



Current Report

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1981 ALFALFA FORAGE YIELD TRIALS

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The trials reported herein were conducted on the Oklahoma Agricultural Experiment Station to identify superior alfalfa varieties for Oklahoma.

The 1981 growing season began with an exceptionally mild winter. Soil moisture was low throughout the state as a result of the 1980 drought. These conditions coupled with high numbers of overwintering spotted alfalfa aphids and moderately severe infestations of alfalfa weevils caused forage yields at first harvest to be lower than usual. Wide-spread economic levels of pea aphids throughout the state and scattered concentrations of blue alfalfa aphids developed just prior to first harvest and also played a role in reducing yields.

Lack of rainfall limited yields again toward the end of the second regrowth (late June). Otherwise conditions were exceptionally favorable for forage production with mild summer temperatures and adequate amounts of rain during July, August, and September. Dryland alfalfa production was nearly as high as irrigated and was much more economical.

An early (June) infestation of web worms never developed to severe levels but these insects were present in higher than normal levels through August. During September a widespread infestation of the three cornered alfalfa hopper caused growth to stop and made many fields turn yellow. Yield reductions were significant but insecticides were seldom applied.

Pytophthora root rot was observed in many fields during the periods of high rainfall and the occurrence of anthracnose was higher than usual in fields during July and August. *Fusarium* spp. were also identified in widespread fields.

Recently named varieties previously identified with an experimental number include: Pike (PCC-77-122), Vancor (K729), Raidor (NK-78010)

LSD (Least Significant Difference) is a statistical test of yield differences. If the 5% LSD number is greater than the yield difference between two varieties, we cannot be confident there is any difference in yield.

The 5% LSD number must be smaller than the yield difference between two varieties before we can be 95% sure that the differences are not due to environmental irregularities and errors.

Subjective Summary Of Alfalfa Yields

1976-81

Variety	Cumulative Overall Rating	Duration of Longest Trial*	Total No. of Trials	Station Years*
WL 318	Very Good	5	14	42
Apollo	Very Good	5	10	31
Cimarron	Very Good	3	7	16
555 (Pioneer)	Very Good	2	6	9
Advantage	Very Good	2	3	6
Pike	Very Good	2	3	6
Trident	Very Good	2	3	6
WL 313	Very Good	1	2	2
WL 314	Very Good	1	2	2
Riley	Good	4	14	33
Kanza	Good	5	12	41
Perry	Good**	4	3	6
WL 312	Good**	2	3	6
Hi-phy	Good	2	3	6
Dawson	Good	5	6	17
Gladiator	Good**	2	3	6
Arc	Fair**	5	17	47
Liberty	Fair**	5	12	38
Buffalo	Fair**	4	9	26
Cody	Fair**	4	7	22
Vanguard	Fair**	4	10	31
Vancor	Fair	2	3	6
Classic	Fair**	2	3	6
Team	Fair	5	4	16
Olympic	Fair**	4	3	12

* 9 station-years with one trial lasting at least 3 years usually establishes a strong trend.

** Denotes ratings different from previously reported.

Agronomy Research Station Stillwater-Payne Co. 1979-81

Oklahoma Common Strains

Entry	Tons Dry Matter/Acre										Relative Yield ^{1/}
	1981						1980	1979	3 yr.		
	4/23	6/9	7/10	8/14	9/25	Total	5 cuts	4 cuts	Avg.		
Riley*	1.60	2.04	1.81	1.38	1.21	8.04	10.03	5.37	7.81	104	
Schroeder	1.69	1.95	1.80	1.62	1.40	8.45	8.74	6.11	7.77	104	
OCPX	1.67	1.90	1.74	1.49	1.35	8.23	8.64	6.25	7.71	105	
Givens	1.66	2.03	1.78	1.59	1.46	8.52	9.06	5.44	7.67	103	
Graham	1.70	2.09	2.02	1.61	1.29	8.72	8.76	5.48	7.65	102	
Wright	1.67	1.97	1.77	1.52	1.31	8.24	8.54	6.06	7.61	102	
Kanza	1.74	1.89	1.73	1.37	1.29	8.02	9.08	5.59	7.56	101	
Dugan	1.66	1.96	1.79	1.63	1.39	8.43	8.22	5.63	7.43	99	
Cody	1.72	1.99	1.86	1.53	1.48	8.58	8.27	5.43	7.43	99	
Dawson	1.56	2.11	1.63	1.29	1.17	7.76	8.58	5.92	7.42	99	
Berends	1.68	1.92	1.80	1.43	1.33	8.15	8.03	5.97	7.38	99	
Elsener	1.66	1.85	1.70	1.40	1.31	7.93	8.17	5.80	7.30	98	
Gastin	1.55	1.94	1.72	1.45	1.37	8.03	7.98	5.70	7.24	97	
Arc*	1.78	1.90	1.45	1.24	1.06	7.44	8.50	5.49	7.14	95	
Kohler	1.58	1.89	1.65	1.50	1.21	7.83	7.87	5.55	7.08	95	
Percy	1.47	1.79	1.77	1.49	1.31	7.84	7.91	5.25	7.00	94	
Average	1.65	1.96	1.75	1.47	1.31	8.13	8.52	5.69	7.46	---	
5% LSD	N.S.	N.S.	0.18	0.17	0.16	0.57	0.99	0.58	N.S.	---	
CV (%)	10.4	8.9	8.8	10.1	10.7	6.1	10.1	8.9	10.9	---	

