

2003

KANSAS PERFORMANCE TESTS WITH

ALFALFA VARIETIES

REPORT OF PROGRESS 918

Kansas State University
Agricultural Experiment Station
and Cooperative Extension Service

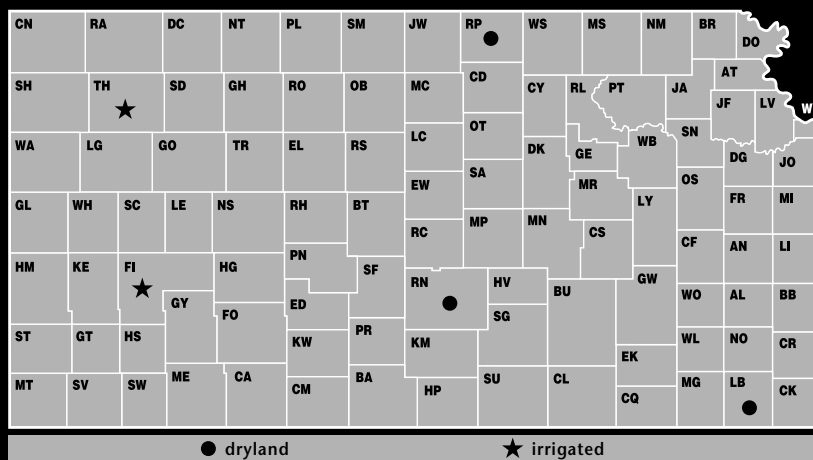
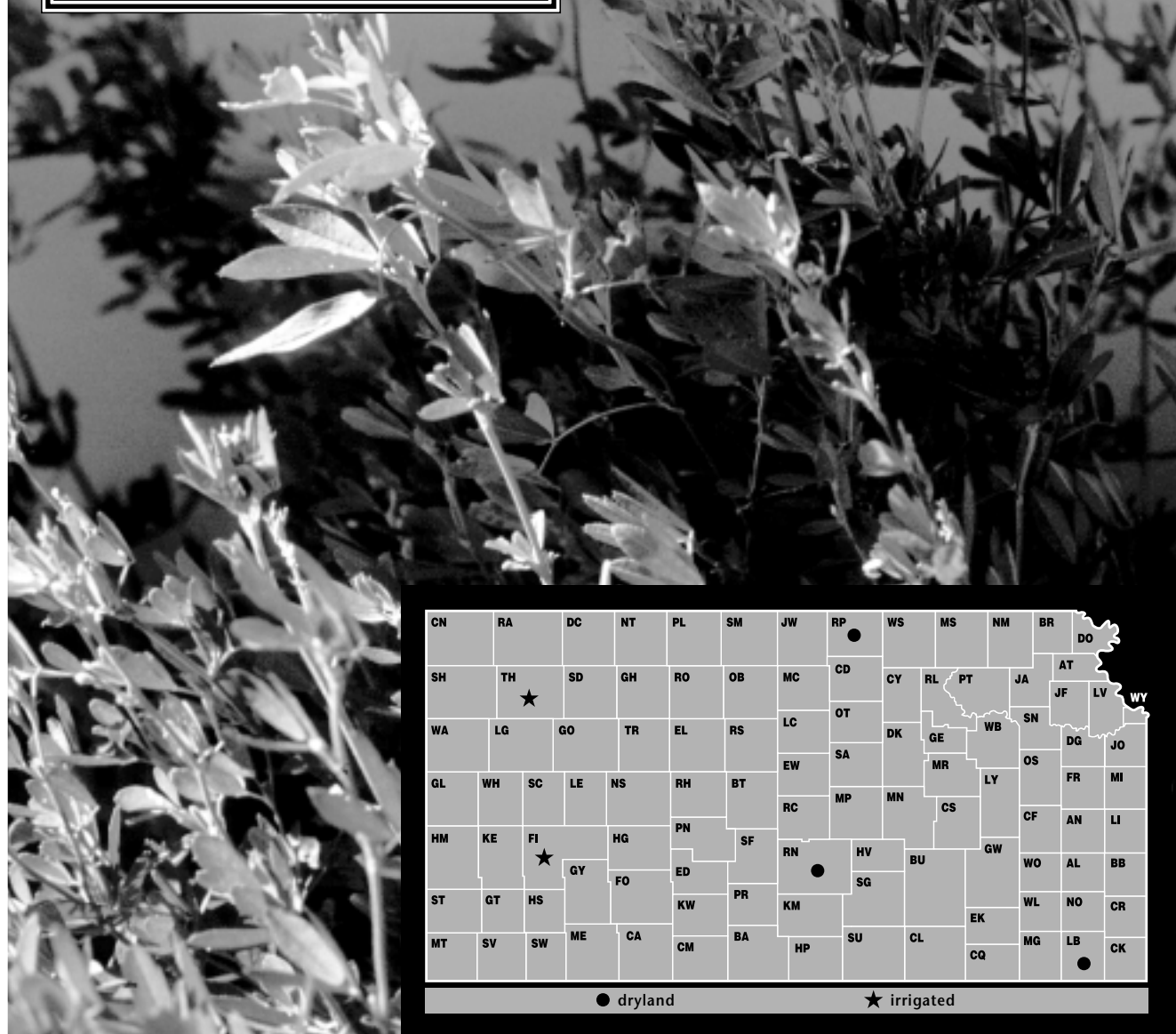


