



Crops Testing
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1996 Colorado Alfalfa Variety Trial Results

Thank you for entering your alfalfa hybrids in Colorado State University's alfalfa performance trials. The results of these trials will be used by Colorado alfalfa producers to make better variety decisions. Attached are the 1996 alfalfa variety test reports from tests conducted at Rocky Ford, Fruita and Yellow Jacket. If you have questions about the results, please feel free to contact me at the following address: Jerry J. Johnson, Dept. of Soil and Crop Sciences, Colorado State University, Fort Collins, CO 80523; phone number (970) 491-1454; FAX number (970) 491-2758; or e-mail jjj@lamar.colostate.edu or one of the following:

Rocky Ford - Frank Schweissing (719) 254-6312

Fruita - Calvin Pearson, Harold Golus, or Bob Hammon (970) 858-3629

Yellow Jacket - Abdel Berrada, Mark Stack or David Sanford (970) 562-4255

As in the past, we are always open to suggestions for improving our crops testing system.

Thanks in advance,

Jerry J. Johnson
Extension Specialist/Crop Production

Forage yields of 27 alfalfa varieties in the 2-year trial at the Arkansas Valley Research Center, Rocky Ford, CO in 1996.

Variety	Brand/Source	1st	2nd	3rd	4th	1996	1995	2 Yr
		Cut	Cut	Cut	Cut			
		June 4	July 12	Aug 20	Oct 8	Total	Total	Total
-----tons/acre ¹ -----								
Vernal	USDA WI-AES	2.19	1.30	1.69	1.01	6.19	5.83	12.02
Reward	Drussel Seed & Supply	2.21	1.54	1.53	1.04	6.32	5.39	11.71
Rushmore	Northrup King	2.08	1.62	1.39	0.93	6.02	5.64	11.66
Tahoe	Northrup King	2.15	1.49	1.37	0.98	5.99	5.61	11.60
Archer	America's Alfalfa	2.11	1.43	1.32	1.02	5.88	5.71	11.59
Jewel	Wilbur-Ellis	2.00	1.56	1.46	0.92	5.94	5.63	11.57
Multi-Plier	Mycogen Plant Sciences	2.08	1.58	1.43	0.87	5.96	5.54	11.50
Ram	Great Plains Research	2.16	1.41	1.44	0.95	5.96	5.39	11.35
Webfoot MPR	Great Lakes Hybrids	2.12	1.59	1.37	0.91	5.99	5.36	11.35
Legacy	Grassland West Co.	2.09	1.32	1.38	0.99	5.78	5.54	11.32
Magnum IV	Dairyland Seed Co.	2.19	1.39	1.44	0.91	5.93	5.31	11.24
5454	Pioneer Hi-Bred	2.10	1.43	1.21	0.94	5.68	5.49	11.17
3BO5	Arkansas Valley Seed Co.	2.22	1.32	1.37	0.97	5.88	5.25	11.13
ICI630	ICI Seeds	2.05	1.42	1.24	0.93	5.64	5.48	11.12
Sure	Sharp Bros. Seed	2.08	1.46	1.29	0.84	5.67	5.44	11.11
4J12	Cargill Hybrids	2.05	1.34	1.32	0.94	5.65	5.42	11.07
ABI 9237	America's Alfalfa	2.22	1.48	1.34	0.94	5.98	5.07	11.05
Evergreen	Arkansas Valley Seed Co.	1.99	1.30	1.06	0.99	5.34	5.68	11.02
Evolution	Mycogen Plant Sciences	2.23	1.41	1.40	1.01	6.05	4.94	10.99
DK133	Dekalb Plant Genetics	2.12	1.48	1.34	0.95	5.89	5.04	10.93
WL 323	Germain's/W-L Research	2.06	1.35	1.22	0.91	5.54	5.35	10.89
Dominator	Agripro	2.24	1.49	1.25	0.88	5.86	5.00	10.86
91-12	W-L Research	2.11	1.47	1.20	0.85	5.63	5.04	10.67
Lahontan	USDA NV-AES	2.28	1.41	1.52	0.92	6.13	4.54	10.67
ABI 923AA	America's Alfalfa	2.18	1.61	1.29	0.87	5.95	4.64	10.59
Ranger	USDA NE-AES	2.05	1.50	1.37	0.85	5.77	4.54	10.31
ABI 9236	Agripro	2.17	1.45	1.29	0.83	5.74	4.53	10.27
Average		2.14	1.46	1.35	0.93	5.88	5.26	11.14
LSD _{.05}		0.22	0.14	0.16	0.10	0.50	0.31	0.68
CV %		7.3	6.6	8.5	7.7	6.1	8.1	4.3

¹Weight based on oven dry samples.

Planted: August 30, 1994

Experimental design: Randomized complete block with four replications (1 plot = 75 sq. ft.).

The trial is being managed to reduce factors which limit production.