^{1/} Percent of average of Arc and Riley
 N.S. = No Significant Differences Among Varieties (.05)
 Planting Date: 9/15/78 Exp. No. 812
 Irrigated: Sprinkler
 Soil Type: Port Loam

Agronomy Research Station Stillwater-Payne Co. 1979-81

Tons Dry Matter/Acre

Entry	Tons Dry Matter/Acre										Relative Yield ^{1/}
	1981						1980	1979	3 yr.		
	4/21	6/9	7/10	8/14	9/28	Total	5 cuts	4 cuts	Avg.		
Buffalo	1.55	2.05	1.82	1.59	1.64	8.65	8.91	5.83	7.80	109	
Cimarron	1.63	2.07	1.62	1.37	1.31	7.99	8.76	6.20	7.65	107	
Aztec	1.57	2.00	1.70	1.45	1.43	8.15	8.63	6.10	7.63	106	
Liberty	1.53	2.10	1.54	1.22	1.29	7.69	8.92	6.28	7.63	106	
531	1.35	1.98	1.68	1.32	1.38	7.70	9.11	6.06	7.62	106	
Apollo	1.37	1.98	1.76	1.49	1.39	8.00	8.52	5.95	7.49	104	
WL 318	1.44	1.86	1.65	1.32	1.34	7.60	8.85	5.86	7.44	104	
Kanza	1.36	1.85	1.64	1.42	1.37	7.64	8.51	5.79	7.31	103	
Cody	1.32	1.94	1.78	1.49	1.50	8.02	8.05	5.76	7.28	102	
Givens	1.29	1.90	1.66	1.49	1.36	7.71	8.03	6.00	7.25	102	
APC 1976	1.37	1.95	1.57	1.32	1.22	7.43	8.67	5.60	7.23	101	
Arc*	1.59	2.03	1.50	1.32	1.17	7.62	8.24	5.82	7.23	101	
Vanguard	1.32	2.01	1.64	1.25	1.20	7.43	7.93	6.16	7.17	100	
Riley*	1.17	1.83	1.49	1.40	1.25	7.15	8.35	5.83	7.11	99	
530	1.23	1.94	1.49	1.26	1.22	7.14	7.85	5.84	6.94	97	
Baker	1.32	1.81	1.40	1.22	1.12	6.89	7.55	5.61	6.68	93	
Average	1.40	1.96	1.62	1.37	1.32	7.67	8.43	5.90	7.33	---	
5% LSD	N.S.	0.16	0.19	0.17	0.13	0.54	0.69	N.S.	0.40	---	
CV (%)	9.7	7.2	10.0	10.4	8.8	6.1	7.1	6.5	8.2	---	

^{1/} Percent of average of Arc and Riley
 N.S. = No significant Differences Among Varieties (.05)
 Planting Date: 9/15/78 Exp. No. 804
 Irrigated: Sprinkler
 Soil Type: Port Loam