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Entrants in 2003 Kansas Alfalfa Performance Tests.

AgVenture Seeds, Inc. Kentland, IN 888-999-0859 agventure.com	Foundation Seed Division Lincoln, NE 402-624-8038 Garst Seed Co. Slater, IA 800-831-6630 garstseed.com	KSU - Foundation Seed Manhattan, KS 785-532-6115 Midwest Seed Genetics Carroll, IA 800-369-8218 midwestseed.com	Producers Hybrids Battle Creek, NE 402-675-2975 producershybrids.com
Allied Seed Cooperative Angola, IN 800-813-5025	Great Plains Research Co. Apex, NC 919-362-1583 greatplainsresearch.com	Monsanto Seed St. Louis, MO 800-833-5252 farmsource.com or monsanto.com	Sharp Bros. Seed Company Healy, KS 800-462-8483 sharpseed.com
America's Alfalfa Princeton, IL 800-873-2532 americasalfalfa.com	Hytest Seeds Shiremantown, PA 717-737-4529	Mycogen Seeds Indianapolis, IN 1-800-MYCOGEN mycogen.com	Star Seed Inc. Beloit, KS 800-782-7611 gostarseed.com
CroPlan Genetics Shoreview, MN 651-765-5713 croplangenetics.com	J.R. Simplot Company Boise, ID 208-672-2732 simplot.com	PGI Alfalfa, Inc. Oxnard, CA 866-744-5710	Syngenta Seeds, Inc. Ames, IA 800-258-0498 syngenta.com
Dairyland Seed Co. West Bend, WI 800-236-0163 dairylandseed.com	JC Robinson Seed Co. Waterloo, NE 800-228-9906 goldenharvestseeds.com	Pioneer, A DuPont Co. Lakewood, CO 303-716-3967 pioneer.com	United Suppliers Inc. Eldora, IA 877-714-4503 uniteds.com
Donley Seed Co. New Albany, IN 812-941-9822			W-L Research Inc. Madison, WI 608-240-0630

2003 PERFORMANCE TESTS

Objectives and Procedures

The Kansas Agricultural Experiment Station established an official alfalfa testing program in 1980 to provide Kansas growers with unbiased performance comparisons of alfalfa varieties marketed in the state. Each year, private companies are asked to enter varieties voluntarily at the locations slated for establishment that year. Announcements and entry forms are mailed to private companies in June for entry in fall-seeded tests. Companies enter varieties of their choice and pay entry fees to cover part of the costs of conducting the tests. Most tests are planted in mid-August or September; however, the Southeast Kansas test usually is planted in the spring. Individual tests are conducted for a minimum of 3 years. New tests typically are established during the final production year of the previous test or more frequently if there is enough interest.

