



**Making Better Decisions
The CSU Alfalfa Pages
Posted November 6, 2003**

2002 Colorado Alfalfa Variety Results

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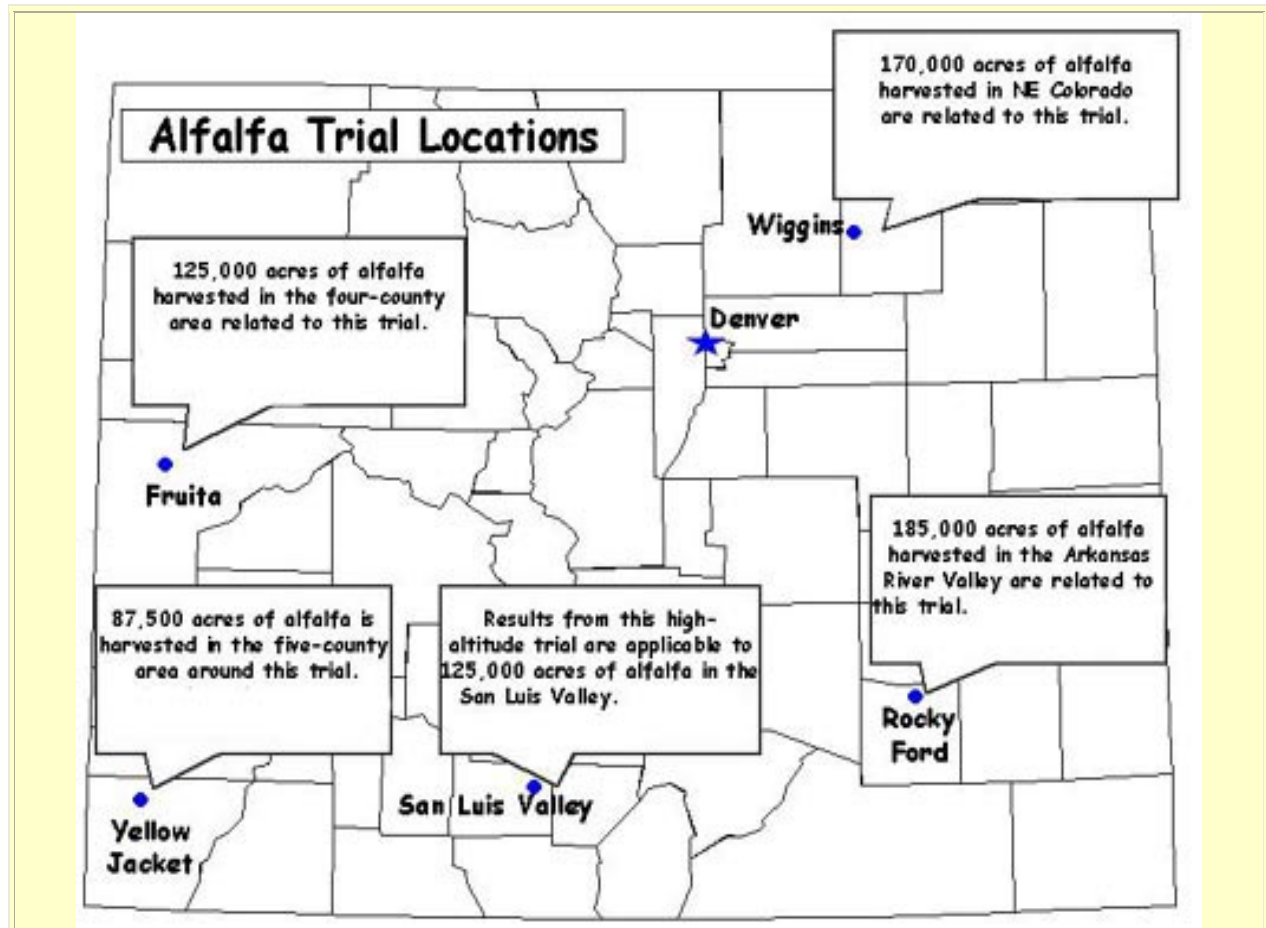
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Fruita - Fruita Research Center; Rocky Ford - Arkansas Valley Research Center; Yellow Jacket - Southwestern Colorado Research Center.



Western Colorado Alfalfa Variety Trial at Fruita 2002

Summary

Numerous alfalfa varieties are available for farmers to plant. With so many varieties in the marketplace, selecting a variety to plant can be overwhelming to a farmer. Agronomic performance data for alfalfa varieties provides quantitative information to aid farmers and others in deciding which varieties should be planted. Testing all available alfalfa varieties at anyone location is not feasible. A variety performance test is conducted at the Western Colorado Research Center at Fruita in which selected alfalfa varieties are evaluated for a three-year testing period. The performances of these varieties are evaluated under local conditions; thus, the results obtained from this test are relevant to similar production environments. This is a progress report for an ongoing study.