2068.2

Agronomy Research Station Stillwater - Payne Co. 1980-81

Entry	Tons Dry Matter/Acre							2 yr. Avg.	Relative Yield ^{1/}
	1981						1980 5 cuts		
	4/23	6/9	7/10	8/14	9/30	Total			
555	2.26	2.46	1.92	1.68	1.16	9.48	8.37	8.93	119
PCC 77-122 Br	2.25	2.31	1.87	1.56	1.12	8.92	8.50	8.71	116
Pike	2.16	2.41	1.72	1.50	1.05	8.82	8.45	8.64	116
Advantage	1.95	2.28	1.74	1.45	1.05	8.46	8.21	8.34	112
Trident	1.78	2.30	1.83	1.58	1.06	8.56	8.02	8.29	111
Cimarron	2.14	2.11	1.81	1.42	1.05	8.32	8.22	8.27	111
WL 312	2.13	2.28	1.73	1.46	1.00	8.59	7.86	8.23	110
WL 318	1.86	2.19	1.69	1.48	1.05	8.26	8.03	8.15	109
Hi-phy	2.03	2.31	1.70	1.45	1.03	8.53	7.62	8.08	108
Apollo	1.89	2.25	1.74	1.48	1.04	8.41	7.65	8.03	107
Kanza	1.88	1.95	1.58	1.44	0.93	7.75	7.93	7.84	105
Buffalo	1.84	2.05	1.80	1.71	1.12	8.51	6.99	7.75	104
Arc*	2.09	1.97	1.46	1.18	0.78	7.48	7.86	7.67	103
Vanguard	1.97	2.15	1.58	1.34	0.91	7.95	7.35	7.65	102
Riley*	1.86	1.96	1.55	1.24	0.89	7.49	7.53	7.51	100
Dawson*	1.95	2.02	1.40	1.28	0.84	7.49	7.46	7.48	100
Vancor	1.95	2.04	1.47	1.33	0.82	7.60	7.29	7.45	100
Classic	1.84	1.93	1.54	1.24	0.87	7.43	7.43	7.43	99
G7730	1.65	2.02	1.59	1.33	0.93	7.51	7.35	7.43	99
Baker*	2.03	1.90	1.34	1.11	0.69	7.08	7.43	7.26	97
Liberty	1.91	1.61	1.32	1.23	0.75	6.81	7.50	7.16	96
Gladiator	1.72	1.56	1.17	1.05	0.81	6.30	7.62	6.96	93
Raidor	1.68	1.50	1.22	1.14	0.74	6.27	7.53	6.90	92
Average	1.95	2.08	1.59	1.39	0.95	7.95	7.77	7.86	---
5% LSD	0.21	0.24	0.19	0.14	0.15	0.64	0.74	0.57	---
CV (%)	9.5	10.1	10.5	8.6	14.0	7.0	8.3	9.0	---

^{1/} Percent of average of Baker, Riley, Dawson and Arc
 Planting Date: 9/21/79 Exp. No. 901
 Irrigated: Sprinkler
 Soil Type: Port Loam

Agronomy Research Station Perkins-Payne Co. 1981

Entry	Tons Dry Matter/Acre						Relative Yield ^{1/}
	1981					Total	
	5/1	6/10	7/13	8/18	9/29		
74-5T9	1.80	1.97	1.66	1.52	1.27	8.21	116
555	1.56	2.06	1.70	1.48	1.16	7.96	113
WL 314	1.64	1.97	1.74	1.49	1.11	7.95	113
Riley*	1.53	2.03	1.73	1.49	1.09	7.88	111
WL 318	1.65	1.92	1.58	1.42	1.11	7.67	108
WL 313	1.59	1.76	1.60	1.51	1.21	7.67	108
77T25	1.47	1.78	1.68	1.51	1.19	7.62	108
OK9 Syn 1	1.50	1.70	1.69	1.53	1.16	7.58	107
Syn XX	1.42	1.88	1.57	1.44	1.15	7.47	106
OK5 Syn 1	1.53	1.72	1.54	1.48	1.16	7.45	105
Baker	1.80	1.84	1.55	1.28	0.94	7.41	105
UC PX 1971	1.32	1.69	1.66	1.49	1.20	7.36	104
MSF-6 CLS-4	1.56	1.87	1.62	1.26	1.03	7.34	104
OK8 Syn 1	1.57	1.80	1.52	1.38	1.07	7.34	104
Teason	1.45	1.75	1.57	1.46	1.07	7.30	103
OK10 Syn 1	1.29	1.79	1.56	1.37	1.07	7.07	100
OK6 Syn 1	1.27	1.67	1.55	1.40	0.98	6.87	97
UC 176	1.08	1.50	2.03	1.25	0.96	6.81	96
Perry	1.46	1.85	1.36	1.21	0.90	6.78	96
Corona	1.26	1.63	1.41	1.39	0.99	6.67	94
Wash SNI	1.17	1.69	1.45	1.31	0.95	6.57	93
Washoe	1.26	1.55	1.36	1.36	0.90	6.43	91
OK4 Syn 1	1.11	1.50	1.41	1.33	0.92	6.26	89
Arc*	1.05	1.57	1.44	1.28	0.91	6.26	89
OK11 Syn 1	0.88	1.54	1.26	1.27	0.91	5.85	83
Average	1.41	1.76	1.57	1.40	1.06	7.18	---
5% LSD	0.19	0.18	N.S.	0.14	0.15	0.81	---
CV (%)	11.9	9.1	25.9	8.5	12.3	9.9	---