Descriptive information is presented with the results for each test. This information, including soil type, establishment methods, fertilization, pest control, irrigation, harvest dates, and growing conditions unique to that location, can help explain test and/or variety performance.

Forage yields were estimated by harvesting four replications of each variety with a plot harvester. The amount of forage produced from a specific area (35-80 ft²) was weighed, and a subsample was taken to determine moisture content. This information was used to convert the plot weights to tons of dry matter per acre for each cutting, the season total, and the total for each previous season, as presented in Tables 1-5. The forage yield over the lifetime of a particular test is presented as the total tons of dry matter produced per acre, as the total tons of 15% moisture hay, and as a percentage of the test average.

Each table is separated into three sections. The first lists released cultivars that are generally available on the seed market or soon will be. The second section includes experimental cultivars that were entered in the test before being released for sale. These experimental lines often represent an earlier generation of seed than that used for the released cultivars. The third section includes summary statistics unique to that test.

At the bottom of each column, the Least Significant Difference (LSD) is listed at the 0.05 and 0.20 levels. These values indicate how large a difference is needed to be confident that one variety is superior to another. Differences between varieties that are equal to or greater than the 0.05 LSD have only a 1 in 20 chance of being due to chance or error. Differences equal to or greater than the 0.20 LSD have a 1 in 5 chance of being caused by chance or error.

The Coefficient of Variability (CV) provides an estimate of the consistency of the results of a particular test. In these tests, CVs below 10% generally indicate reliable, uniform data, whereas CVs of 10-15% are not uncommon and generally indicate that the data are acceptable for rough comparisons. Tests with CVs over 15% may still be useful, but variety comparisons lack precision.

The Mean Coefficient of Variability (MCV) is similar to the CV in that it serves as an indicator of test precision. The MCV is calculated by dividing the 0.05 LSD by the test mean (average) and multiplying by 100. The MCV reveals the percent difference required to detect differences between varieties with 95% confidence. Many alfalfa breeders and testers agree that tests with MCV values greater than 10% are of little benefit.

Variety Characterization

For variety selection, producers should consider the performance of a variety in each of the current tests where it appears, its performance over time and locations relative to familiar or check varieties, and the disease and insect resistance characteristics that are potentially important in their situation.

Tables 1-5 contain updated yield data from individual tests currently in progress. First-season yields for a spring-planted test are often more variable than yields in subsequent years. Season totals are important, but yield distribution during the season may vary among varieties. Examine yields from individual cuttings to determine if differences in yield distribution exist. Yield totals over many years provide the best measure of variety performance over time.

Table 6 provides additional descriptive information such as fall dormancy, disease resistance, and insect resistance ratings. These ratings were obtained primarily from the annual "Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties" pamphlet published by the Alfalfa Council. That report summarizes information submitted by developers of alfalfa varieties as part of the variety registration process. The Association of Official Seed Certifying Agencies (AOSCA) National Alfalfa Variety Review Board (NAVRB) reviewed the ratings before they were published. Companies submitting varieties for the tests provided ratings for some unregistered varieties.

Fall dormancy values are based on the fall canopy height measured in Minnesota. Dormancy values generally are related to the speed of regrowth. The rapid regrowth types have higher values, and the slower regrowth types have lower values.

Table 1. Southeast Kansas, Mound Valley Alfalfa Performance Test, Seeded April 2001.

