CR-2106
0689

OSU

Current Report

Cooperative Extension Service • Division of Agriculture • Oklahoma State University

Alfalfa Variety Yield Trials - 1988

K.T. Shelton, L.M. Rommann and J.L. Caddel

Long-term results show the varieties included in the "suggested use list" will be the superior varieties with or without chemical insect control. Alfalfa varieties tested by the Oklahoma Agricultural Experiment Station are normally tested without the use of insecticides to allow the expression of genetic insect resistance. However, chemical insect control on surrounding crops controls the alfalfa insects at several research stations.

Weather

Adequate rainfall during the fall of 1987 allowed good seedbed preparation and seedling establishment. Heavy snows through the winter and light rainfall in March, April, and May resulted in a very good first harvest throughout most of the state. Hot temperatures and drought conditions prevailed through the summer months and severely limited dryland production.

Pests

Due to extensive egg lays during the spring, alfalfa weevil, (Hyper postica) larvae remained in alfalfa fields longer than usual. During mid-March a hard freeze slowed the weevil activity somewhat, but counts across the state showed several hundred larvae/sq. ft. Spotted alfalfa aphids, (Therioaphis maculata) generally were not much of a problem during 1988. Blue alfalfa aphids, (A. kondoi) were found in high numbers in isolated areas during mid-April and counts dropped off drastically after the first harvest. Weeds were generally not a problem. Phytophthora root rot, which seems to be the most consistently important alfalfa pest, was not a problem for susceptible varieties. However, the lack of extended periods of waterlogged soils lessened its immediate impact during 1988.

Numerous alfalfa varieties and experimental strains are currently being tested by Oklahoma Agricultural Experiment Station. This report does not attempt to cover all entries under test. As sufficient data are collected other promising varieties will be included in future reports.

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.

SOUTH CENTRAL RESEARCH STATION
CHICKASHA-GRADY CO. 1988

Entry	1988 5/10	6/16	7/13	10/17	Total	Relative Yield*
	Tons Dry Matter Acre					
Cimarron	3.27	1.57	0.72	1.26	6.82	102
OK 49 Syn 3	3.17	1.50	0.76	1.31	6.74	101
555	2.95	1.63	0.83	1.30	6.70	101
Cim 2000-G	3.33	1.47	0.68	1.18	6.67	100
OK 69 Syn 3	3.21	1.57	0.74	1.14	6.66	100
OK 71 Syn 3	2.83	1.65	0.89	1.25	6.61	99
OK 100 Syn 3	3.07	1.46	0.78	1.25	6.57	99
OK08	2.93	1.66	0.73	1.14	6.45	97
5432	2.94	1.54	0.67	1.22	6.38	96
Archer	2.99	1.46	0.76	1.15	6.36	96
OK 48 Syn 3	2.90	1.53	0.70	1.10	6.24	94
Wilson	2.63	1.50	0.89	1.20	6.22	93
OK 70 Syn 3	2.90	1.35	0.75	1.20	6.20	93
OK 51 Syn 3	3.26	1.35	0.48	1.09	6.19	93
AP 8660	2.92	1.34	0.60	1.26	6.12	92
OK 85 Syn 3	2.51	1.47	0.82	1.21	6.01	90
AP 8650	2.84	1.25	0.62	1.17	5.88	88
Dona Ana	2.20	1.26	0.63	1.15	5.24	79
Mean	2.94	1.48	.73	1.20	6.34	-
5% LSD	.22	.31	.27	.19	.76	-
CV (%)	6.51	18.15	32.21	13.70	10.40	-

*Percent of average of 555, Cimarron and OK08.

Location: South Central Research Station
Planting Date: 9-16-87 Harvested Plot Size: 1m X 5m
Design: RCB w/6 Reps Dryland
Soil Type: Reinach silt loam Exp. No. 732