^{1/} Percent of average of Arc and Riley
 N.S. = No Significant Differences Among Varieties (.05)
 Planting Date: 9/24/80 Exp. No. 021
 Irrigated: Sprinkler
 Soil Type: Teller Loam

2068.3

North Central Research Station Lahoma, Major Co. 1980-81

Entry	1981					Total	1980	2 yr.	Relative Yield ^{2/}
	4/27	6/16	7/15	8/19	10/6		1 cut ^{1/}	Avg.	
555	1.68	1.83	1.50	0.71	0.62	6.35	1.86	4.11	115
Pike	1.67	1.81	1.36	0.65	0.69	6.17	1.68	3.93	110
PCC 77-122 Br	1.47	1.80	1.39	0.68	0.62	5.97	1.62	3.80	106
Buffalo	1.42	1.78	1.46	0.79	0.73	6.17	1.38	3.78	105
Kanza	1.67	1.62	1.38	0.70	0.66	6.03	1.50	3.77	105
Trident	1.50	1.78	1.43	0.65	0.60	5.95	1.50	3.73	104
WL 318	1.44	1.92	1.37	0.62	0.65	6.00	1.44	3.72	104
Arc*	1.34	1.77	1.26	0.63	0.58	5.57	1.87	3.72	104
Apollo	1.46	1.79	1.42	0.63	0.55	5.85	1.59	3.72	104
Vanguard	1.38	1.82	1.30	0.60	0.57	5.66	1.73	3.70	103
Hi-phy	1.23	1.95	1.39	0.62	0.65	5.84	1.54	3.69	103
WL 312	1.55	1.79	1.32	0.61	0.58	5.85	1.49	3.67	102
Advantage	1.21	1.87	1.30	0.59	0.60	5.57	1.73	3.65	102
Riley*	1.53	1.70	1.34	0.65	0.55	5.77	1.53	3.65	102
Gladiator	1.43	1.76	1.30	0.59	0.63	5.70	1.41	3.56	99
Baker*	1.67	1.74	1.21	0.52	0.52	5.66	1.42	3.54	99
Cimarron	1.34	1.70	1.20	0.59	0.57	5.40	1.53	3.47	97
Dawson*	1.25	1.78	1.29	0.65	0.53	5.51	1.38	3.45	96
Vancor	1.25	1.63	1.18	0.57	0.57	5.20	1.42	3.31	92
Classic	1.13	1.57	1.30	0.57	0.60	5.17	1.44	3.31	92
Raidor	0.97	1.60	1.18	0.55	0.60	4.89	1.47	3.18	89
Liberty	0.99	1.56	1.14	0.59	0.59	4.88	1.43	3.16	88
G7730	0.74	1.44	1.10	0.51	0.50	4.29	1.63	2.96	82
Average	1.37	1.74	1.31	0.62	0.60	5.64	1.55	3.59	---
5% LSD	0.32	N.S.	0.16	0.07	0.12	0.69	0.23	0.39	---
CV (%)	20.2	14.8	10.6	10.3	17.0	10.6	13.1	13.5	---