Introduction and Objectives

Evaluating varieties under local production conditions provides site-specific information that can

be useful to growers in that area and to growers in other areas with similar environments and production practices. Local variety performance information is also of value to breeding and seed companies in knowing how to develop and market seed of their varieties. Company representatives determine which of their varieties to include. Prior to planting the test plots, alfalfa breeding and seed companies are solicited for varieties to enter into the test. One or more public check varieties are selected by university researchers to include in the test.

Western Colorado Alfalfa Variety Performance Test at Fruita 2002

The 2002 results of Colorado State University's alfalfa variety performance test at Fruita are shown below. Plots were planted fall 2001 and the 2002 data are for the first of a three-year testing period. Stands are excellent. Plots are very weed-free. Alfalfa is furrow-irrigated. Summer 2002 in western Colorado was hot and dry which made for good haymaking conditions and alfalfa yield overall were good.

Forage yields of 15 alfalfa varieties at the Western Colorado Research Center at Fruita in 2002

Variety	Brand/Source	1 st Cut May 29	2 nd Cut July 2	3 rd Cut Aug 23	4 th Cut Oct 8	2002 Total ²
		----- tons/acre ³ -----				
Sendero	Allied Seed, L.L.C.	2.38	2.38	2.85	1.56	9.17
FG 3R139	J.R. Simplot Co.	2.45	2.37	2.81	1.54	9.16
Select	IFA	2.28	2.37	2.91	1.54	9.10
DU 201	Great Plains Research Co., Inc.	2.40	2.20	2.77	1.67	9.03
WL 327	W-L Research	2.58	2.37	2.63	1.46	9.03
Goliath	Allied Seed, L.L.C.	2.38	2.34	2.79	1.51	9.01
WL 342	W-L Research	2.55	2.36	2.47	1.53	8.91
Ameristand 403T	America's Alfalfa	2.65	2.19	2.64	1.32	8.80
HybriForce 400	Dairyland Seed Co.	2.46	2.05	2.64	1.50	8.64
Pawnee	Midwest Seed Genetics	2.45	2.27	2.52	1.40	8.64
Dagger+EV	AgriPro	2.26	2.19	2.65	1.52	8.62
Mountaineer	Croplan Genetics	2.21	2.32	2.61	1.45	8.59
Journey Brand 204 Hybrid	Dairyland Seed	2.34	2.06	2.67	1.49	8.56
Enhancer	Sharp Bros. Seed Co.	2.35	1.97	2.63	1.53	8.49
FR 9802	Great Plains Research Co., Inc.	2.33	1.70	2.38	1.54	7.94
Average		2.41	2.21	2.66	1.50	8.78
CV%		7.69	4.88	6.30	5.09	4.32
LSD _(0.05)		NS	0.16	0.24	0.11	0.54

¹Seeded 6 September 2001 at 15 lbs/acre.

²Table is arranged by decreasing, 2002 total yield.

³Yields were calculated on an air-dry basis.

Elevation: 4510 feet. Average annual precipitation is 8.4 inches. Average frost-free days is 181 days. Last spring frost - May 9, 2002; first fall frost - October 15, 2002. Frost-free days for 2002 - 159 days (28°F base). Fertilizer: 324 lbs P₂O₅/acre and 68 lbs N/acre broadcast as 11-52-0 on August 30, 2001 and plowed down prior to planting. Applied Select at 8 oz/acre on 8 October 2001 for weed control. Soil series: Youngston clay loam.

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Forage yields of 20 alfalfa varieties at Fruita¹ 2001 and for the period 1999-2001.