SOUTH CENTRAL RESEARCH STATION
CHICKASHA-GRADY CO. 1986-88

Entry	1988 5/10	6/20	7/14	8/22	10/13	Total	1987 Total	1986 Total	3-yr. Total	Relative Yield*
	Tons Dry Matter/Acre									
555	2.22	2.17	1.64	1.65	1.69	9.37	10.24	6.90	26.52	110
84634	2.25	2.25	1.50	1.54	1.61	9.15	9.92	7.34	26.40	110
WL 320	2.26	2.18	1.55	1.62	1.67	9.28	9.57	7.28	26.14	109
Garst 624	2.15	2.20	1.49	1.56	1.61	9.02	9.71	7.21	25.94	108
A.P. 47	2.28	2.18	1.38	1.58	1.65	9.07	9.27	7.45	25.79	107
Garst 655	2.21	2.26	1.54	1.66	1.66	9.32	9.38	7.04	25.75	107
A.P. 49	2.25	2.21	1.52	1.49	1.67	9.14	9.44	7.16	25.74	107
A.P. 46	2.23	2.11	1.38	1.59	1.66	8.98	9.03	7.55	25.56	106
OK 51 Syn 2	2.34	2.12	1.59	1.55	1.70	9.30	9.02	7.04	25.36	106
R.S. 239	2.20	2.17	1.55	1.52	1.62	9.06	9.15	7.12	25.33	106
OK 49 Syn 2	2.18	2.05	1.48	1.67	1.67	9.04	9.23	7.02	25.30	105
DK 135	2.04	2.08	1.45	1.54	1.65	8.76	9.21	7.25	25.22	105
Riley	2.09	1.94	1.42	1.51	1.57	8.54	9.34	7.15	25.03	104
Vernema	2.15	2.10	1.52	1.52	1.50	8.79	9.22	6.90	24.91	104
Garst 689	1.86	2.04	1.39	1.49	1.58	8.36	9.60	6.86	24.82	103
R.S. 242	2.01	2.03	1.51	1.48	1.60	8.63	9.03	7.01	24.68	103
Cimarron	2.15	2.11	1.41	1.54	1.61	8.83	8.88	6.92	24.63	103
OK 48 Syn 2	2.07	2.07	1.46	1.56	1.56	8.71	9.33	6.49	24.53	102
Garst 629	2.16	2.00	1.39	1.55	1.43	8.53	8.76	6.56	23.84	99
Apollo	2.07	1.99	1.49	1.55	1.58	8.68	8.27	6.75	23.71	99
Advantage	2.00	1.91	1.46	1.58	1.65	8.59	8.52	6.52	23.63	98
5444	1.98	1.87	1.41	1.51	1.56	8.32	8.70	6.58	23.60	98
WL 318	2.11	1.98	1.39	1.40	1.54	8.41	8.63	6.48	23.53	98
OK08	1.82	1.74	1.17	1.45	1.31	7.48	8.12	5.81	21.41	89
Mean	2.13	2.07	1.46	1.55	1.60	8.81	9.15	6.93	24.89	-
5% LSD	.28	.27	.17	.20	.14	.86	.75	.75	-	-
CV (%)	11.36	11.21	9.86	11.15	7.76	8.52	6.40	7.70	-	-

*Percent of average of 555, WL318, Cimarron and OK08.

Location: South Central Research Station
Planting Date: 9-6-85 Plot Size: 1m X 5m
Design: RCB w/6 Reps Irrigated: Sprinkler
Soil Type: Reinach/McLain silt loam Exp. No. 531

South Central Research Station
Chickasha-Grady Co. 1982-84

Entry	1988 5/9	6/20	7/14	8/22	10/12	Total	Relative Yield*
	Tons Dry Matter Acre						
WL 320	2.02	1.46	1.18	1.29	1.40	7.35	108
Cimarron	2.04	1.39	1.10	1.15	1.34	7.01	103
Dart	2.01	1.36	1.09	1.19	1.37	7.01	103
OK 69 Syn 3	1.97	1.36	1.09	1.14	1.27	6.83	101
OK 49 Syn 3	1.82	1.31	1.14	1.18	1.36	6.81	100
OK 100 Syn 3	1.95	1.30	1.08	1.14	1.33	6.80	100
555	1.66	1.31	1.11	1.23	1.44	6.75	99
5432	1.79	1.30	1.15	1.19	1.32	6.75	99
OK08	1.83	1.31	1.03	1.10	1.36	6.62	98
OK 71 Syn 3	1.80	1.23	1.07	1.16	1.32	6.58	97
OK 70 Syn 3	1.83	1.32	1.04	1.06	1.29	6.54	96
Wilson	1.90	1.21	1.05	1.10	1.26	6.53	96
OK 51 Syn 3	1.84	1.25	1.05	1.05	1.33	6.52	96
Cim 2000-G	1.94	1.27	0.96	0.97	1.32	6.46	95
Southern Special	1.69	1.28	1.05	1.11	1.30	6.44	95
OK 85 Syn 3	1.72	1.24	1.00	1.06	1.29	6.32	93
Dona Ana	1.76	1.14	0.95	1.03	1.31	6.19	91
83T58	1.49	1.08	0.98	1.02	1.19	5.75	85
Mean	1.84	1.26	1.06	1.12	1.32	6.63	-
5% LSD	.24	.14	.14	.14	.08	.60	-
CV (%)	11.34	9.69	11.38	10.79	5.46	7.85	-

*Percent of average of 555, Cimarron and OK08.

