



Current Report

Cooperative Extension Service • Division of Agriculture • Oklahoma State University

Performance of Wheat Varieties, Oklahoma - 1985

David S. Howle, E.L. Smith, and T.R. Hughen
Department of Agronomy

Grain production from wheat during the 1984-85 growing season in Oklahoma was affected by a series of events which resulted in below average yields and test weights. The fall of 1984 was dry in most areas, resulting in late planting and reduced fall growth. Ample moisture during the winter and spring months, however, allowed for rapid growth and anticipation of high yields. Unfortunately, the cool, wet spring also provided an excellent environment for disease development. The spring of 1985 will be remembered for the worst leaf rust epidemic Oklahoma has seen in decades. Other diseases that caused significant losses were tan spot, Septoria leaf spot, and take-all. A brief period of hot, dry weather during the grain development stage appeared to affect grain yields in many areas of the state. Rains during the harvest season resulted in severe reductions in test weights.

Two varieties, Siouxland and Payne, had excellent resistance to leaf rust and two others, Bounty 205 (a hybrid) and Mustang, exhibited tolerance to the infection. This contributed to these four varieties being the top yielders across the state.

This report contains the results of 12 farmer cooperative and 4 experiment station trials. Trials at Mangum, Vinita, and Holdenville were planted, but are not reported for various reasons. In no way is this report an endorsement or recommendation of all or any of the varieties or hybrids tested. The purpose of this testing program is to provide

Oklahoma wheat farmers with current and reliable performance data on the varieties which are presently grown or are available for use in Oklahoma. When evaluating this data for variety selection it is recommended that specific emphasis be given to the data representing the region of the state in which the wheat is to be grown and that multiple year averages be consulted when possible. It will also be helpful to consider the cultural information provided in an accompanying table.

These data are results of a cooperative effort between several individual wheat growers, the Oklahoma Agricultural Experiment Station, the Cooperative Extension Service and the Oklahoma Wheat Commission.

NORTH CENTRAL OKLAHOMA

VARIETIES	KINGFISHER		LAMONT		CHEROKEE		LAHOMA		TONKAWA		REGIONAL AVERAGE	
	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.
1. Siouxland	56.3	54.2	49.0	56.6	40.8	53.8	35.8	52.7	57.9	57.2	48.0	54.9
2. Bounty 205	52.6	54.6	52.1	56.0	41.8	52.2	27.7	49.4	54.4	54.1	45.7	53.3
3. Mustang	54.9	56.1	47.8	56.7	35.1	52.5	34.7	51.6	47.1	54.7	43.9	54.3
4. Wrangler	52.1	55.3	46.2	56.6	37.4	54.2	35.7	52.2	44.3	55.0	43.1	54.7
5. Payne	45.7	52.1	42.4	54.2	39.2	52.1	29.9	50.8	52.1	54.6	41.9	52.8
6. Chisholm	50.8	56.0	37.6	54.7	36.4	55.1	32.6	52.0	41.2	54.8	39.7	54.5
7. Triumph 64	45.5	55.9	41.2	57.5	38.2	56.1	33.8	55.1	--	--	39.7	56.2
8. Quantum 576	51.5	54.3	38.4	55.2	36.6	52.8	27.3	51.2	--	--	38.5	53.4
9. Hawk	42.9	53.2	33.3	53.4	34.4	52.4	23.1	50.6	39.1	52.9	34.6	52.5
10. H.W. 1035	45.0	53.5	34.7	54.2	27.7	51.8	21.4	50.3	40.2	52.9	33.8	52.6
11. TAM 101	39.9	53.4	35.9	53.4	28.5	50.3	25.2	50.7	37.3	54.8	33.4	52.5
12. Newton	35.3	52.3	42.7	53.7	25.7	49.9	20.9	49.5	37.5	53.2	32.4	51.7
13. Vona	46.9	53.7	28.0	52.4	27.6	52.0	23.6	49.9	35.2	53.3	32.3	52.3
14. TAM 105	39.6	54.8	28.6	51.2	23.6	48.3	19.8	50.1	34.8	52.5	29.3	51.4
Location Average:	47.1	54.2	39.9	54.7	33.8	52.4	28.0	51.2	43.4	54.2	38.3	53.4
L.S.D. (.05):	7.5	2.2	7.3	1.1	4.3	1.6	6.2	1.5	5.2	1.1		
C.V. (%):	12.1	2.9	12.6	1.4	8.9	2.2	15.6	2.0	8.8	1.4		

