTIFIED SEED

- *High Quality Seed
- *Genetically Identified
- *Pure Seed
- *Seed With a Pedigree, Breeder Seed – Foundation Seed – Registered Seed – Certified Seed
- *Passes all Field Inspections and Laboratory Tests
- *Doesn't Cost, It Pays**



Ok102

Total Variety from Wheat to Flour

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Table 1. Grain yield in bu/a of Ok102 and selected wheat varieties.

Entry	1997 (4) ¹	1998 (8)	1999 (4)	2000 (7)	2001 (8)	2001 (21)	Advantage of Ok102
Ok102	72	63	74	48	56	50	-
2174	-	60	68	47	55	49	+1.7
Custer	56	65	66	50	-	47	+2.9
Jagger	47	60	65	-	-	54	+2.2
2137	-	60	68	45	53	48	+2.8

¹ Number of locations where comparisons were made.
Data from wheat breeding nurseries and wheat variety trials.

Table 2. Fall forage yield in lb/a of Ok102 and selected wheat varieties.

Entry	Chickasha (2 yr) ¹	Perkins (2 yr)	Goodwell 2001	Lahoma 2001	Overall 6 site-years
Ok102	2010	2490	3090	2140	2330
Ok101	2270	2630	3490	2090	2420
2174	2320	2570	3420	2370	2490
Custer	2140	2580	3340	2480	2320
Jagger	2210	2670	3450	2680	2470
2137	1950	2430	3420	2290	2290
Mean ²	2210	2570	3250	2270	2360

¹Two year averages for 2000 and 2001. ²Mean of all varieties in the trial.

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