Location: South Central Research Station
Planting Date: 9-17-87 Harvested Plot Size: 1m X 5m
Design: RCB w/6 Reps Irrigated: Sprinkler
Soil Type: Reinach silt loam Exp. No. 731

South Central Research Station
Chickasha-Grady Co. 1986-88

Entry	1988 5/10	6/16	7/13	10/12	Total	1987 Total	1986 Total	3-yr Total	Relative Yield*
	Tons Dry Matter/Acre								
Garst 655	1.54	1.42	0.88	1.05	4.88	6.27	3.12	14.27	108
OK 48 Syn 2	1.49	1.40	0.90	1.06	4.86	6.35	2.79	14.00	106
OK 51 Syn 2	1.63	1.62	1.07	1.10	5.42	5.99	2.55	13.96	105
OK 61 Syn 2	1.54	1.49	0.91	1.01	4.95	6.40	2.58	13.93	105
Apollo	1.48	1.49	0.91	1.07	4.95	6.09	2.72	13.75	104
WL 318	1.38	1.37	0.89	1.07	4.71	6.15	2.84	13.70	104
Riley	1.51	1.39	0.86	1.03	4.78	6.03	2.78	13.59	103
OK 49 Syn 2	1.52	1.51	0.91	1.04	4.98	5.72	2.81	13.51	102
DK 135	1.48	1.35	0.89	1.09	4.81	5.77	2.89	13.46	102
555	1.46	1.39	0.97	1.11	4.93	5.73	2.76	13.42	101
OK 61 Syn 1	1.57	1.43	0.89	0.95	4.83	5.94	2.42	13.19	100
Cimarron	1.49	1.34	0.80	1.05	4.68	5.58	2.92	13.18	100
Garst 624	1.38	1.47	0.93	1.12	4.90	5.55	2.70	13.15	99
Garst 689	1.40	1.35	0.79	1.02	4.56	5.88	2.67	13.11	99
OK 61 Syn 3	1.53	1.35	0.73	0.92	4.52	6.02	2.49	13.03	98
W125R2W1	1.40	1.42	0.87	0.98	4.67	5.40	2.93	13.00	98
5444	1.49	1.36	0.81	1.00	4.65	5.58	2.67	12.90	97
Vernema	1.49	1.34	0.77	0.98	4.59	5.50	2.68	12.77	96
OK08	1.26	1.21	0.79	0.91	4.17	6.03	2.45	12.65	96
Garst 629	1.43	1.18	0.73	0.99	4.33	5.22	2.46	12.01	91
Mean	1.47	1.39	.86	1.03	4.76	5.86	2.71	13.33	-
5% LSD	.19	.34	.31	.09	.81	.32	N.S.	1.54	-
CV (%)	11.28	20.94	31.04	7.94	14.79	10.40	11.10	10.07	-

*Percent total of 555, WL 318, Cimarron and OK08.
N.S. = No significant difference among varieties.

Location: South Central Research Station
Planting Date: 9-6-85 Plot Size: 1m X 5m
Design: RCB w/6 Reps Dryland
Soil Type: Reinach/McLain silt loam Exp. No. 532

AGRONOMY RESEARCH STATION
STILLWATER-PAYNE CO. 1988

Entry	1988 5/5	6/14	7/19	8/24	10/4	Total	Relative Yield*
	Tons Dry Matter Acre						
OK 69 Syn 3	1.55	2.51	1.85	1.46	1.59	8.95	108
Ca87-130,131	1.81	2.58	1.75	1.32	1.49	8.94	107
Cimarron	1.76	2.48	1.79	1.38	1.51	8.93	107
Cimarron VR	1.80	2.46	1.65	1.39	1.51	8.80	106
5432	1.54	2.48	1.77	1.44	1.46	8.69	104
WL 320	1.67	2.42	1.75	1.41	1.43	8.68	104
Arrow	1.60	2.52	1.70	1.36	1.49	8.68	104
Cim 2000-G	1.74	2.54	1.65	1.27	1.48	8.68	104
OK 70 Syn 3	1.53	2.45	1.78	1.40	1.51	8.67	104
OK 100 Syn 3	1.55	2.38	1.74	1.45	1.54	8.66	104
86637	1.64	2.46	1.71	1.31	1.50	8.62	104
555	1.50	2.40	1.68	1.44	1.49	8.51	102
OK 71 Syn 3	1.47	2.26	1.76	1.44	1.52	8.45	102
OK 51 Syn 3	1.45	2.43	1.57	1.30	1.53	8.28	100
Wilson	1.23	2.09	1.63	1.35	1.42	7.73	93
Dona Ana	1.17	1.99	1.68	1.32	1.56	7.73	93
OK 85 Syn 3	1.12	2.05	1.63	1.32	1.52	7.63	92
OK08	1.46	2.03	1.44	1.24	1.36	7.53	90
Mean	1.53	2.36	1.70	1.37	1.50	8.45	-
5% LSD	.19	.15	.16	.10	.09	.44	-
CV (%)	10.49	5.40	8.23	6.26	4.99	4.56	-