Variety	Brand/Source	2001				Total			
		1 st Cut May 21	2 nd Cut July 6	3 rd Cut Aug 27	4 th Cut Oct 2	2001	2000	1999	3-yr
-----tons/acre -----									
Focus HSN*	Arkansas Valley Seed Co	2.47	2.06	2.66	1.15	8.34	9.85	8.74	26.93
Millennia	IFA	2.37	2.20	2.57	1.31	8.44	9.72	8.68	26.84
ZX 9453	ABI Alfalfa, Inc.	2.24	2.12	2.32	1.21	7.88	9.94	8.60	26.42
Baralfa 54	Seekamp Seed	2.38	1.98	2.55	1.18	8.09	9.52	8.39	26.00
WL 232 HQ	Germaines Seeds	2.31	2.01	2.44	0.98	7.73	9.57	8.70	26.00
Reno	Novartis	2.34	1.99	2.65	1.15	8.12	9.64	8.18	25.94
ZX 9451	ABI Alfalfa, Inc.	2.16	1.95	2.28	1.13	7.52	9.66	8.70	25.88
Archer	America's Alfalfa	2.08	2.19	2.36	1.16	7.79	9.54	8.55	25.88
Archer II	America's Alfalfa	2.18	2.24	2.23	1.16	7.81	9.52	8.51	25.84
DEKALB DK 142	Monsanto/DEKALB	2.02	1.72	2.50	1.01	7.25	9.83	8.74	25.82
TMF Multiplier II	Mycogen Seeds	2.19	1.75	2.70	1.06	7.69	9.65	8.44	25.78
WL 325 HQ	Germaines Seeds	2.16	2.19	2.37	1.10	7.83	9.34	8.39	25.55
DEKALB DK 140	Monsanto/DEKALB	2.09	1.93	2.42	1.08	7.51	9.42	8.51	25.45
Garst 6420	Garst	1.74	1.53	2.32	1.04	6.63	9.87	8.69	25.19
DEKALB DK 134	Monsanto/DEKALB	2.09	1.88	2.46	1.02	7.45	9.47	7.99	24.91
ABT 350	ABT	1.97	1.84	2.04	0.92	6.77	9.57	8.40	24.75
Innovator+Z	America's Alfalfa	2.02	1.79	2.43	0.90	7.14	9.29	8.20	24.62
TMF 421	Mycogen Seeds	2.14	1.85	2.25	0.93	7.16	9.21	8.08	24.45
Ranger	public	1.99	1.57	2.43	0.89	6.88	9.31	7.45	23.64
Ladak	public	2.00	1.58	2.52	0.82	6.91	9.09	7.20	23.20

Variety	Brand/Source	May 22	Jun 28	Jul 27	Aug 31				
		-----tons/acre ² ----- -----							
Pioneer brand 5396	Pioneer Hi-Bred Int'l, Inc.	2.84	2.14	1.61	1.65	8.24	8.88	8.05	25.17
Reno	Novartis Seeds	2.61	2.18	1.60	1.65	8.04	9.11	8.00	25.16
DEKALB DK142	Monsanto/DEKALB	2.78	2.06	1.60	1.64	8.09	9.27	7.78	25.13
Big Horn	Cargill Hybrid Seeds	2.71	2.20	1.66	1.63	8.20	9.19	7.66	25.06
Legacy	Grassland West Company	2.60	2.11	1.52	1.65	7.89	9.19	7.92	25.00
DEKALB DK127	Monsanto/DEKALB	2.80	2.08	1.60	1.59	8.08	9.26	7.54	24.88
TMF Multiplier II	Mycogen Seeds	2.75	2.09	1.48	1.61	7.94	9.09	7.80	24.83
Pioneer brand 5312	Pioneer Hi-Bred Int'l, Inc.	2.96	2.08	1.57	1.65	8.25	9.01	7.56	24.82
Depend+EV	Agripro Seed, Inc.	2.59	2.09	1.55	1.56	7.79	9.24	7.77	24.80
Garst Seed 631	Garst Seeds	2.71	2.07	1.63	1.65	8.06	8.86	7.84	24.76
Garst Seed 630	Garst Seeds	2.78	2.06	1.54	1.65	8.04	8.84	7.78	24.66
WL 325HQ	W-L Research, Inc.	2.71	2.07	1.60	1.63	8.01	8.84	7.77	24.62
Magnum III	Dairyland Seed Company	2.58	2.14	1.60	1.60	7.92	8.74	7.80	24.46
Alpha 2001	Great Lakes Hybrids	2.82	2.09	1.55	1.63	8.09	8.54	7.77	24.40
Shamrock	Sharp Bros. Seed Co.	2.47	2.00	1.51	1.58	7.56	8.88	7.92	24.36
AlfaLeaf II	Sharp Bros. Seed Co.	2.38	2.05	1.55	1.62	7.60	8.98	7.76	24.34
Innovator+Z	America's Alfalfa	2.76	2.02	1.47	1.55	7.80	8.64	7.81	24.25
Excalibur II	Allied Seed	2.59	2.02	1.54	1.61	7.76	8.75	7.74	24.25
AmeriGraze 401 + Z	America's Alfalfa	2.54	1.92	1.54	1.59	7.59	8.86	7.59	24.04
Spartan	Allied Seed	2.64	2.06	1.52	1.57	7.80	8.57	7.67	24.04
Complete	Arrow Seed Co.	2.56	1.98	1.47	1.54	7.54	8.58	7.81	23.93
Tahoe	Novartis Seeds	2.67	1.99	1.60	1.69	7.96	8.76	6.98	23.70
Total + Z	America's Alfalfa	2.48	1.96	1.49	1.55	7.48	8.43	7.71	23.62
Webfoot	Great Lakes	2.53	1.99	1.53	1.55	7.60	8.32	7.44	23.37