Eastern Research Station Haskell-Muskogee Co. 1978-81

Entry	Tons Dry Matter/Acre										4 yr. Avg.	Relative Yield ^{1/}
	1981					Total	1980	1979	1978	4 cuts		
	4/23	6/4	7/1	8/19	9/23		4 cuts	4 cuts	3 cuts			
531	1.52	1.70	1.67	0.99	0.91	6.79	5.49	4.51	3.75	5.14	105	
Riley	1.76	1.51	1.40	1.02	0.84	6.53	5.34	4.74	3.67	5.07	104	
WL 318	1.60	1.58	1.49	0.98	0.79	6.44	5.51	4.35	3.80	5.03	103	
Kanza	1.71	1.52	1.50	1.04	0.91	6.68	5.50	4.36	3.53	5.02	103	
Apollo	1.21	1.58	1.62	1.02	0.81	6.23	5.25	4.51	3.98	4.99	102	
Cody	1.34	1.52	1.57	1.19	1.00	6.61	5.14	4.57	3.38	4.93	101	
Aztec	1.45	1.60	1.28	1.02	0.85	6.19	5.32	4.47	3.72	4.93	101	
Team	0.90	1.56	1.25	1.04	0.73	5.47	5.43	4.66	3.65	4.80	98	
Olympic	0.91	1.48	1.13	0.99	0.71	5.22	5.41	4.78	3.75	4.79	98	
APC 1976	1.15	1.36	1.48	0.95	0.80	5.73	5.36	4.32	3.64	4.76	97	
Liberty	1.00	1.43	1.27	1.04	0.79	5.53	5.38	4.62	3.47	4.75	97	
Vanguard	1.22	1.59	1.45	0.98	0.81	6.06	4.95	4.27	3.72	4.75	97	
Arc	0.90	1.47	1.31	0.98	0.83	5.48	5.36	4.29	3.76	4.72	97	
530	0.64	1.26	1.15	1.10	0.84	4.98	5.26	4.49	4.02	4.69	96	
x 321	0.88	1.33	1.28	1.04	0.91	5.44	5.22	4.28	3.33	4.57	94	
Buffalo	0.77	1.28	1.41	1.12	1.00	5.59	4.97	4.23	3.33	4.53	93	
Average	1.18	1.48	1.39	1.03	0.84	5.94	5.31	4.47	3.66	4.84	---	
5% LSD	0.34	0.21	0.29	N.S.	0.14	0.68	N.S.	N.S.	0.36	0.27	---	
CV (%)	20.1	9.9	14.6	14.7	11.3	8.0	6.2	6.6	7.0	7.8	---	

^{1/} Percent of Kanza and Liberty
 N.S. = No Significant Differences Among Varieties
 Planting Date: 9/27/77 Exp. No. 702
 Dryland
 Soil Type: Taloka Silt Loam

^{1/} Also harvested 6/1/80 but yields were not recorded because of severe weed infestation.

^{2/} Percent of average Baker, Riley, Dawson and Arc
 Planting Date: 9/24/79 Exp. No. 941
 Dryland
 Soil Type: Grant Silt Loam

2068*4

South Central Research Station Chickasha-Grady Co. 1980-81

Eastern Research Station Haskell-Muskogee Co. 1981

Entry	Tons Dry Matter/Acre				Relative Yield ^{1/}
	1981			Total	
	5/7	6/11	8/21		
Cimarron	1.80	1.60	0.73	4.13	109
Teason	1.82	1.60	0.70	4.12	109
Arc*	1.83	1.47	0.61	3.91	103
555	1.59	1.60	0.71	3.90	103
Wash SNI	1.53	1.46	0.72	3.71	98
Riley*	1.60	1.40	0.68	3.67	97
Corona	1.55	1.44	0.66	3.66	97
Baker	1.75	1.36	0.54	3.65	96
Syn XX	1.50	1.46	0.66	3.61	95
MSF6 CLS4	1.61	1.39	0.53	3.53	93
OK10 Syn 1	1.41	1.36	0.68	3.45	91
Washoe	1.44	1.27	0.55	3.26	86
Average	1.62	1.45	0.65	3.72	---
5% LSD	0.16	0.13	0.11	0.26	---
CV (%)	8.6	7.9	14.3	6.1	---

^{1/} Percent of average of Arc and Riley
 Planting Date: 10/4/80 Exp. No. 051
 Dryland
 Soil Type: Taloka Silt Loam

