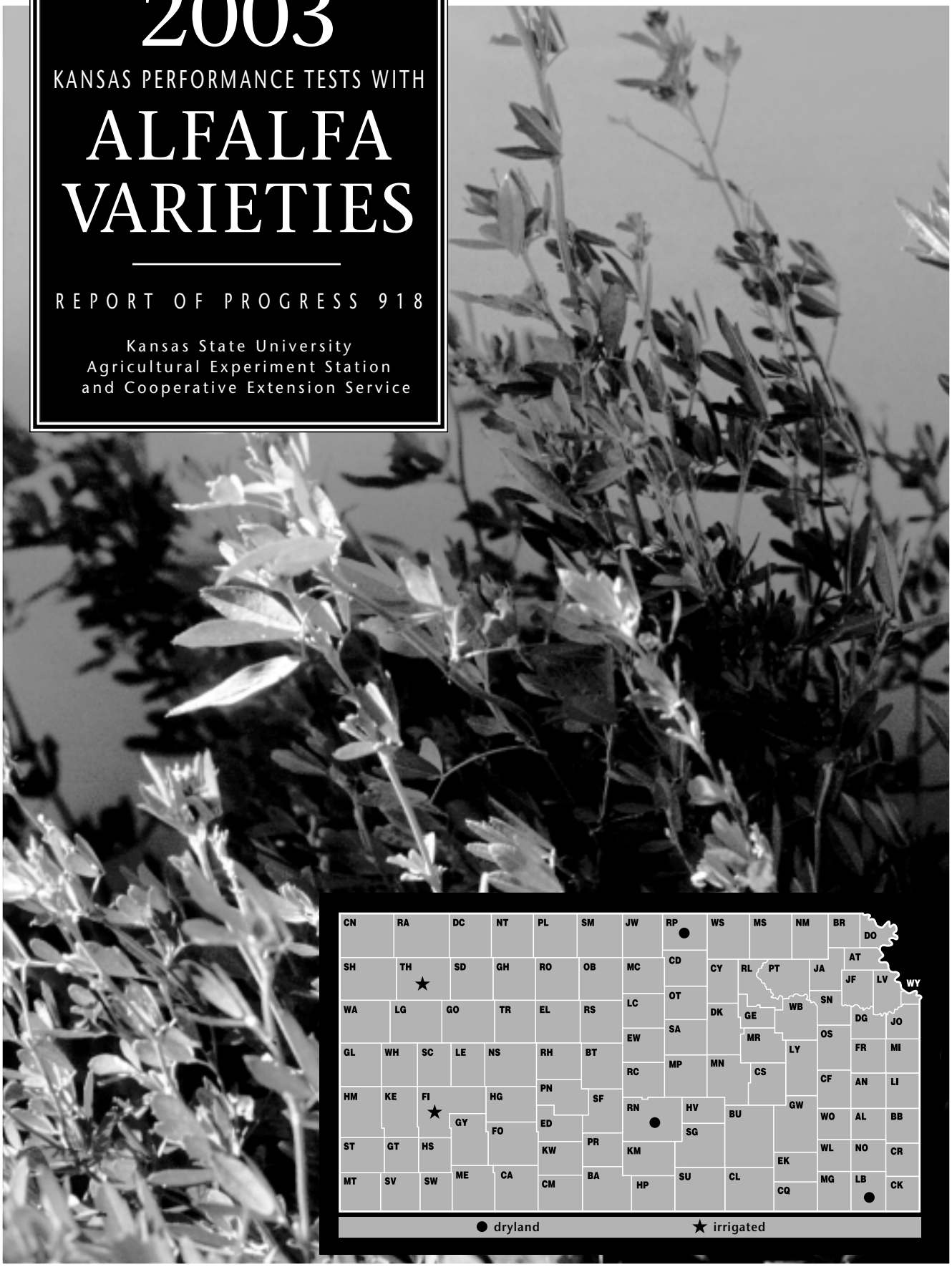
2003

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

Allied Seed Cooperative
Angola, IN
800-813-5025

America's Alfalfa
Princeton, IL
800-873-2532
americasalfalfa.com

CroPlan Genetics
Shoreview, MN
651-765-5713
croplangenetics.com

Dairyland Seed Co.
West Bend, WI
800-236-0163
dairylandseed.com

Donley Seed Co.
New Albany, IN
812-941-9822

Foundation Seed Division
Lincoln, NE
402-624-8038

Garst Seed Co.
Slater, IA
800-831-6630
garstseed.com

Great Plains Research Co.
Apex, NC
919-362-1583
greatplainsresearch.com

Hytest Seeds
Shiremantown, PA
717-737-4529

J.R. Simplot Company
Boise, ID
208-672-2732
simplot.com

JC Robinson Seed Co.
Waterloo, NE
800-228-9906
goldenharvestseeds.com

KSU - Foundation Seed
Manhattan, KS
785-532-6115

Midwest Seed Genetics
Carroll, IA
800-369-8218
midwestseed.com

Monsanto Seed
St. Louis, MO
800-833-5252
farmsource.com or
monsanto.com

Mycogen Seeds
Indianapolis, IN
1-800-MYCOGEN
mycogen.com

PGI Alfalfa, Inc.
Oxnard, CA
866-744-5710

Pioneer, A DuPont Co.
Lakewood, CO
303-716-3967
pioneer.com

Producers Hybrids
Battle Creek, NE
402-675-2975
producershybrids.com

Sharp Bros. Seed Company
Healy, KS
800-462-8483
sharpseed.com

Star Seed Inc.
Beloit, KS
800-782-7611
gostarseed.com

Syngenta Seeds, Inc.
Ames, IA
800-258-0498
syngenta.com

United Suppliers Inc.
Eldora, IA
877-714-4503
uniteds.com

W-L Research Inc.
Madison, WI
608-240-0630

Contribution No. 04-215-S from the Kansas Agricultural Experiment Station.

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 ft^2) 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.

	Forage Yield tons/acre Dry Matter										