NAME	Forage Yield									Total, 15% Moist.	01-03 Total, % of Mean
	tons/acre										
	Dry Matter						2002 Total	2001 Total	01-03 Total		
	2003										
4-23	6-4	7-2	7-24	11-7	Total						
RELEASED CULTIVARS											
HybriForce-400	1.58	1.70	0.68	0.40	0.72	5.08	5.42	1.34	11.84	13.93	106
6420	1.55	1.80	0.68	0.42	0.78	5.23	5.36	1.21	11.80	13.88	106
Dagger+EV	1.45	1.78	0.76	0.44	0.76	5.19	5.08	1.29	11.56	13.60	104
Pawnee	1.53	1.78	0.73	0.42	0.68	5.14	4.98	1.13	11.25	13.24	101
5-Star	1.46	1.69	0.72	0.44	0.76	5.07	4.89	1.17	11.13	13.09	100
400SCL	1.52	1.77	0.69	0.37	0.77	5.12	4.94	1.04	11.10	13.06	100
WL 327	1.55	1.80	0.75	0.46	0.70	5.26	4.70	1.12	11.08	13.04	99
Pioneer 54V54	1.36	1.71	0.79	0.43	0.67	4.96	5.04	1.01	11.01	12.95	99
Rebound 4.2	1.51	1.78	0.72	0.40	0.70	5.11	4.80	1.02	10.93	12.86	98
Perry	1.50	1.63	0.60	0.38	0.72	4.83	5.03	1.07	10.93	12.86	98
WL 342	1.39	1.77	0.73	0.42	0.68	4.99	4.77	1.08	10.84	12.75	97
350	1.46	1.70	0.75	0.39	0.56	4.86	4.82	1.12	10.80	12.71	97
Kanza	1.48	1.59	0.69	0.44	0.63	4.83	4.70	1.25	10.78	12.68	97
SUMMARY STATISTICS											
Average	1.49	1.73	0.71	0.41	0.70	5.04	4.96	1.14	11.14	13.11	100
LSD(0.05)	NS	NS	0.07	NS	0.08	0.27	NS	0.15	NS	NS	NS
LSD(0.20)	NS	0.11	0.06	NS	0.07	0.21	0.32	0.09	0.74	0.87	7
CV(%)	7.76	6.60	8.35	11.33	9.70	4.45	6.94	8.96	3.81	3.81	4
MCV(%)	NS	NS	9.96	NS	11.66	5.32	NS	12.85	NS	NS	NS

<p>LOCATION: Southeast Kansas Site: Southeast Ag. Research Center County: Labette Town: Mound Valley Soil: Parsons silty clay loam</p>	<p>2003 FERTILIZATION: 20-50-200 lb/a of N-P-K on February 12, 2003.</p>	<p>2003 CONDITIONS: Very dry from mid-June to late August. Stand reduced because of dry conditions.</p>
<p>ESTABLISHMENT: 5/9/2001; RCBD, 4 reps Plots 5'x30'; 3'x20' harvested 15 lb. seed/acre</p>	<p>2003 PEST CONTROL: First cut early because of alfalfa weevil. Insecticide applied to early regrowth after first cutting.</p>	

Table 2. North Central Kansas, Belleville Alfalfa Performance Test, Seeded Sept. 2001.