Entry	1981			1980 2 cuts	2 yr. Avg.	Relative Yield ^{1/}
	4/30	6/19	Total			
Gladiator	0.88	1.53	2.42	4.10	3.26	106
WL 312	0.94	1.48	2.41	4.01	3.21	105
Liberty	0.95	1.50	2.45	3.91	3.18	104
Baker*	0.86	1.40	2.26	4.08	3.17	103
555	0.77	1.52	2.29	3.96	3.13	102
Pike	0.87	1.54	2.41	3.82	3.12	102
PCC 77-122 Br	0.84	1.61	2.45	3.77	3.11	102
Riley*	0.78	1.52	2.31	3.91	3.11	102
Cimarron	0.89	1.51	2.40	3.82	3.11	102
Classic	0.77	1.47	2.24	3.96	3.10	101
Kanza	0.76	1.52	2.28	3.92	3.10	101
WL 318	0.81	1.41	2.22	3.96	3.09	101
Advantage	0.82	1.49	2.31	3.87	3.09	101
Vanguard	0.73	1.47	2.21	3.92	3.07	100
G7730	0.64	1.50	2.14	3.96	3.05	100
Apollo	0.80	1.43	2.23	3.84	3.04	99
Vancor	0.82	1.50	2.32	3.70	3.01	98
Dawson*	0.89	1.48	2.36	3.61	2.99	98
Arc*	0.91	1.44	2.35	3.62	2.99	98
Raidor	0.76	1.39	2.15	3.80	2.98	97
Hi-phy	0.73	1.57	2.30	3.61	2.96	97
Trident	0.76	1.43	2.18	3.70	2.94	96
Buffalo	0.90	1.62	2.52	3.33	2.93	96
Average	0.82	1.49	2.31	3.83	3.06	---
5% LSD	0.11	N.S.	N.S.	N.S.	N.S.	---
CV (%)	11.3	11.0	9.0	9.8	10.7	---

^{1/} Percent of average of Baker, Riley, Dawson and Arc
 N.S. = No Significant Differences Among Varieties (.05)
 Planting Date: 9/26/79 Exp. No. 931
 Dryland
 Soil Type: Pocasset Silty Clay Loam

2068.5

Sandyland Research Station Mangum-Greer Co. 1979-81

Southwest Agronomy Research Station Tipton-Tillman Co. 1979-81

Entry	Tons Dry Matter/Acre								Relative Yield ^{2/}
	1981					1980	1979	3 yr. Avg. ^{1/}	
	5/11	6/19	7/17	8/31	Total	4 cuts	3 cuts ^{1/}		
531	1.60	2.07	2.61	2.00	8.29	6.17	3.62	6.03	112
Givens	1.42	2.37	2.75	1.96	8.50	5.78	3.53	5.94	110
Riley*	1.30	2.08	3.22	1.76	8.37	5.80	3.59	5.92	110
Aztec	1.49	2.52	2.34	1.93	8.28	5.78	3.48	5.85	108
WL 318	1.51	2.14	2.81	1.89	8.35	5.60	3.54	5.83	108
Apollo	1.38	2.25	2.61	1.87	8.10	5.74	3.59	5.81	108
Cimarron	1.41	2.26	2.64	1.92	8.23	5.50	3.32	5.68	105
Baker	1.52	2.44	2.06	1.74	7.76	5.70	3.32	5.59	104
Buffalo	1.43	2.05	2.52	1.88	7.88	5.28	3.54	5.57	103
Kanza	1.53	1.96	2.40	1.75	7.64	5.72	3.29	5.55	103
Liberty	1.45	2.59	2.18	1.78	7.99	5.02	3.24	5.42	100
530	1.31	2.03	2.30	1.85	7.49	5.05	3.55	5.36	99
APC 1976	1.36	2.08	2.21	1.70	7.36	5.46	3.21	5.34	99
Vanguard	1.29	2.31	2.29	1.87	7.77	4.96	3.25	5.32	99
Cody	1.22	1.70	2.59	1.95	7.46	5.45	3.03	5.31	98
Arc*	1.17	2.33	2.18	1.67	7.35	4.28	2.66	4.76	88
Average	1.40	2.20	2.48	1.85	7.93	5.46	3.36	5.58	---
5% LSD	N.S.	N.S.	N.S.	N.S.	N.S.	0.84	0.54	0.51	---
CV (%)	22.4	23.1	24.2	22.2	9.5	10.8	11.2	11.2	---