	2003										
NAME	4-23	6-4	7-2	7-24	11-7	Total	2002 Total	2001 Total	01-03 Total	Total, 15% Moist.	01-03 Total, % of Mean
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

LOCATION: Southeast Kansas
Site: Southeast Ag. Research Center
County: Labette
Town: Mound Valley
Soil: Parsons silty clay loam

ESTABLISHMENT:
5/9/2001; RCBD, 4 reps
Plots 5'x30'; 3'x20' harvested
15 lb. seed/acre

2003 FERTILIZATION:
20-50-200 lb/a of N-P-K on February 12, 2003.

2003 PEST CONTROL:
First cut early because of alfalfa weevil. Insecticide applied to early regrowth after first cutting.

2003 CONDITIONS:
Very dry from mid-June to late August. Stand reduced because of dry conditions.

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

	Forage Yield								
	tons/acre								
	Dry Matter								
	2003							Total,	02-03 Total,
NAME	5-28	7-1	7-29	9-9	Total	2002 Total	02-03 Total	15% Moist.	% of Mean
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

LOCATION: North Central Kansas
Site: North Central Kansas Exp. Field
County: Republic
Town: Belleville
Soil: Crete silt loam

ESTABLISHMENT:
8/22/2001; RCBD, 4 reps
Plots 5'x15'; 3'x15' harvested
18 lb. seed/acre

2003 FERTILIZATION:
11-50-0 applied in February and after first cutting.

2003 PEST CONTROL:
None

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.

Table 3. South Central Kansas, Hutchinson Alfalfa Performance Test, Seeded September 2002.

NAME	Plant Height inches		Forage Yield tons/acre Dry Matter 2003			Total, 15% Moist.	2003 Total, % of Mean
	5-21	6-24	5-21	6-24	Total		
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
Hytest 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.