SOUTH CENTRAL OKLAHOMA

VARIETIES	LAWTON		CHICKASHA		DUNCAN		REGIONAL AVERAGE	
	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.
1. Siouxland	32.8	56.0	66.8	57.2	31.9	53.6	43.8	55.6
2. Bounty 205	27.1	52.9	54.0	53.7	46.2	55.8	42.4	54.1
3. Payne	34.5	54.2	55.2	53.8	30.6	54.3	40.1	54.1
4. Mustang	27.7	53.7	49.8	54.8	35.5	55.1	37.7	54.5
5. Chisholm	22.8	52.9	50.6	55.3	32.3	54.7	35.2	54.3
6. Triumph 64	22.0	56.0	48.1	57.0	32.5	56.5	34.2	56.5
7. Wrangler	25.9	53.5	50.1	55.8	26.4	55.7	34.1	55.0
8. Quantum 576	22.5	52.1	44.7	53.3	32.7	55.5	33.3	53.6
9. TAM 101	23.1	51.7	41.6	52.3	30.7	57.0	31.8	53.7
10. Hawk	18.4	51.5	36.2	51.8	39.2	55.2	31.3	52.8
11. H.W. 1035	17.6	51.6	36.9	51.7	37.4	53.6	30.6	52.3
12. Vona	15.2	49.6	36.0	52.7	39.4	56.9	30.2	53.1
13. Newton	17.8	51.6	31.4	51.6	39.4	54.9	29.5	52.7
14. TAM 105	16.8	50.9	32.3	51.5	32.9	48.6	27.3	50.3
Location Average:	23.2	52.7	45.3	53.8	34.8	54.8	34.4	53.8
L.S.D. (.05):	3.6	0.8	4.6	1.0				
C.V. (%):	11.9	1.1	7.0	1.2				

SOUTHWEST OKLAHOMA

VARIETIES	CUSTER CITY		APACHE		ALTUS		REGIONAL AVERAGE	
	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.
1. Siouxland	41.6	57.1	66.8	57.3	43.0	55.3	50.5	56.6
2. Payne	50.5	55.4	61.8	54.9	36.3	53.5	49.5	54.6
3. Wrangler	47.4	56.0	52.7	56.8	41.2	55.3	47.1	56.0
4. Mustang	48.6	56.0	53.9	55.2	38.4	54.2	47.0	55.1
5. Bounty 205	48.4	54.2	52.8	53.3	31.3	52.4	44.2	53.3
6. Chisholm	41.0	55.9	49.5	54.8	34.7	53.9	41.7	54.9
7. TAM 101	46.8	54.6	39.8	52.5	32.4	54.1	39.7	53.7
8. Triumph 64	35.9	57.2	43.7	57.4	34.7	56.6	38.1	57.1
9. Quantum 576	40.7	54.1	43.3	52.9	28.2	52.3	37.4	53.1
10. Hawk	39.7	54.9	38.1	51.6	28.1	52.3	35.3	52.9
11. Newton	36.4	53.2	38.2	53.0	28.9	53.3	34.5	53.2
12. Vona	36.5	53.6	35.8	50.8	28.1	52.5	33.5	52.3
13. H.W. 1035	36.4	53.1	38.2	52.6	23.6	53.0	32.7	52.9
14. TAM 105	36.6	53.1	31.4	51.1	22.2	52.8	30.1	52.3
Location Average:	41.9	54.9	46.1	53.9	32.2	53.7	40.1	54.1
L.S.D. (.05):	4.6	1.1	2.8	0.8	2.1	0.6		
C.V. (%):	8.5	1.4	4.2	1.0	4.6	0.8		

NORTHWEST OKLAHOMA

VARIETIES	HOOKER		BUFFALO		ARNETT		REGIONAL AVERAGE	
	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.	Bu/A	T.W.
1. Bounty 205	42.8	56.1	65.1	54.1	49.0	54.0	52.3	54.7
2. Mustang	46.2	58.3	58.5	54.0	50.9	54.3	51.9	55.5
3. Wrangler	39.5	59.0	61.1	55.9	51.5	55.1	50.7	56.7
4. Chisholm	37.9	58.4	57.8	56.2	51.4	55.8	49.0	56.8
5. TAM 101	41.8	57.9	58.2	55.0	43.8	52.9	47.9	55.3
6. Siouxland	41.6	58.7	58.0	55.5	42.3	52.5	47.3	55.6
7. Payne	41.7	56.4	56.8	51.9	40.1	51.4	46.2	53.2
8. Triumph 64	37.1	60.9	47.0	57.0	51.1	56.2	45.1	58.0
9. Vona	40.7	57.2	52.7	53.9	41.3	52.8	44.9	54.6
10. Quantum 576	39.8	57.8	52.1	52.9	41.5	52.5	44.5	54.4
11. Hawk	40.7	55.6	49.3	51.6	41.8	51.9	43.9	53.0
12. Newton	36.4	56.1	50.1	51.6	36.9	49.3	41.1	52.3
13. H.W. 1035	35.5	56.7	50.4	52.4	32.7	48.4	39.5	52.5
14. TAM 105	34.7	55.3	47.0	51.0	36.3	50.3	39.3	52.2
Location Average:	39.7	57.5	54.6	53.8	43.6	49.3	46.0	54.6
L.S.D. (.05):	3.3	1.2	6.2	1.9	5.6	2.8		
C.V. (%):	6.5	1.5	8.0	2.5	9.0	3.7		