*Percent of average of 555, Cimarron and OK08.

Location: Agronomy Research Station
Planting Date: 9-14-87 Harvested Plot Size: 1m X 5m
Design: RCB w/6 Reps Irrigated: Sprinkler
Soil Type: Port loam Exp. No. 701

AGRONOMY RESEARCH STATION
STILLWATER-PAYNE CO. 1987-88

Entry	1988 5/5	6/14	7/19	8/25	10/4	Total	1987 Total	2-yr. Total	Relative Yield*
	Tons Dry Matter Acre								
DS 660	2.65	2.92	2.14	1.45	1.68	10.83	10.58	21.41	120
Edge	2.50	2.90	1.95	1.36	1.55	10.27	11.05	21.32	120
DS 686	2.50	3.00	2.09	1.40	1.71	10.70	10.53	21.23	119
S-34	2.39	2.67	2.06	1.56	1.57	10.25	10.67	20.92	117
AP 8660	2.10	2.40	1.98	1.47	1.66	9.61	11.28	20.90	117
Dynasty	2.49	2.81	1.97	1.36	1.56	10.19	10.64	20.84	117
OK 49 Syn 3	2.55	2.78	2.04	1.53	1.62	10.52	10.27	20.79	117
Garst 636	2.47	2.83	1.95	1.34	1.47	10.05	10.70	20.75	116
AP 8650	2.20	2.44	1.96	1.41	1.53	9.53	11.21	20.75	116
Garst 630	2.48	2.73	1.95	1.45	1.54	10.15	10.17	20.31	114
RS 341	2.42	2.78	1.90	1.26	1.50	9.86	10.45	20.31	114
5432	2.41	2.85	2.11	1.56	1.62	10.54	9.75	20.30	114
KS 196	2.42	2.78	1.80	1.41	1.47	9.89	10.33	20.22	114
Magnum +	2.41	2.69	2.02	1.33	1.58	10.03	10.15	20.18	113
Archer	2.15	2.59	1.92	1.45	1.51	9.63	10.53	20.16	113
Cimarron	2.44	2.68	2.02	1.45	1.55	10.13	9.96	20.10	113
84CR232	2.51	2.82	1.90	1.38	1.55	10.15	9.56	19.71	111
Acclaim	2.33	2.73	1.96	1.49	1.53	10.04	9.64	19.68	110
83CR252	2.42	2.77	1.94	1.39	1.55	10.08	9.44	19.52	110
84PR231	2.38	2.62	1.86	1.42	1.55	9.83	9.63	19.47	109
085-33	2.39	2.55	1.86	1.20	1.35	9.36	10.07	19.42	109
84CR242	2.44	2.74	1.79	1.32	1.45	9.75	9.26	19.00	107
C84-107	2.34	2.48	1.81	1.24	1.46	9.34	9.42	18.75	105
78X-2	1.96	2.22	1.88	1.44	1.55	9.05	9.40	18.44	104
OK 51 Syn 3	2.30	2.63	1.81	1.24	1.43	9.41	9.01	18.42	103
555	2.22	2.45	1.82	1.42	1.61	9.52	8.59	18.12	102
Garst 655	2.27	2.47	1.60	1.34	1.44	9.13	8.84	17.96	101
OK08	2.12	2.19	1.39	1.25	1.28	8.22	6.99	15.21	85
Mean	2.37	2.66	1.91	1.39	1.53	9.86	9.93	19.79	-
5% LSD	.14	.24	.15	.17	.11	.56	.71	1.00	-
CV (%)	5.07	7.75	6.97	10.40	6.19	4.96	6.20	4.44	-

*Percent of average of 555, Cimarron and OK08.