	Forage Yield tons/acre Dry Matter								
	2003					2002	02-03	Total, 15%	02-03 Total, % of
NAME	6-3	7-8	8-6	9-9	Total	Total	Total	Moist.	Mean
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

LOCATION: Northwest Kansas
Site: Northwest Res.-Ext. Center
County: Thomas
Town: Colby
Soil: Keith silt loam

ESTABLISHMENT:
8/29/2001; RCBD, 4 reps
Plots 3'x20'; 3'x17' harvested
18 lb. seed/acre

2003 FERTILIZATION:
17-60-0 prior to planting

2003 PEST CONTROL:
Herbicide applied for grass control on 4/3/03; insecticide applied for pea aphid control 5/14/03

2003 CONDITIONS:
July and August were very dry. A total of 25" of water was added in 7 irrigations.

Table 5. Southwest Kansas, Garden City Irrigated Alfalfa Performance Test, Seeded Sept. 2002.

NAME	Forage Yield tons/acre Dry Matter 2003 6-11	7-16	8-22	12-5	Total	Total, 15% Moist.	2003 Total, % of Mean
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
Hytest 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
Dagger+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
Hytest 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

ESTABLISHMENT:
9/3/2002; RCBD, 4 reps
Plots 3'x20'; 3'x20' harvested
30 lb. seed/acre

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.

Table 6. Varieties in 2003 Kansas Alfalfa Performance Tests with fall dormancy and disease and insect resistance ratings.

COMPANY Name	FD	BW	VW	FW	AN	PRR	SAA	PA	BAA	SN	APH	SRKN	NRKN	PL
Allied														
350	3	H	H	H	H	H	R	R	-	-	H	-	-	-
400SCL	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Macon	4	H	H	H	H	H	R	R	-	M	H	-	-	-
Reliance	3	H	H	H	H	H	R	-	-	M	R	-	-	-
America's Alfalfa														
Abilene+Z	5	H	H	H	H	H	M	H	M	R	R	-	-	-
Ameristand 403T	4	H	H	H	H	H	M	R	-	M	H	-	-	-
AV														
4200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CroPlan Genetics														
5-Star	5	R	R	H	R	R	R	R	R	R	R	-	-	-
Rebound 4.2	4	H	H	H	H	H	R	R	-	M	H	-	-	-
Dairyland														
HybriForce-400	4	H	R	H	R	H	H	R	M	R	M	-	H	H
Magna 601	6	R	M	H	R	H	H	R	-	R	M	R	R	R
Magnum V	4	H	R	H	R	H	R	R	M	R	M	-	M	M
Donley														
FK421	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Garst														
631	4	H	R	H	R	H	R	H	M	R	M	-	-	-
6410	4	H	H	H	H	H	R	R	-	-	H	-	-	-
6420	4	H	R	H	R	H	R	R	-	R	R	-	H	H
645-II	3	H	H	H	H	H	-	R	-	-	H	-	-	-
Garst/AgriPro														
Dagger+EV	5	H	H	H	H	H	M	H	M	R	H	-	L	L
Feast+EV	3	H	H	H	R	H	-	M	-	-	H	-	-	-
Golden Harvest														
GH 750	4	H	H	H	H	H	R	R	-	M	H	-	-	-
Great Plains														
Key	4	H	H	H	H	H	H	H	M	M	M	M	-	-
Hytest														
Hytest 410	4	H	H	H	H	H	H	M	-	R	H	-	-	-
Hytest 520	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KS AES & USDA														
Kanza	3	R	-	-	-	-	R	R	-	-	-	-	-	-
Midwest Seed														
Pawnee	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monsanto														
Aspire	6	M	R	H	H	H	H	H	H	R	H	-	-	-
DKA42-15	4	H	H	H	H	H	R	H	-	R	H	-	-	-
Mycogen														
4A421	4	H	H	H	H	H	H	H	-	-	H	-	M	M
NE AES & USDA														
Perry	3	R	-	-	L	-	M	R	-	-	-	-	-	-
NK														
Geneva	4	H	H	H	H	H	R	H	L	R	H	-	-	-
PGI														
A 30-06	3	H	H	H	H	H	-	R	-	-	H	-	-	-
Reward	4	H	R	H	R	H	R	H	M	M	M	-	-	-
Reward II	4	H	R	H	R	H	R	R	R	R	R	-	H	H
Pioneer														
53V08	3	H	H	H	H	H	R	H	M	H	L	-	H	H
54Q53	4	H	H	R	R	H	M	M	-	H	M	-	H	H
54V54	4	H	H	H	H	H	R	-	-	L	M	-	-	-
Producers														
Target II Plus	3	H	R	H	R	H	M	R	M	R	M	-	M	M
Sharp														
Abundance	4	H	R	H	R	H	R	R	M	R	R	-	H	H
Enhancer	4	H	R	H	R	H	R	R	M	M	M	-	M	M
Sharp/Font/Arrow														
Journey 204 Hybrid	4	H	R	H	H	H	R	R	-	R	R	-	H	H
Simplot														
Masterpiece	4	H	R	H	H	H	R	-	R	H	R	-	R	R
Star														
Lightning II	4	H	R	H	H	H	H	M	-	M	H	-	-	-
US Seeds														
US A4230	4	H	H	H	H	H	R	R	-	R	H	-	-	-
W-L Research														
WL 319 HQ	3	H	H	H	H	H	R	H	-	M	H	-	-	-
WL 327	4	H	R	H	H	H	R	R	H	R	H	-	-	-
WL 342	4	H	H	H	H	H	H	H	-	R	H	-	-	-