MPR	Hybrids								
Focus HSN ³	Arkansas Valley Seeds	2.41	2.06	1.56	1.64	7.68	8.46	7.18	23.32
Evergreen-2	Arkansas Valley Seeds	2.48	2.04	1.59	1.66	7.77	8.36	6.87	23.00
Average		2.65	2.06	1.56	1.61	7.88	8.83	7.67	24.38
LSD _(0.30)		0.29	0.10	0.07	0.05	0.18	0.27	0.24	0.13

Trial conducted on the Martin Smits farm (NW 1/4 of Section 4, T 3N, R 60W), seeded 9/3/97. Yields calculated on oven-dry basis and adjusted to 14% moisture. Elevation: 4750 ft. Soil series: Valent loamy sand with some bijou loamy sand characteristics.

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Introduction

The Arkansas Valley, in southeastern Colorado, extends from the mountains on the west to the Kansas border. Alfalfa is the most important irrigated crop in the Valley being produced on 165,000 acres. Furrow or flood irrigation predominates, but about 3,000 acres are produced under sprinklers and there are an additional 5,000 dryland acres. The elevation varies from 3400 feet in the east to 4700 feet at Pueblo. The average annual precipitation along the Valley is 11 inches. The average frost free period is 158 days from May 1 to October 6 which results in four cuttings per season as a standard practice. Successful varieties need winter hardiness, temperatures go below 0oF, but they also must take advantage of a relatively long growing season. The average alfalfa yield in the Valley is 4.35 tons/acre. The most persistent pests are the alfalfa weevil, stem nematode, and tansy mustard/flixweed.

Researcher

Dr. Frank Schweissing, Superintendent-Entomologist, has conducted alfalfa trials at the Arkansas Valley Research Center (AVRC) for 30 years. He received his B.S. and M.S. in Entomology from Colorado State University and Ph.D. in Entomology from Kansas State University. He began working at the AVRC in 1961 as an Entomologist and became Superintendent in 1980. His major research efforts have been with the insect and mite pests of alfalfa, corn, sorghum and onions.

Forage yields of 24 alfalfa varieties at Rocky Ford¹, Arkansas Valley, CO in 2001 and 2002

		1 st Cut	2 nd Cut	3 rd Cut	4 th Cut	2002	2001	2-Yr
Variety	Brand/Source	5/29	7/2	8/7	10/1	Total	Total	Total
		-----tons dry matter/acre ¹ -----						
Arapaho	Dairyland Research	2.85	1.88	2.01	1.54	8.28	5.52	13.80
Arrow Head	Dairyland Research	2.56	1.86	1.73	1.48	7.63	5.15	12.78
ZX 9450A*	ABI Alfalfa, Inc.	2.41	2.03	1.73	1.32	7.49	5.20	12.69