Entry	Tons Dry Matter/Acre										3 yr. Avg.	Relative Yield ^{1/}
	1981						1980	1979				
	4/22	6/9	7/7	8/17	10/6	Total	5 cuts	4 cuts				
WL 318	1.86	2.15	2.21	2.20	1.45	9.86	7.15	8.15	8.39	104		
Cimarron	1.88	2.17	1.80	2.43	1.61	9.88	8.91	8.34	8.38	104		
531	2.15	1.85	1.88	2.07	1.46	9.41	7.28	8.42	8.37	104		
Apollo	2.03	2.29	2.12	2.13	1.55	10.12	6.75	8.15	8.34	104		
Givens	1.68	2.03	2.10	2.32	1.54	9.67	6.84	8.52	8.34	104		
Riley*	2.08	2.26	2.10	2.06	1.69	10.19	6.82	7.96	8.32	103		
Aztec	1.80	2.08	1.87	2.03	1.61	9.38	7.28	8.25	8.30	103		
Kanza	1.73	2.07	1.99	2.00	1.54	9.33	7.17	8.36	8.29	103		
APC 1976	1.63	2.12	1.92	2.19	1.55	9.41	6.66	8.07	8.05	100		
Buffalo	1.27	2.18	1.90	2.03	1.64	9.02	6.90	8.14	8.02	100		
Vanguard	1.56	2.07	1.70	2.29	1.46	9.10	6.70	8.25	8.02	100		
Cody	1.68	1.80	1.65	2.06	1.63	8.81	6.99	7.99	7.93	98		
Liberty	1.78	1.89	1.72	1.83	1.39	8.62	6.93	8.18	7.91	98		
Baker	2.08	2.12	1.93	2.01	1.28	9.40	6.41	7.79	7.87	98		
Arc*	1.42	2.27	1.98	2.12	1.53	9.32	6.43	7.60	7.78	97		
530	1.45	1.69	1.66	2.02	1.45	8.27	6.06	7.79	7.38	92		
Average	1.75	2.07	1.91	2.11	1.52	9.36	6.83	8.12	8.11	---		
5% LSD	0.33	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	0.70	N.S.	---		
CV (%)	16.3	28.9	21.9	20.9	19.8	13.8	13.0	7.5	15.1	---		

^{1/} First cut not recorded in 1979

^{2/} Percent of average of Arc and Riley

N.S. = No Significant Differences Among Varieties (.05)

Planting Date: 9/8/78

Exp. No. 807

Dryland

Soil Type: Meno Sandy Loam

^{1/} Percent of average of Arc and Riley

N.S. = No Significant Differences Among Varieties (.05)

Planting Date: 9/7/78

Exp. No. 808

Irrigated

Soil Type: Tipton Silt Loam

2068.6

Southwest Agronomy Research Station Tipton-Tillman Co. 1981

Entry	Tons Dry Matter/Acre						Relative Yield ^{1/}
	1981					Total	
	4/23	6/8	7/7	8/17	10/6		
WL 318	1.97	2.78	1.96	2.09	1.62	10.43	120
74-5T9	1.88	2.41	1.96	1.91	1.60	9.75	112
MSF6 CLS4	1.47	2.63	1.88	1.98	1.64	9.61	110
555	1.82	2.25	1.85	1.90	1.65	9.46	109
OK9 Syn 1	1.67	2.13	2.01	2.08	1.53	9.42	108
Riley*	1.67	2.37	1.78	1.93	1.58	9.34	107
77T25	1.69	2.10	1.86	1.94	1.71	9.29	107
WL 314	1.85	2.20	1.96	1.70	1.47	9.19	106
OK5 Syn 1	1.74	2.13	1.78	1.88	1.62	9.15	105
Teason	1.49	2.24	2.00	1.85	1.53	9.10	104
Baker	1.78	2.44	1.62	1.73	1.44	9.00	103
Perry	1.48	2.34	1.84	1.83	1.46	8.95	103
OK8 Syn 1	1.67	2.16	1.94	1.72	1.40	8.88	102
WL 313	1.74	2.08	1.84	1.68	1.50	8.84	101
OK 10 Syn 1	1.65	1.82	1.99	1.77	1.62	8.84	101
Syn XX	1.73	1.95	1.85	1.74	1.53	8.81	101
OK6 Syn 1	1.25	2.28	1.82	1.75	1.53	8.64	99
Washoe	1.45	1.90	1.82	1.86	1.48	8.52	98
Wash SNI	1.04	2.26	1.74	1.78	1.66	8.48	97
NS 77 ASP	1.30	2.45	1.63	1.61	1.47	8.46	97
OK11 Syn 1	1.04	2.30	1.82	1.74	1.47	8.37	96
OK4 Syn 1	1.07	1.89	1.96	1.86	1.46	8.24	94
NS 79 ASP	1.33	2.28	1.66	1.67	1.29	8.22	94
Arc*	1.00	2.28	1.80	1.85	1.31	8.14	93
NS 78 ASP	1.22	1.98	1.77	1.66	1.46	8.09	93
Average	1.52	2.23	1.84	1.81	1.53	8.89	---
5% LSD	0.28	N.S.	N.S.	N.S.	N.S.	1.03	---
CV (%)	15.9	24.8	13.2	14.7	16.1	10.1	---