Location: Agronomy Research Station
Planting Date: 9-11-86 Harvested Plot Size: 1m X 5m
Design: RCB w/6 Reps Irrigated: Sprinkler
Soil Type: Port loam Exp. No. 601

Southwest Agronomy Research Station
Tipton-Tillman Co. 1986-88

Entry	1988 5/12	6/20	7/22	8/18	9/27	Total	1987 Total	1986 Total	3-yr. Total	Relative Yield*
	Tons Dry Matter/Acre									
OK 49 Syn 2	1.98	2.16	1.94	1.91	1.33	9.32	10.61	7.20	27.13	107
WL 320	1.98	2.22	1.92	1.51	1.34	8.96	10.61	7.33	26.89	106
OK 48 Syn 2	2.14	2.35	2.01	1.70	1.26	9.46	10.38	6.94	26.79	106
Garst 655	2.13	2.33	1.96	1.50	1.22	9.15	10.24	7.06	26.44	104
Garst 629	2.11	2.13	1.90	1.50	1.28	8.93	10.60	6.90	26.43	104
A.P. 49	1.84	2.34	1.93	1.62	1.33	9.07	10.49	6.71	26.26	104
Mn 5888	2.06	2.20	1.93	1.71	1.21	9.11	10.01	7.07	26.20	104
Garst 624	2.12	2.26	1.85	1.40	1.32	8.94	10.23	6.84	26.01	103
Cimarron	2.03	2.27	1.82	1.52	1.20	8.84	10.14	7.03	26.01	103
W 4251	2.21	2.34	1.87	1.51	1.26	9.19	9.90	6.83	25.91	102
5444	2.06	2.35	1.78	1.35	1.19	8.73	9.65	7.47	25.85	102
Mn 5621	1.97	2.26	1.94	1.46	1.21	8.84	10.05	6.82	25.70	102
A.P. 46	2.15	2.15	1.77	1.29	1.22	8.58	9.92	6.86	25.36	100
Riley	2.04	2.00	1.70	1.28	1.09	8.11	10.37	6.81	25.30	100
DK 135	1.83	2.05	1.79	1.32	1.37	8.36	9.84	6.90	25.10	99
WL 318	2.18	2.15	1.76	1.29	1.25	8.64	9.84	6.56	25.04	99
OK 51 Syn 2	2.00	2.00	1.75	1.23	1.23	8.21	10.06	6.72	24.99	99
Mn 5889	2.14	1.88	1.64	1.32	1.34	8.33	9.70	6.67	24.70	98
Apollo	1.93	1.89	1.73	1.18	1.19	7.92	10.07	6.67	24.66	97
Vernema	1.98	1.99	1.70	1.26	1.09	8.02	9.52	6.98	24.52	97
555	2.08	1.78	1.77	1.37	1.28	8.28	9.52	6.53	24.33	96
Garst 689	1.84	1.82	1.69	1.17	1.05	7.56	10.23	6.52	24.31	96
OK08	1.93	1.96	1.67	1.11	1.11	7.78	9.32	6.90	24.00	95
W 45	1.99	1.86	1.75	1.15	1.19	7.94	9.48	6.44	23.86	94
Mn 5887	1.92	1.74	1.64	1.36	1.22	7.89	9.04	6.21	23.14	91
Mn 5302	1.78	1.75	1.68	1.44	1.20	7.85	9.06	6.05	22.96	91
Mean	2.02	2.09	1.80	1.40	1.23	8.54	9.97	6.81	25.32	-
5% LSD	.46	.52	.26	.49	.23	1.53	.83	N.S.	-	-
CV (%)	16.31	17.73	10.14	24.83	13.41	12.73	7.30	9.00	-	-

*Percent of average of 555, WL 320, Cimarron and OK08.
N.S. = No significent differences among varieties.

Location: Southwest Agronomy Research Station
Planting Date: 9-5-85 Plot Size: 1m X 5m
Design: RCB w/6 Reps Irrigated: Flood
Soil Type: Tipton silt loam Exp. No. 561

Agronomy Research Station
Perkins-Payne Co. 1988

Entry	1988 5/13	10/12	Total	Relative Yield*
	Tons Dry Matter Acre			
86637	1.82	1.09	2.91	104
OK 51 Syn 3	1.85	1.05	2.90	104
Cimarron VR	1.88	1.01	2.88	103
Cim 2000-G	1.84	1.02	2.86	102
OK 69 Syn 3	1.86	1.00	2.86	102
555	1.70	1.15	2.85	102
AP 8660	1.81	1.03	2.84	101
OK08	1.82	1.02	2.84	101
5432	1.70	1.08	2.78	99
Archer	1.74	1.01	2.75	98
OK 100 Syn 3	1.70	1.03	2.73	97
Cimarron	1.65	1.06	2.71	97
OK 85 Syn 3	1.67	1.04	2.71	97
OK 71 Syn 3	1.60	1.10	2.71	97
OK 70 Syn 3	1.62	1.07	2.70	96
Wilson	1.70	0.99	2.69	96
AP 8650	1.63	0.98	2.61	93
Dona Ana	1.44	0.91	2.35	84
Mean	1.72	1.04	2.76	-
5% LSD	.21	.09	.25	-
CV (%)	10.41	7.59	7.73	-

*Percent of average of 555, Cimarron and OK08.