FG 6M71*	Forage Genetics Int'l.	2.30	1.89	1.87	1.42	7.48	5.10	12.58
Emperor	America's Alfalfas	2.58	1.79	1.71	1.34	7.42	5.09	12.51
Dagger + EV	AgriPro	2.53	1.72	1.81	1.37	7.43	5.03	12.46
Ranger	USDA-NE	2.46	1.80	1.81	1.56	7.63	4.83	12.46
ZG 9650A*	ABI Alfalfa, Inc.	2.38	1.83	1.79	1.36	7.36	5.07	12.43
Lahontan	USDA-NV	2.47	1.78	1.87	1.42	7.54	4.87	12.41
Target Plus	Producers Hybrids	2.43	1.69	1.74	1.37	7.23	5.17	12.40
Abilene + Z	America's Alfalfas	2.27	1.84	1.72	1.42	7.25	5.06	12.31
53V08	Pioneer Hi-Bred Int'l.	2.49	1.75	1.74	1.31	7.29	5.02	12.31
Magnum V-Wet	Dairyland Research	2.43	1.69	1.84	1.44	7.40	4.90	12.30
Winter Crown	Dairyland Research	2.46	1.65	1.78	1.30	7.19	5.06	12.25
54Q53	Pioneer Hi-Bred Int'l.	2.36	1.71	1.70	1.36	7.13	4.91	12.04
ZX 9853*	ABI Alfalfa, Inc.	2.47	1.70	1.72	1.33	7.22	4.71	11.93
Geneva	Novartis Seeds.	2.33	1.75	1.71	1.36	7.15	4.78	11.93
FG 5M84*	Forage Genetics Int'l.	2.19	1.76	1.75	1.30	7.00	4.90	11.90
ZC9941A*	ABI Alfalfa, Inc.	2.46	1.53	1.69	1.40	7.08	4.77	11.85
4200	Arkansas Valley Seeds	2.18	1.75	1.76	1.36	7.05	4.79	11.84
Samurai	America's Alfalfas	2.36	1.60	1.72	1.24	6.92	4.74	11.66
Baralfa 42IG	Barenbrug U.S.A.	2.45	1.61	1.64	1.24	6.94	4.70	11.64
FG 3R139	Forage Genetics Int'l.	2.18	1.67	1.70	1.29	6.84	4.67	11.51
A30-06	ABI Alfalfa, Inc.	2.15	1.45	1.52	1.22	6.34	4.70	11.04
Average		2.41	1.74	1.75	1.36	7.26	4.95	12.21
LSD _(0.05)		0.29	0.21	0.20	0.15	0.76	0.33	1.04
CV%		8.66	8.53	8.04	7.86	7.39	4.71	6.05

Trial conducted on the Arkansas Valley Research Center; seeded 9/01/00.

²Yields calculated on oven-dry basis.

*Indicates experimental entry

Trial Site Information:

Elevation: 4178 feet. Average annual precipitation 11.86 inches. Average frost-free days-158

Last spring frost-April 24, 2001; First fall frost-October 6, 2001; 2001 frost-free days-165

Fertilizer 2001: 100 lbs. P₂O₅ + 21 lbs. N/acre prior to planting

Soil Series: Rocky Ford silty clay loam

Precipitation: 2002 April through September - 2.07"

Growing Days: 2002 - 164 April 23 - Oct. 4 Frost Free

Herbicide - Sencor DF .75 + Gramoxone Extra .47 lbs. AI/Acre - 3/12/02

Insecticide - Warrior T .025 lbs. AI/Acre - 5/13/02

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Arkansas Valley Alfalfa Variety Trial at Rocky Ford - Results for 1998 through 2000 - Last complete trial results

Variety	Brand /Source	1st Cut	2nd Cut	3rd Cut	4th Cut	2000	1999	1998	3-Yr
		May 30	July 5	Aug 10	Sept 28	-----Total-----			
		-----tons/acre**-----							
WL 334RK	W-L Research	1.87	1.82	1.57	1.39	6.65	7.03	5.86	19.54
3L104*	Novartis	1.95	1.74	1.40	1.34	6.43	6.59	5.57	18.59
DK143	DeKalb	1.88	1.68	1.36	1.42	6.34	6.52	5.67	18.53
Millennia	Union Seed Co	2.02	1.70	1.37	1.27	6.36	6.64	5.48	18.48
Leaf Master	Union Seed Co	1.99	1.72	1.43	1.30	6.44	6.73	5.24	18.41
Cimarron 3i	Great Plains Research	1.90	1.61	1.39	1.34	6.24	6.62	5.54	18.40
Pinnacle	Arkansas Valley Seed	1.98	1.66	1.49	1.23	6.36	6.48	5.35	18.19
Depend + EV	Agripro Seeds Inc	1.56	1.58	1.35	1.25	5.74	6.63	5.60	17.97
TMF Multiplier II	Mycogen Seeds	1.77	1.62	1.28	1.33	6.00	6.40	5.44	17.84
Big Horn	Cargill Hybrid Seeds	1.76	1.56	1.38	1.24	5.94	6.48	5.41	17.83
ZX 9352*	ABI Alfalfa	1.50	1.53	1.38	1.40	5.81	6.55	5.46	17.82