NAME	Forage Yield							Total, 15% Moist.	02-03 Total, % of Mean
	tons/acre								
	Dry Matter								
	2003				2002	02-03	Total		
5-28	7-1	7-29	9-9	Total	Total	Total	Total	Total	
Released Cultivars									
645-II	2.41	1.84	0.55	0.78	5.58	4.16	9.74	11.46	108
GH 750	2.44	2.05	0.54	0.78	5.81	3.88	9.69	11.40	107
Abundance	2.37	1.92	0.54	0.70	5.53	4.16	9.69	11.40	107
Pawnee	2.13	1.76	0.46	0.60	4.95	4.48	9.43	11.09	104
A 30-06	2.28	1.88	0.55	0.74	5.45	3.98	9.43	11.09	104
Feast+EV	2.29	1.82	0.45	0.76	5.32	4.07	9.39	11.05	104
US A4230	2.32	1.89	0.51	0.72	5.44	3.91	9.35	11.00	103
Enhancer	2.32	1.90	0.47	0.69	5.38	3.94	9.32	10.96	103
6410	2.32	1.81	0.52	0.70	5.35	3.92	9.27	10.91	103
DKA42-15	2.34	1.91	0.48	0.64	5.37	3.88	9.25	10.88	102
Lightning II	2.22	1.90	0.55	0.68	5.35	3.86	9.21	10.84	102
Dagger+EV	2.26	1.82	0.54	0.73	5.35	3.81	9.16	10.78	101
FK421	2.33	1.80	0.48	0.74	5.35	3.77	9.12	10.73	101
Pioneer 54Q53	2.28	1.88	0.45	0.68	5.29	3.79	9.08	10.68	100
Macon	2.27	1.80	0.58	0.66	5.31	3.74	9.05	10.65	100
Journey 204 Hybrid Alfalfa	2.29	1.68	0.53	0.71	5.21	3.81	9.02	10.61	100
Abilene+Z	2.11	1.77	0.53	0.61	5.02	3.94	8.96	10.54	99
Ameristand 403T	2.16	1.73	0.49	0.66	5.04	3.91	8.95	10.53	99
HybriForce-400	2.18	1.62	0.42	0.63	4.85	4.09	8.94	10.52	99
Geneva	2.24	1.73	0.46	0.62	5.05	3.86	8.91	10.48	99
Perry	2.50	1.81	0.58	0.79	5.68	3.13	8.81	10.36	97
Reliance	2.01	1.59	0.39	0.57	4.56	3.94	8.50	10.00	94
Kanza	1.93	1.52	0.45	0.50	4.40	3.17	7.57	8.91	84
Experimental Strains									
ZC9840A	2.59	2.03	0.58	0.82	6.02	4.16	10.18	11.98	113
ZG9840	2.31	1.80	0.54	0.74	5.39	3.95	9.34	10.99	103
ZG9941	2.40	1.70	0.47	0.74	5.31	3.81	9.12	10.73	101
4M72	2.31	1.86	0.49	0.70	5.36	3.74	9.10	10.71	101
ZC9950A	2.22	1.84	0.47	0.67	5.20	3.65	8.85	10.41	98
ZC9851A	2.07	1.63	0.44	0.60	4.74	4.07	8.81	10.36	97
ZC9941A	2.17	1.69	0.44	0.62	4.92	3.88	8.80	10.35	97
ZC9940A	2.21	1.63	0.50	0.64	4.98	3.78	8.76	10.31	97
5M87	2.16	1.87	0.59	0.65	5.27	3.47	8.74	10.28	97
ZC9942A	2.12	1.75	0.44	0.65	4.96	3.73	8.69	10.22	96
ZC9841A	2.18	1.63	0.49	0.64	4.94	3.70	8.64	10.16	96
ZC9953A	2.00	1.57	0.36	0.58	4.51	3.85	8.36	9.84	92
ZC9842A	2.09	1.62	0.45	0.62	4.78	3.35	8.13	9.56	90
Summary Statistics									
Average	2.25	1.78	0.49	0.68	5.20	3.84	9.04	10.64	100
LSD(0.05)	0.17	0.16	0.08	0.09	0.43	0.41	0.94	1.11	10
LSD(0.20)	0.13	0.13	0.06	0.06	0.34	0.27	0.61	0.72	7
CV(%)	6.29	7.67	13.34	10.99	7.08	7.62	5.19	5.19	5
MCV(%)	7.56	9.00	15.78	12.84	8.31	10.68	10.40	10.40	10

<p>LOCATION: North Central Kansas Site: North Central Kansas Exp. Field County: Republic Town: Belleville Soil: Crete silt loam</p> <p>ESTABLISHMENT: 8/22/2001; RCBD, 4 reps Plots 5'x15'; 3'x15' harvested 18 lb. seed/acre</p>	<p>2003 FERTILIZATION: 11-50-0 applied in February and after first cutting.</p> <p>2003 PEST CONTROL: None</p>	<p>2003 CONDITIONS: Wet weather delayed the first cutting. Favorable conditions in May and June produced acceptable yields for the first two cuttings. The second two cuttings were reduced by extremely dry weather.</p>
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Table 3. South Central Kansas, Hutchinson Alfalfa Performance Test, Seeded September 2002.