Panhandle Research Station Goodwell-Texas Co. 1978-81

Entry	Tons Dry Matter/Acre										Relative Yield ^{1/}
	1981					Total	1980	1979	1978	4 yr. Avg.	
	5/15	6/23	7/23	8/24	9/25		4 cuts	4 cuts	3 cuts		
Apollo	2.98	2.13	1.72	1.47	0.94	9.24	8.43	8.04	6.10	7.95	104
Kanza*	3.10	2.03	1.71	1.47	0.84	9.15	8.06	7.98	6.07	7.82	102
WL 318	2.69	2.06	1.72	1.40	0.95	8.83	8.27	7.96	6.23	7.82	102
X 321	2.43	2.02	1.78	1.59	0.92	8.74	8.12	7.98	6.26	7.78	102
Vanguard	-2.70	2.05	1.79	1.44	0.78	8.75	7.76	7.96	6.30	7.69	101
Arc	2.67	2.00	1.58	1.23	0.72	8.18	7.70	7.99	6.43	7.58	99
Aztec	2.73	2.14	1.55	1.41	0.75	8.60	8.02	7.58	5.95	7.54	99
Liberty*	2.63	2.05	1.52	1.17	0.65	8.03	7.51	7.92	6.44	7.48	98
Cody	2.64	2.00	1.74	1.66	0.87	8.91	7.89	7.26	5.73	7.45	97
Buffalo	2.53	2.08	1.75	1.43	1.02	8.81	7.82	7.28	5.72	7.41	97
Team	2.52	1.94	1.60	1.37	0.76	8.19	7.27	7.38	6.35	7.30	95
530	2.39	1.87	1.11	1.32	0.71	7.40	7.22	6.98	6.40	7.00	92
Average	2.67	2.03	1.63	1.41	0.83	8.57	7.84	7.69	6.16	7.57	---
5% LSD	0.35	N.S.	N.S.	0.23	0.15	0.91	0.47	0.67	N.S.	0.38	---
CV (%)	9.2	7.8	17.6	11.1	12.9	7.4	4.2	6.0	6.6	7.0	---

^{1/} Percent of average of Kanza and Liberty
 N.S. = No Significant Differences Among Varieties (.05)
 Planting Date: 9/16/77 Exp. No. 709
 Irrigated: Flooded
 Soil Type: Richland Clay Loam

^{1/} Percent of average of Arc and Riley
 N.S. = No Significant Differences Among Varieties (.05)
 Planting Date: 9/25/80 Exp. No. 061
 Irrigated: Flooded/Furrow
 Soil Type: Tipton Silt Loam

2068.7

Quick Reference for Insect and Disease Resistance

Variety	Pea Aphid	Spotted Aphid	Weevil	Potato Leafhopper	Blue Aphid	Phytophthora root rot	Anthracnose	Fusarium wilt	Downy mildew	Bacterial wilt	Stem nematode
WL 318	✓	✓			✓	✓	✓		✓		
Apollo	✓	✓			✓	✓	✓		✓		
Cimarron	✓	✓	✓		✓	✓	✓		✓		
Riley	✓	✓						✓	✓		
555	✓	✓				✓			✓		
Trident					✓	✓	✓		✓		
Advantage					✓	✓	✓		✓		
Perry	✓	✓	✓	✓		✓		✓	✓		
Pike	✓	✓				✓		✓		✓	
WL 313	✓	✓				✓	✓		✓		
WL 314	✓	✓		✓			✓		✓	✓	
Southern Special	✓	✓		✓	✓	✓	✓		✓		
Baker	✓	✓		✓				✓	✓		
Buffalo									✓		
Cody		✓							✓		
Kanza	✓	✓		✓					✓		
Team	✓		✓			✓					
Arc	✓		✓			✓			✓		
Liberty	✓		✓			✓					
Dawson	✓	✓							✓		
Lahontan		✓							✓	✓	
Olympic	✓	✓		✓		✓	✓		✓		
Vanguard	✓			✓		✓	✓		✓		
Common											

Suggested for use in Oklahoma (1982)

Currently look good but not adequately tested in Oklahoma

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