WL 324	Germain's	1.50	1.49	1.34	1.21	5.54	6.52	5.74	17.80
5454	Pioneer Hi-Bred Int'l	1.57	1.62	1.35	1.32	5.86	6.49	5.43	17.78
DK142	DeKalb	1.79	1.57	1.29	1.30	5.95	6.47	5.34	17.76
631	Garst Seed Co	1.61	1.58	1.24	1.26	5.69	6.60	5.38	17.67
ZC 9651*	ABI Alfalfa	1.46	1.57	1.34	1.29	5.66	6.39	5.56	17.61
Archer	America's Alfalfa	1.54	1.64	1.35	1.34	5.87	6.29	5.24	17.40
WL 325HQ	Germain's	1.86	1.62	1.38	1.26	6.12	6.01	5.25	17.38
Innovator + Z	America's Alfalfa	1.62	1.54	1.32	1.20	5.68	6.27	5.43	17.38
Affinity + Z	America's Alfalfa	1.46	1.46	1.25	1.27	5.44	6.44	5.44	17.32
DK127	DeKalb	1.67	1.61	1.30	1.16	5.74	6.29	5.24	17.27
Lahontan	USDA NV-AES	1.77	1.68	1.38	1.25	6.08	6.06	5.13	17.27
630	Garst Seed Co	1.57	1.60	1.28	1.19	5.64	6.19	5.34	17.17
Haygrazer	Great Plains Research	1.61	1.42	1.29	1.14	5.46	6.24	5.29	16.99
6L271*	Arkansas Valley Seed	1.40	1.58	1.32	1.44	5.74	6.11	5.07	16.92
ZC 9650*	ABI Alfalfa	1.42	1.55	1.28	1.21	5.46	6.01	5.30	16.77
Ranger	USDA NE-AES	1.28	1.28	1.17	1.10	4.83	5.25	4.71	14.79
Vernal	USDA WI-AES	1.29	1.25	1.01	0.94	4.49	5.39	4.51	14.39
Average	-	1.67	1.58	1.33	1.26	5.84	6.35	5.36	17.55
CV%	-	10.28	5.32	6.82	7.25	5.90	4.72	4.12	3.79

LSD(0.05)	-	0.24	0.12	0.13	0.13	0.48	0.42	0.31	0.94
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Trial conducted on the Arkansas Valley Research Center, seeded 8/29/97. Yields calculated on oven-dry basis.

*Indicates experimental entry

Reference to commercial companies or varieties is made with the understanding that no discrimination is intended and no endorsement is implied by Colorado State University.

Trial Site Information:

(Elevation 4178 ft.) Average annual precipitation 11.88 inches. Average frost-free days - 158 (32oF base). Last spring frost - April 25, 2000; First fall frost-September 25, 2000; 2000 frost free days - 153. Soil series: Rocky Ford Silty Clay Loam; ca 1.5% o.m.; ca 7.8pH. Seeding rate: 10.2 lbs. seed/acre Fertilizer: 150 lbs. P2O5 + 31 lbs. N/acre prior to planting and Nov. 30, 1998. Herbicide: Sencor 75 DF .50 + Gramoxone .31 lbs. Al/Acre - Feb. 16, 1999 & Feb. 22, 2000. Insecticide: Furadan 4F .75 lbs. Al/Acre - April 21, 1999; Furadan 4F 1.0 lb. Al/Acre - April 25, 2000.

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**San Luis Valley Alfalfa Variety Trial at Center
 Merlin A. Dillon**

The San Luis Valley is a huge, flat inter-mountain valley surrounded by snow-capped mountains. The altitude is 7700 feet. The area is comprised of Alamosa, Conejos, Costilla, Rio Grande, and Saguache counties. This area has been increasing its alfalfa yield, alfalfa price and acreage. It produced 167,000 acres of alfalfa in 2001. San Luis Valley alfalfa hay production was valued at \$69 million. Including other high altitude acreage in Colorado makes up an area over 250,000 acres.

Growers here typically cut three times per year. Stands usually last 5 to 7 years; however, warm, dry winters can cause severe winter kill. Winter-hardiness and persistence are important variety selection factors; as well as regrowth, yield and pest resistance.

Researcher Comments

I am grateful for the cooperation of local grower Sherril Mix, a potato/barley/alfalfa producer, who provided space for this trial.. This trial was planted solo in June 2000; an excellent stand was established. This field was harvested three times in 2001; however, third harvest data was lost. Data from all three harvests were collected in 2002.

Irrigation water was a problem for many this year. Many irrigation ditches didn't even run water this year. Groundwater wells mostly produced less water than normal. However, adequate water

and good growing conditions produced a better than average test plot yield in 2002. The early spring was warm which made the first cutting early again this year. Harvest dates were June 5, July 17, and September 6. This year was very dry and all cuttings escaped rain damage. The third cutting was larger than normal because of the early date for first cutting and warm, dry, sunny conditions. Variety differences were statistically significant (0.05) for 2002. Vernal and Ranger were again in the bottom half of the trial as they have been for the last 20+ years. Vernal and Ranger are usually 0.7 tons per acre below the top yield.

Two year results also show statistical significance. Several varieties have performed very well in both years. The test average for 2 years (6.0 tons per acre) is typical for this area considering that yields are calculated from green weights without harvest losses.