NAME	Plant Height inches		Forage Yield				2003 Total, % of Mean
			tons/acre			Total, 15% Moist.	
			Dry Matter		Total		
			5-21	6-24			
RELEASED CULTIVARS							
350	27	17	2.64	1.63	4.27	5.02	111
400SCL	27	18	2.55	1.64	4.19	4.93	109
Macon	25	17	2.21	1.67	3.88	4.56	101
Reliance	25	16	2.41	1.86	4.27	5.02	111
5-Star	25	16	2.02	1.52	3.54	4.16	92
Rebound 4.2	26	17	2.17	1.71	3.88	4.56	101
HybriForce-400	27	17	2.44	1.51	3.95	4.65	103
645-II	26	16	2.55	1.59	4.14	4.87	108
Dagger+EV	27	17	2.37	1.42	3.78	4.45	98
Key	27	16	2.30	1.31	3.61	4.25	94
Hyttest 410	28	18	2.41	1.59	3.99	4.69	104
Kanza	24	17	1.99	1.32	3.31	3.89	86
Pawnee	24	16	2.26	1.52	3.78	4.45	98
Aspire	22	17	1.89	1.49	3.38	3.98	88
DKA42-15	26	18	2.14	1.66	3.80	4.47	99
Perry	28	18	2.38	1.53	3.91	4.60	102
Reward II	28	17	2.39	1.61	4.00	4.71	104
Journey 204 Hybrid Alfalfa	26	16	2.48	1.62	4.10	4.82	106
Lightning II	26	16	2.26	1.47	3.73	4.39	97
WL 342	27	16	2.56	1.58	4.14	4.87	108
EXPERIMENTAL STRAINS							
CW 83018	26	16	2.14	1.59	3.73	4.39	97
CW 93018	26	17	2.08	1.70	3.78	4.45	98
CW 94022	27	15	2.15	1.38	3.54	4.16	92
CW 94006	25	17	2.12	1.53	3.65	4.29	95
SUMMARY STATISTICS							
Average	26	17	2.29	1.56	3.85	4.53	100
LSD(0.05)	3	NS	0.40	0.27	0.49	0.58	13
LSD(0.20)	2	1	0.26	0.18	0.32	0.38	8
CV(%)	8	8	12.53	12.28	8.95	8.95	9
MCV(%)	11	NS	17.67	17.31	12.62	12.62	13
LOCATION: South Central Kansas Site: South Central Experiment Field County: Reno Town: Hutchinson Soil: Ost silt loam ESTABLISHMENT: 9/1/2002; RCBD, 4 reps Plots 5'x20', 3'x20' harvested 18 lb. seed/acre			2003 FERTILIZATION: 75-40-40 prior to planting 2003 PEST CONTROL: None		2003 CONDITIONS: Hot, dry conditions in July and August limited regrowth after the second cutting. The regrowth was so erratic that only the first two cuttings are reported.		

Table 4. Northwest Kansas, Colby Irrigated Alfalfa Performance Test, Seeded August 2001.