Statewide Yield Summary for 1984-85 Wheat Variety Trial

Variety	North Central		Southwest		South Central		Northwest		Eastern		State Average	3-Year Average (1983-85)
	Yield	Rank	Yield	Rank	Yield	Rank	Yield	Rank	Yield	Rank		
-----Bu/A-----												
1. Siouxland	48.0	(1)	50.5	(1)	43.8	(1)	47.3	(6)	42.2	(1)	46.8	--
2. *Bounty 205	45.7	(2)	44.2	(5)	42.4	(2)	52.3	(1)	--		46.6	--
3. Mustang	43.9	(3)	47.0	(4)	37.7	(4)	51.9	(2)	35.2	(3)	43.7	**45.1
4. Payne	41.9	(5)	49.5	(2)	40.1	(3)	46.2	(7)	39.8	(2)	43.5	44.6
5. Wrangler	43.1	(4)	47.1	(3)	34.1	(7)	50.7	(3)	--		42.2	--
6. Chisholm	39.7	(6)	41.7	(6)	35.2	(5)	49.0	(4)	31.3	(4)	39.9	46.3
7. Triumph 64	39.7	(7)	38.1	(8)	34.2	(6)	45.1	(8)	--		39.3	41.9
8. *Quantum 576	38.5	(8)	37.4	(9)	33.3	(8)	44.5	(10)	--		38.8	--
9. TAM 101	33.4	(11)	39.7	(7)	31.8	(9)	47.9	(5)	28.0	(6)	36.3	42.2
10. Hawk	34.6	(9)	35.3	(10)	31.3	(10)	43.9	(11)	--		36.0	42.5
11. *H.W. 1035	33.8	(10)	32.7	(13)	30.6	(11)	39.5	(13)	--		35.0	--
12. Newton	32.4	(12)	34.5	(11)	29.5	(13)	41.1	(12)	--		34.1	39.5
13. Vona	32.3	(13)	33.5	(12)	30.2	(12)	44.9	(9)	28.3	(5)	34.0	42.4
14. TAM 105	29.3	(14)	30.1	(14)	27.3	(14)	39.3	(14)	--		31.7	39.7
Regional Average	38.3		40.1		34.4		46.0		34.1		39.1	42.7

2086.5

* Hybrid

** 2-yr. average (1984 & 1985)

<u>NORTH CENTRAL</u>	<u>SOUTHWEST</u>	<u>SOUTH CENTRAL</u>	<u>NORTHWEST</u>	<u>EASTERN</u>
Kingfisher	Custer City	Lawton	Hooker	Haskell
Lamont	Apache	Chickasha	Buffalo	Ada
Cherokee	Altus	Duncan	Arnett	
Lahoma				
Tonkawa				

Site Information

Location	Soil Series and Texture*	Soil pH	Soil Temp. (F°)	Soil Moisture	Planting Date	Seeding Rate (lb/A)	Harvest Date	**Comments
1. Kingfisher	Kirkland SL	6.5	51°	Good	10-24-84	60	6-19-85	cheat; leaf rust, tan spot
2. Lamont	Pond Creek SiL	5.4	55°	Good	10-23-84	60	6-17-85	
3. Tonkawa	Bethany SiL	5.9	66°	Good	10-22-84	60	6-15-85	
4. Cherokee	Dale SiL	---	64°	Marginal-Poor	10-26-84	60	6-17-85	poor stand
5. Lahoma	Pond Creek SiL	4.6	57°	Good	10-30-84	70	6-10-85	low pH
6. Custer City	Carey SiL	5.7	60°	Good	10-30-84	60	6-20-85	leaf rust; hail
7. Apache	Hollister SiL	5.7	64°	Marginal	11-09-84	60	6-14-85	leaf rust
8. Altus	Hollister CL	7.2	46°	Good	12-03-84	60	6-13-85	planted late
9. Lawton	Foard Tillman SiCL	6.9	55°	Good	11-13-84	60	6-24-85	leaf rust; lodging
10. Chickasha	Dale SiL	---	53°	Good	11-03-84	90	6-13-85	leaf rust
11. Duncan	Kirkland CL	---	91°	Marginal-Poor	9-10-84	60	6-26-85	cheat; grazed
12. Hooker	Dalhart FSL	6.5	51°	Good	11-01-84	50	6-27-85	
13. Buffalo	Woodward L	7.8	65°	Marginal	10-15-84	60	6-21-85	fallowed
14. Arnett	St. Paul SiL	6.6	51°	Good	10-15-84	60	6-21-85	leaf rust
15. Haskell	Taloka SiL	---	61°	Good	11-08-84	90	6-20-85	
16. Ada	Port SiCL	5.3	60°	Good	11-15-84	60	6-14-85	leaf rust; hail

* C = clay, L = loam, Si = silt, S = sand, F = fine

** All locations are continuous wheat unless specified otherwise

Oklahoma State Cooperative Extension Service does not discriminate because of race, color, sex, or national origin in its programs and activities, and is an equal opportunity employer. Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Charles B. Browning, Director of Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of the Division of Agriculture and has been prepared and distributed at a cost of \$617.00 for 7,300 copies. AI 5545 0885 PD