Researcher

Merlin Dillon, Area Extension Agent, Agronomy, has conducted alfalfa trials in the San Luis Valley for 20+ years. Raised on a dryland farm in southeast Colorado (Baca County), Merlin received his B.S. in agronomy from Panhandle State University in Goodwell, Oklahoma, and an M.S. in agronomy from Colorado State University. Merlin worked for Kansas State University as a crop's researcher in Tribune, KS; as an irrigated crop consultant; and as an independent fertilizer applicator prior to joining CSU Cooperative Extension in 1982. His research has included small grain variety trials (soft white and hard red spring wheat, durum wheat and barley and oats) as well as quinoa, canola, and bio-control crops.

Forage yields of 24 alfalfa varieties at Center¹, San Luis Valley, CO in 2002 by Merlin Dillon, Area Extension Agent, Agronomy, SLV Research Center.

Variety	Brand/Source	2001	2002	2 Year Average
		tons/acre ²		
Columbia 2000	Public	5.63	7.34	6.46
WL 327	W-L Research	5.72	6.97	6.34
Select	Forage Genetics Intl.	5.88	6.54	6.22
DK 142	Monsanto/DeKalb	5.73	6.23	6.18
DK 143	Monsanto/DeKalb	5.80	6.55	6.11
Geneva	Novartis Seeds	5.43	6.55	6.05
Magnum V	Dairyland Seed	5.52	6.46	6.02
Baralfa 42IQ	Barenbrug Colorado	5.54	6.44	6.02
WL 325 HQ	W-L Research	5.76	6.28	6.00
Pro Gro	M.B.S. Inc	5.71	6.48	6.00
54Q53	Pioneer Hi-Bred Intl.	5.66	6.25	5.99
FG 3R139	Forage Genetics Intl.	5.40	6.55	5.97
HybriForce™-400	Dairyland Research Intl	5.28	6.48	5.95

Ranger	USDA NE-AES	5.30	6.35	5.95
WL 232 HQ	W-L Research	5.70	6.32	5.91
Aspire	Asgrow Seed	5.48	6.29	5.91
FG 4200	Seed Solutions	5.54	6.24	5.89
53V08	Pioneer Hi-Bred Intl.	5.41	6.46	5.89
Vernal	USDA WI-AES	5.35	6.07	5.87
AmeriStand 201	ABI Alfalfa	5.58	6.14	5.86
DK 134	Monsanto/DeKalb	5.34	6.29	5.81
Award	Asgrow Seed	5.48	6.04	5.76
Abound	Asgrow Seed	5.47	6.16	5.74
Gold Plus	M.B.S. Inc.	5.39	6.09	5.70
	Test Average	5.54	6.42	5.98
	CV%	6.1	6.4	4.60
	LSD _(0.05)	NS	0.6	0.7

¹ Trial conducted on the Sherrel Mix farm, Rio Grande County, Roads 8N & 1W; seeded at 15 lbs/acre on 6/16/2000.

² Yields calculated on oven-dry basis.

³ Third cutting was lost to custom swather; yield was estimated.

Field Site Information:

(Elevation 7700 ft.) Average annual precipitation 6.92 inches. Average froSt-free days - 88days (32°F).

Average last spring frost - June 6; average first fall frost - September 11.

Soil Series: Norte gravelly sandy loam.

Contact:

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Results from the last complete 3 year trial in the San Luis Valley

Forage yields of 20 alfalfa varieties at the Richard Ramstetter Farm, Center, CO in 1997-99.

Variety	Brand/Source	1997	1998	1999	3-Year Total	Winter Injury Rating
		-----tons/acre-----				