Variety characterization codes:
FD = Fall dormancy rating
BW = Bacterial wilt
VW = Verticillium wilt
FW = Fusarium wilt
AN = Anthracnose race 1
PRR = Phytophthora root rot
SAA = Spotted alfalfa aphid
PA = Pea aphid
BAA = Blue alfalfa aphid
SN = Stem nematode
APH = Aphanomyces root rot race 1
SRKN = Southern root knot nematode
NRKN = Northern root knot nematode
PL = Potato leafhopper

Fall dormancy ratings:

Check variety	Rating
Maverick	1
Vernal	2
5426	3
Legend	4
Archer	5
ABI 700	6
Dona Ana	7
Pierce	8
CUF 101	9
UC 1887	10

Pest resistance ratings:

Code	Resistance class	% Resistant plants
S	Susceptible	0-5%
L	Low Resistance	6-14%
M	Moderate Resistance	15-30%
R	Resistance	31-50%
H	High Resistance	>50%
-	Not adequately tested	

Fall dormancy and disease and insect resistance ratings are from Alfalfa Varieties, a publication of the Certified Alfalfa Seed Council, NAAIC cultivar descriptions, or from developers of the varieties. Blank spaces indicate that the variety has not been tested adequately for that trait.

For those interested in accessing crop performance testing information electronically, visit our World Wide Web site. Most of the information contained in this publication is available for viewing or downloading.

The URL is **http://www.ksu.edu/kscpt**.

Excerpts from the UNIVERSITY RESEARCH POLICY AGREEMENT
WITH COOPERATING SEED COMPANIES

Permission is hereby given to Kansas State University to test varieties and/or hybrids designated on the attached entry forms in the manner indicated in the test announcements. I certify that seed submitted for testing is a true sample of the seed being offered for sale.

I understand that all results from Kansas Crop Performance Tests belong to the University and the public and shall be controlled by the University so as to produce the greatest benefit to the public. Performance data may be used in the following ways: 1) Tables may be reproduced in their entirety provided the source is referenced and data are not manipulated or reinterpreted; 2) Advertising statements by an individual company about the performance of its entries may be made as long as they are accurate statements about the data as published, with no reference to other companies' names or cultivars. In both cases, the following must be included with the reprint or ad citing the appropriate publication number and title: "See the official Kansas State University Agricultural Experiment Station and Cooperative Extension Service Report of Progress 918 '2003 Kansas Performance Tests with Alfalfa Varieties', or the Kansas Crop Performance Test website, http://www.ksu.edu/kscpt, for details. Endorsement or recommendation by Kansas State University is not implied."

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Kansas State University Agricultural Experiment Station and Cooperative Extension Service, Manhattan 66506
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