Location: Agronomy Research Station
Planting Date: 9-25-87 Harvested Plot Size: 1m X 5m
Design: RCB w/6 Reps Dryland
Soil Type: Teller loam Exp. No. 721

Southwest Agronomy Research Station
Tipton-Tillman Co. 1986-88

Entry	1988 5/12	6/20	7/22	8/18	9/27	Total	1987 Total	1986 Total	3-yr. Total	Relative Yield*
	Tons Dry Matter/Acre									
OK 49 Syn 2	2.36	2.84	1.93	1.79	1.45	10.37	11.97	3.34	25.67	105
Cimarron	2.52	2.84	2.19	1.70	1.39	10.64	11.32	3.60	25.56	105
OK 51 Syn 2	2.62	2.94	2.11	1.58	1.35	10.59	11.36	3.57	25.53	104
Garst 629	2.30	2.79	2.13	1.65	1.36	10.24	11.87	3.26	25.37	104
OK08	2.47	2.97	2.09	1.67	1.33	10.53	11.04	3.59	25.16	103
Riley	2.21	2.54	2.05	1.44	1.36	9.60	11.75	3.47	24.82	102
OK 61 Syn 3	2.27	2.77	2.15	1.53	1.23	9.95	11.30	3.46	24.71	101
OK 61 Syn 2	2.11	2.49	1.93	1.43	1.28	9.25	11.47	3.67	24.40	100
DK 135	2.13	2.42	2.18	1.46	1.40	9.59	11.35	3.29	24.22	99
Garst 655	2.20	2.33	1.94	1.32	1.28	9.07	11.68	3.39	24.13	99
OK 48 Syn 2	1.98	2.54	1.99	1.51	1.29	9.33	11.38	3.41	24.12	99
Southern Special	2.19	2.58	1.94	1.60	1.23	9.55	11.47	3.09	24.11	99
Apollo	2.09	2.36	1.99	1.44	1.31	9.18	11.50	3.33	24.01	98
Garst 624	2.29	2.52	1.99	1.40	1.28	9.48	11.21	3.20	23.88	98
WL 318	2.22	2.57	1.93	1.57	1.31	9.61	10.93	3.29	23.83	97
Vernema	2.03	2.56	1.87	1.38	1.21	9.04	11.03	3.34	23.41	96
Garst 689	2.13	2.35	1.76	1.28	1.17	8.70	11 32	3.19	23.21	95
555	2.25	2.26	1.68	1.36	1.35	8.91	11.03	3 26	23.20	95
5444	2.26	2.26	1.76	1.09	1.15	8.51	11.05	3.50	23.07	94
Mn 5621	1.92	2.21	1.71	1.33	1.27	8.42	10.98	3.64	23.05	94
Mn 5889	1.97	2.19	1.69	1.35	1.36	8.55	10.70	3.33	22.59	92
Mn 5888	1.83	2.12	1.80	1.10	1.08	7.94	10.39	3.57	21.90	90
Mn 5302	1.79	2.15	1.66	1.28	1.13	8.01	10.61	3.16	21.78	89
Mn 5887	1.60	1.61	1.30	0.89	0.78	6.18	9.60	2.99	18.77	77
Mean	2.16	2.47	1.91	1.42	1.27	9.22	11.43	3.42	23.77	-
5% LSD	.39	.56	28	.47	.23	1.68	.69	N.S.	-	-
CV (%)	12.89	16.20	10.53	23.40	12.97	12.91	4.30	10.50	-	-

*Percent of average of 555, WL 318, Cimarron, and OK08.
N.S. No significent differences among varieties.