NAME	Forage Yield							Total, 15% Moist.	02-03 Total, % of Mean
	tons/acre					2002 Total	02-03 Total		
	Dry Matter								
	2003								
6-3	7-8	8-6	9-9	Total					
Released Cultivars									
A 30-06	3.16	2.04	1.49	1.16	7.86	6.77	14.63	17.21	110
Pioneer 53V08	3.07	1.87	1.33	1.40	7.67	6.51	14.18	16.68	107
Lightning II	2.80	1.77	1.36	1.35	7.28	6.89	14.17	16.67	107
631	2.86	1.72	1.34	1.30	7.23	6.73	13.96	16.42	105
Enhancer	2.67	1.80	1.44	1.30	7.20	6.65	13.85	16.29	104
Target II Plus	2.93	1.49	1.29	1.35	7.06	6.61	13.67	16.08	103
645-II	3.16	1.57	1.14	1.11	6.99	6.64	13.63	16.04	103
Magnum V	2.43	1.70	1.29	1.38	6.80	6.76	13.56	15.95	102
Pioneer 54Q53	2.76	1.66	1.44	1.39	7.25	6.29	13.54	15.93	102
Reward	2.49	1.78	1.30	1.34	6.91	6.17	13.08	15.39	98
Kanza	2.37	1.63	1.39	1.53	6.91	6.05	12.96	15.25	98
Geneva	2.64	1.63	1.36	1.36	6.99	5.94	12.93	15.21	97
Feast+EV	3.09	1.67	1.14	1.25	7.15	5.75	12.90	15.18	97
4200	2.37	1.70	1.16	1.26	6.48	5.95	12.43	14.62	94
Perry	2.90	1.66	1.23	1.12	6.91	5.18	12.09	14.22	91
Experimental Strains									
ZC9842A	3.14	1.72	1.37	1.29	7.51	6.43	13.94	16.40	105
ZC9840A	3.07	1.71	1.41	1.19	7.38	6.50	13.88	16.33	104
CW 94008	2.84	1.64	1.41	1.46	7.35	6.37	13.72	16.14	103
6M71	2.86	1.67	1.43	1.36	7.31	6.38	13.69	16.11	103
CW 64004	3.07	1.63	1.37	1.34	7.41	6.19	13.60	16.00	102
5M84	2.75	1.70	1.39	1.37	7.22	6.32	13.54	15.93	102
5M85	2.59	1.80	1.47	1.29	7.15	6.24	13.39	15.75	101
ZC9940A	2.96	1.82	1.45	1.13	7.35	6.00	13.35	15.71	100
ZC9851A	2.75	1.78	1.29	1.23	7.05	6.28	13.33	15.68	100
CW 75044	2.72	1.54	1.41	1.38	7.06	6.23	13.29	15.64	100
ZC9950A	2.70	1.64	1.25	1.33	6.93	6.35	13.28	15.62	100
ZC9854A	2.62	1.69	1.26	1.37	6.94	6.22	13.16	15.48	99
ZC9841A	2.80	1.57	1.15	1.19	6.72	6.43	13.15	15.47	99
CW 74040	2.72	1.73	1.49	1.20	7.14	5.84	12.98	15.27	98
CW 64049	2.65	1.62	1.23	1.22	6.72	5.80	12.52	14.73	94
CW 64026	2.56	1.37	1.16	1.21	6.30	6.00	12.30	14.47	93
CW 54033	2.71	1.38	1.21	1.19	6.49	5.57	12.06	14.19	91
CW 73029	2.73	1.72	1.13	1.10	6.67	5.37	12.04	14.16	91
Summary Statistics									
Average	2.79	1.68	1.32	1.29	7.07	6.22	13.29	15.64	100
LSD(0.05)	0.45	NS	0.23	0.23	0.65	0.47	1.15	1.35	9
LSD(0.20)	0.30	NS	0.15	0.16	0.43	0.31	0.74	0.87	6
CV(%)	11.51	15.08	12.51	13.00	6.60	5.43	4.32	4.32	4
MCV(%)	16.13	NS	17.55	18.20	9.26	7.62	8.65	8.65	9

<p>LOCATION: Northwest Kansas Site: Northwest Res.-Ext. Center County: Thomas Town: Colby Soil: Keith silt loam</p> <p>ESTABLISHMENT: 8/29/2001; RCBD, 4 reps Plots 3'x20'; 3'x17' harvested 18 lb. seed/acre</p>	<p>2003 FERTILIZATION: 17-60-0 prior to planting</p> <p>2003 PEST CONTROL: Herbicide applied for grass control on 4/3/03; insecticide applied for pea aphid control 5/14/03</p>	<p>2003 CONDITIONS: July and August were very dry. A total of 25" of water was added in 7 irrigations.</p>
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Table 5. Southwest Kansas, Garden City Irrigated Alfalfa Performance Test, Seeded Sept. 2002.