Class	Union Seed Co.	6.5	5.1	6.0	17.7	1.5
Pinnacle	Arkansas Valley Seed	6.3	5.0	6.2	17.5	2.3
Extend	Grassland West	6.3	5.2	5.9	17.2	4.0
ZN 9540	ABI Alfalfa	6.1	5.1	5.9	17.1	3.3
Webfoot MPR	Great Lakes Hybrids	6.2	4.5	5.9	17.0	2.8
Innovator+Z	America's Alfalfa	6.1	5.0	6.0	17.0	3.5
Rainier	Northrup King	6.1	5.0	5.9	16.9	3.5
Depend+EV	Agripro Seeds Inc	5.9	5.0	6.0	16.8	4.0
WL 325HQ	W-L Research	5.8	5.1	6.1	16.8	4.3
ABI 9142	ABI Alfalfa	6.1	5.1	5.7	16.7	4.0
DK 127	DeKalb Genetics	6.1	4.8	5.8	16.7	2.0
AmerGraze 401+Z	America's Alfalfa	5.9	5.0	5.9	16.6	3.8
Vernal	USDA WI-AES	5.9	5.2	5.7	16.5	3.8
DK 122	DeKalb Genetics	6.0	4.6	5.6	16.3	3.3
Alfaleaf II	Plains Alfalfa Assoc.	6.0	5.0	5.4	16.2	3.8
ZG 9543	ABI Alfalfa	5.2	5.1	6.1	16.1	3.0
WL 324	W-L Research	5.3	4.9	6.0	16.0	3.3
Affinity+Z	America's Alfalfa	5.3	5.0	5.8	16.0	4.0
WL 252HQ	W-L Research	5.1	4.7	5.8	15.4	2.8
Ranger	USDA NE-AES	4.9	4.5	5.5	14.7	3.5
Average	-	5.7	5.0	5.9	16.5	3.3
CV%	-	8.4	8.4	7.0	6.3	-

LSD (0.10)	-	0.57	NS	NS	1.13	-
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Yields calculated on an air-dry basis. Winter Injury Rating based on observation of plant injury and death in May 1998:

5 = Severe damage; 1 = No damage. Trial planted: August 2, 1996 at 16 lbs/acre.

Fertilizer: 104 lbs/acre phosphate plus 22 lbs/acre nitrogen broadcast.

Experiment design: randomized complete block with four replications.

Soil series: Norte gravelly sandy loam.

Forage yields of 20 alfalfa varieties at Yellow Jacket in 2002.¹

		1st Cut ³	2nd Cut	3rd Cut	2002	2-Year
Variety	Brand/Source	June 14	Jul 24	Sept 25	Total	Total
		-----tons/acre ² -----				

Magnum V	Dairyland Seed Co.	2.27	1.80	2.44	6.52	15.10
Baralfa 54	Barenbrug USA	1.59	2.22	2.47	6.29	14.62
WL 327	Germain's Seed	1.80	2.00	2.47	6.27	14.97
Millennia	IFA	1.80	1.93	2.50	6.23	14.49
Aspire	Asgrow Seed Co.	2.00	1.61	2.59	6.20	14.61
Geneva	Novartis Seeds	1.60	2.17	2.36	6.13	13.82
ZG 9650A*	ABI Alfalfa, Inc.	1.50	1.92	2.65	6.06	15.04
Pro Gro	MBS Genetics	1.46	2.15	2.38	5.99	14.41
DK 142	DeKalb	1.81	1.68	2.45	5.93	14.44
Forecast 1001	Dairyland Seed Co.	1.61	1.89	2.39	5.89	14.03
Focus HSN	Arkansas Valley Seeds	1.88	1.61	2.40	5.88	14.71
ZX 9652*	ABI Alfalfa, Inc.	1.63	1.91	2.33	5.87	13.48
Archer II	America's Alfalfa	1.47	1.84	2.54	5.85	13.94
DK 134	DeKalb	2.00	1.47	2.34	5.81	14.60
DK 143	DeKalb	1.27	2.12	2.41	5.80	14.19
WL 325HQ	Germain's Seed	1.74	1.79	2.14	5.66	13.41
AmeriGraze 401+Z	America's Alfalfa	1.45	1.89	2.29	5.63	13.48
Award	Asgrow Seed Co.	1.62	1.64	2.33	5.59	14.26
Abound	Asgrow Seed Co.	1.23	2.10	2.21	5.54	13.28

Ranger	Public	1.33	1.28	1.36	3.98	11.05
Average		1.65	1.85	2.35	5.85	14.10
CV%		30.57	24.83	7.96	10.27	7.81
LSD _(0.30)		0.37	0.34	0.14	0.44	0.81

¹Trial conducted at the Southwestern Colorado Research Center, seeded 6/2/00.

²Yields were calculated on an oven-dry basis and adjusted to 12% moisture.

³The 1st cut was damaged by cold spring temperatures (21.9F on April 21, 2002).

*Indicates experimental entry.

Cultural Information:

Elevation: 6960 ft.

Soil series: Wetherill clay loam

Seeding rate: 20 lbs/ac (8-in. row spacing)

Previous crop: Small grain

Fertilizer: 200 lbs P₂O₅/ac broadcast in 2001

Herbicide: Pursuit DF 1.44 oz/ac applied on July 7, 2000

Insecticide: None

Precipitation: 6.2 in. Oct. 1, 2001 thru Sept. 30, 2002 (long-term average is 16.0 in.)

Irrigation: 0 in. sprinkler (wheel-line)