Location: Southwest Agronomy Research Station
Planting Date: 9-5-85 Plot Size: 1m X 5m
Design: RCB w/6 Reps Dryland
Soil Type: Tipton silt loam Exp. No. 562

Agronomy Research Station
Perkins-Payne Co. 1987-88

Entry	1988 5/13	6/17	10/12	Total	1987 Total	2-yr. Total	Relative Yield*
	Tons Dry Matter Acre						
Garst 630	2.88	1.92	1.77	6.58	4.69	11.27	105
5432	2.89	1.89	1.79	6.57	4.42	10.99	103
OK 49 Syn 3	2.89	1.75	1.70	6.34	4.59	10.92	102
OK 68 Syn 3	2.90	1.86	1.69	6.44	4.47	10.91	102
555	2.88	1.76	1.82	6.46	4.40	10.86	101
Garst 655	2.83	1.85	1.74	6.43	4.42	10.85	101
Conquista	2.76	1.83	1.70	6.29	4.52	10.81	101
Garst 636	2.91	1.89	1.69	6.48	4.32	10.80	101
Expo	2.83	1.80	1.69	6.32	4.46	10.78	101
OK 51 Syn 3	2.92	1.63	1.60	6.14	4.61	10.75	100
OK08	2.80	1.93	1.70	6.43	4.28	10.71	100
OK 71 Syn 2	2.73	1.84	1.66	6.24	4.36	10.59	99
Cimarron	2.79	1.85	1.58	6.22	4.37	10.59	99
WL 320	2.82	1.65	1.65	6.12	4.42	10.54	98
OK 69 Syn 2	2.82	1.78	1.62	6.22	4.31	10.53	98
OK 100 Syn 2	2.79	1.82	1.63	6.24	4.27	10.51	98
OK 48 Syn 3	2.72	1.80	1.62	6.14	4.23	10.37	97
OK 102 Syn 1	2.54	1.63	1.71	5.88	4.03	9.92	93
Mean	2.82	1.80	1.69	6.31	4.40	10.71	-
5% LSD	.12	.15	.08	.27	.29	46	-
CV (%)	3.69	7.12	4.28	3.69	5.7	3.73	-

*Percent of average of 555, Cimarron and OK08.

Location: Agronomy Research Station
Planting Date: 9-10-86 Plot Size: 1m X 5m
Design: RCB w/6 Reps Dryland
Soil Type: Teller loam Exp. No. 621

South Central Research Station
Chickasha-Grady Co. 1987-88

Entry	1988 5/11	6/20	7/15	8/22	10/13	Total	1987 Total	2-yr. Total	Relative Yield*
	Tons Dry Matter Acre								
AP 8660	2.17	1.90	1.47	1.55	1.75	8.84	10.89	19.73	111
OK 49 Syn 3	2.30	1.99	1.44	1.71	1.74	9.17	10.40	19.57	110
Archer	2.19	2.00	1.62	1.73	1.71	9.26	10.21	19.47	109
OK 51 Syn 3	2.20	2.04	1.62	1.68	1.79	9.33	9.98	19.31	109
OK 71 Syn 2	2.14	1.94	1.63	1.73	1.67	9.12	9.74	18.85	106
OK 68 Syn 3	2.04	1.92	1.66	1.69	1.75	9.07	9.72	18.78	106
OK 48 Syn 3	2.07	1.93	1.51	1.69	1.65	8.86	9.85	18.70	105
Conquista	2.07	1.96	1.61	1.65	1.78	9.08	9.51	18.59	105
Cimarron	2.16	1.93	1.41	1.59	1.74	8.82	9.61	18.43	104
84CR242	1.95	1.80	1.51	1.64	1.78	8.68	9.64	18.32	103
Garst 630	2.05	1.81	1.51	1.60	1.62	8.60	9.62	18.22	102
83CR252	1.99	1.78	1.57	1.62	1.70	8.67	9.41	18.09	102
Garst 655	2.04	1.85	1.55	1.67	1.73	8.85	9.22	18.07	102
AP 8650	2.01	1.81	1.40	1.48	1.73	8.43	9.64	18.07	102
84PR231	2.00	1.77	1.43	1.53	1.72	8.45	9.54	17.99	101
OK 69 Syn 2	1.98	1.74	1.49	1.67	1.69	8.57	9.41	17.98	101
Acclaim	2.03	1.81	1.63	1.70	1.68	8.83	9.05	17.89	101
84CR232	1.97	1.87	1.63	1.62	1.75	8.82	8.96	17.78	100
555	1.93	1.62	1.47	1.56	1.73	8.31	9.39	17.70	99
5432	1.99	1.76	1.41	1.52	1.61	8.29	9.32	17.61	99
78X-2	2.15	1.82	1.59	1.69	1.69	8.94	8.46	17.40	98
OK08	2.11	1.83	1.42	1.55	1.53	8.44	8.83	17.26	97
Mean	2.07	1.86	1.53	1.63	1.71	8.79	9.56	18.36	-
5% LSD	.27	.27	.21	.18	.13	.86	N.S.	1.78	-
CV (%)	11.57	12.58	11.86	9.57	6.49	8.53	10.80	8.48	-

*Percent of average of 555, Cimarron and OK08.
N.S. = No significent differences among varieties.