NAME	Forage Yield					Total, 15% Moist.	2003 Total, % of Mean
	tons/acre						
	Dry Matter						
	2003						
	6-11	7-16	8-22	12-5	Total		
RELEASED CULTIVARS							
WL 327	3.51	2.61	2.31	0.92	9.35	11.00	108
Reward II	3.55	2.61	2.17	0.83	9.17	10.79	106
WL 342	3.56	2.56	2.14	0.89	9.14	10.75	106
HybriForce-400	3.58	2.56	2.14	0.83	9.11	10.72	105
WL 319 HQ	3.59	2.59	2.12	0.81	9.11	10.72	105
Hyttest 410	3.47	2.55	2.16	0.86	9.04	10.64	104
GH 750	3.56	2.52	2.12	0.82	9.03	10.62	104
4A421	3.37	2.55	2.20	0.88	9.00	10.59	104
Abundance	3.58	2.50	2.08	0.83	9.00	10.59	104
Key	3.47	2.41	2.12	0.81	8.82	10.38	102
Journey 204 Hybrid Alfalfa	3.26	2.48	2.17	0.84	8.75	10.29	101
5-Star	3.30	2.48	2.14	0.81	8.73	10.27	101
Daqger+EV	3.17	2.49	2.14	0.91	8.70	10.24	100
Masterpiece	3.29	2.42	2.15	0.84	8.69	10.22	100
Hyttest 520	3.26	2.50	2.14	0.79	8.68	10.21	100
Pioneer 54V54	3.31	2.49	2.08	0.73	8.61	10.13	99
Feast+EV	3.26	2.47	2.05	0.78	8.56	10.07	99
Magna 601	2.84	2.41	2.26	0.76	8.28	9.74	96
Kanza	2.45	1.99	1.92	0.58	6.95	8.18	80
EXPERIMENTAL STRAINS							
DS107HYB	3.51	2.56	2.20	0.86	9.13	10.74	105
DS106HYB	3.49	2.51	2.17	0.88	9.05	10.65	105
ZC9953A	3.29	2.57	2.17	0.92	8.95	10.53	103
DS9809HYB	3.26	2.54	2.16	0.91	8.88	10.45	103
CW 04022	3.27	2.46	2.13	0.93	8.80	10.35	102
DS108HYB	3.27	2.54	2.21	0.76	8.79	10.34	102
CW 94025	3.19	2.46	2.16	0.84	8.65	10.18	100
DS218HYB	3.05	2.48	2.19	0.84	8.57	10.08	99
DS201HYB	3.06	2.43	2.22	0.84	8.55	10.06	99
FG 40M159A	3.18	2.45	2.13	0.78	8.53	10.04	99
CW 04030	3.21	2.35	2.13	0.80	8.49	9.99	98
CW 04027	3.14	2.38	2.15	0.79	8.46	9.95	98
Exp 80I	3.25	2.36	2.03	0.80	8.45	9.94	98
CW 65086	2.98	2.38	2.22	0.85	8.43	9.92	97
CW 14026	3.00	2.39	2.10	0.86	8.36	9.84	97
Pioneer 55V05	3.04	2.40	2.19	0.73	8.36	9.84	97
GPVL0144	3.23	2.26	2.03	0.77	8.30	9.76	96
CW 94023	3.09	2.35	2.04	0.74	8.23	9.68	95
CW 65085	2.96	2.28	2.07	0.81	8.12	9.55	94
CW 05009	2.91	2.32	2.15	0.73	8.12	9.55	94
SUMMARY STATISTICS							
Average	3.25	2.45	2.14	0.82	8.66	10.19	100
LSD(0.05)	0.17	0.09	0.09	0.06	0.30	0.35	3
LSD(0.20)	0.13	0.06	0.08	0.05	0.23	0.27	3
CV(%)	4.52	3.08	3.75	6.72	2.92	2.92	3
MCV(%)	5.23	3.67	4.21	7.88	3.46	3.46	3
LOCATION: Southwest Kansas Site: Southwest Res.-Ext. Center County: Finney Town: Garden City Soil: Keith silt loam		2003 FERTILIZATION: 22-104-0 applied at planting 2003 PEST CONTROL: None		2003 CONDITIONS: The test got off to a slow start in the spring, delaying all cuttings. The final cutting was delayed by slow regrowth and a late frost.			
ESTABLISHMENT: 9/3/2002; RCBD, 4 reps Plots 3'x20'; 3'x20' harvested 30 lb. seed/acre							

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The URL is <http://www.ksu.edu/kscpt>.

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