Location: South Central Research Station
PLanting Date: 9-9-86 PlotSize: 1m X 5m
Design: RCB w/6 Reps Irrigated: Sprinkler
Soil Type: Reinach/McLain silt loam Exp. No. 631

Quick Reference for Insect and Disease Resistance of Several Varieties.[1]

Variety	DOR	SAA	PA	BA	PLH	SN	PRR	AN	BW	FW	DM	AW	
Cimarron	4	H	R	S	-	-	M	R	H	H	T	T	High
Perry	3	M	R	-	M	-	L	L	R	R	M	T	Performance
Pioneer 555	4	H	H	-	-	-	S	S	H	M	T	-	Varieties
WL 320	5	R	M	M	T	M	R	M	R	H	-	-	
Apollo	4	M	M	S	M	M	R	L	R	R	T	-	
Arc	4	S	H	-	M	L	S	H	L	M	-	T	
Baron	6	H	H	H	-	L	R	M	M	R	-	-	
Buffalo	4	S	S	S	S	M	S	S	R	-	S	-	
Kanza	4	H	H	L	T	L	S	S	H	-	S	-	
Liberty	4	S	L	S	-	M	-	R	S	R	-	T	Adapted
Pike	5	M	R	S	-	R	M	S	M	R	R	-	Varieties
Riley	4	H	H	-	T	L	L	M	H	-	M	-	
WL So. Special	6	R	H	M	-	M	M	M	R	H	-	-	
WL 318	4	R	H	T	-	M	M	M	R	M	M	T	
WL 321	5	R	R	M	-	M	M	M	R	H	-	-	
Challenger	4	-	-	-	-	-	R	R	R	M	-	-	
DK 135	4	M	R	L	-	R	M	M	R	R	-	-	
Dynasty	4	R	-	-	-	-	R	M	H	R	-	-	
Edge	4	R	R	-	-	-	R	H	R	R	-	-	
Expo	4	H	-	-	-	-	R	M	R	R	-	-	
Garst 624	4	M	-	-	-	-	M	M	R	R	-	-	
Garst 629	3	M	R	-	-	R	M	M	R	R	-	-	
Garst 630	4	M	-	-	-	-	R	M	H	R	-	-	
Garst 636	2	-	-	-	M	-	R	M	H	R	-	-	
Garst 655	5	R	-	-	-	-	L	M	R	R	-	-	
Magnum+	4	L	-	-	-	-	R	M	R	R	-	-	
Nitro	7	R	H	-	-	-	R	-	-	H	-	-	
Pioneer 5432	4	H	R	-	-	-	M	-	H	H	-	-	
Pioneer 5444	4	H	-	-	M	-	L	-	M	H	-	-	
Vernema	4	M	-	-	-	H	L	L	M	-	-	-	
Agate	2	S	S	-	T	L	R	M	H	H	-	-	
Baker	2	H	H	-	M	L	S	L	H	R	M	-	
Cody	4	H	S	S	-	-	L	L	M	S	-	-	
Dawson	3	R	R	S	M	L	S	S	M	S	S	-	
Saranac	2	L	L	-	L	M	S	S	R	-	R	-	
Team	3	S	H	S	R	R	S	M	L	M	-	T	
OK08	4	S	S	S	-	-	S	S	S	-	-	S	

DOR - Level of winter dormancy (1=very dormant, 9=nondormant)

PRR - Phytophthora Root Rot
SAA - Spotted Alfalfa Aphid
PA - Pea Aphid
BA - Blue Alfalfa Aphid
PLH - Potato Leafhopper
SN - Stem Nematode
AN - Anthracnose
BW - Bacterial Wilt
FW - Fusarium Wilt
DM - Downy Mildew
AW - Alfalfa Weevil

S = Less than 5% of plants show any resistance to disease or insect.
T = Disease or insect present, but cultivar not greatly affected.
L = 6-14% of plants show resistance to disease or insect.
M = 15-30% of plants show resistance to disease or insect.
R = 31-50% of plants show resistance to disease or insect.
H = More than 51% of plants show resistance to disease or insect.

1. Information derived from cultivar descriptions in Crop Science and the National Alfalfa Variety Review Board.

Cooperative Extension Service

Oklahoma State Cooperative Extension Service offers its programs to all persons regardless of race, national origin, religion, sex, age, or handicap 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 $419 34 for 2,220 copies AI-8842 0789 TD