Fertilizer applied: 150 lb of P₂O₅ acre⁻¹ prior to planting.

Herbicides: Lexone DF 0.5 lb + Gramoxone .46 lb acre⁻¹ were applied March 12, 1996 for winter annual weed control and Furadan 4F 1.0 lb acre⁻¹ was applied April 20, 1996 for alfalfa weevil control.

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Note: This year was very dry through the winter and early spring followed by a cool wet summer. The trial was irrigated prior to the first cutting and after each of the four cuttings. Average yields in the second year of production increased over the first year production and significant differences in yield were observed for all four cuttings, yearly totals and two year total.

Forage yields of 20 alfalfa varieties at the Fruita Research Center, Fruita, CO in 1996.

Variety	Brand/Source	1st	2nd	3rd	1996 Total
		Cut July 8	Cut Aug 13	Cut Oct 1	
-----tons/acre ¹ -----					
Shamrock	Sharp Bros. Seed Co.	1.94	1.98	1.51	5.44
ABI9345A	ABI-Alfalfa	1.78	2.06	1.26	5.10
Evergreen	Arkansas Valley Seed Co.	1.58	1.99	1.48	5.06
Sure	Cenex/Land 'O Lakes	1.46	2.07	1.40	4.94
ABI9352	ABI-Alfalfa	1.75	1.83	1.35	4.93
WL325HQ	Germain's/W-L Research, Inc.	1.62	1.88	1.42	4.91
Loco	Allen Reid	1.58	1.93	1.39	4.90
WL323	Germain's	1.74	1.82	1.34	4.89
Innovator+Z	America's Alfalfa	1.66	1.89	1.33	4.89
Stamina	Allied Seed	1.52	1.85	1.52	4.89
DK127	DeKalb Genetics Corp.	1.49	1.96	1.42	4.87
W133	W-L Research, Inc.	1.64	1.89	1.33	4.86
Ranger	public	1.60	1.87	1.35	4.82
Treasure	Seekamp Seed Co.	1.82	1.78	1.20	4.79
WL252HQ	Germain's	1.58	1.78	1.41	4.78
AlfaLeaf II	Sharp Bros. Seed/Plains Alfalfa	1.56	1.79	1.42	4.77
WL324	Germain's/W-L Research, Inc.	1.64	1.73	1.39	4.76
Spartan	Allied Seed	1.44	1.86	1.40	4.70
Lahontan	public	1.68	1.66	1.14	4.48
Ladak	public	1.33	1.70	0.94	3.98
Average		1.62	1.87	1.35	4.84
LSD _{.05}		NS	NS	0.20	NS
CV %		20.4	12.0	10.5	9.4

¹Yields were calculated on an air-dry basis.

Planted: May 1, 1996 at 13 lb seed acre⁻¹.

Elevation 4510 feet. Average annual precipitation 8.4 inches. Average frost-free days - 181.

Last spring frost - May 1, 1996; First fall frost - October 17, 1996; 1996 frost-free days - 169.

Fertilizer: 123 lb P₂O₅ acre⁻¹ plus 48 lb N acre⁻¹ broadcast as 18-46-0 on April 25, 1996.

Experiment design: Randomized complete block with four replications.

Soil series: Youngston clay loam.

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Note: These data were collected during the establishment year and summer annual weeds present in the first and second cuttings are likely responsible for the high CV's for these two cuttings.

The CV in the third cutting is more reasonable; however, we anticipate better results next year when a comprehensive weed control program is used.

Forage yields of 20 alfalfa varieties at the Southwestern Colorado Research, Yellow Jacket, CO in 1996.

Variety	Brand/Source	1st	2nd	1996 Total
		Cut Aug 2	Cut Sept 30	
		-----ton/acre ¹ -----		
Blazer XL	Cenex/Land O'Lakes	1.81	1.88	3.68
Sterling	Cargill Hybrids	2.06	1.55	3.61
Evergreen	Arkansas Valley Seed	1.69	1.84	3.53
ZX 9345	ABI Alfalfa	1.82	1.66	3.48
Reward	Drussel Seed & Supply	1.81	1.57	3.37
Innovator+Z	ABI Alfalfa	1.89	1.47	3.36
330	Union Seed Co.	1.72	1.61	3.33
Affinity+Z	ABI Alfalfa	1.78	1.53	3.31
P 5472	Pioneer Hi-Bred	1.82	1.46	3.28
P 5454	Pioneer Hi-Bred	1.81	1.43	3.24
Archer	ABI Alfalfa	1.55	1.67	3.22
Vernema	Southwest Seed	1.77	1.43	3.21
WL 323	W-L Research	1.61	1.59	3.20
Rushmore	Northrup King	1.67	1.50	3.17
Depend+EV	ABI Alfalfa	1.68	1.44	3.11
WL 252HQ	W-L Research	1.62	1.46	3.08
AlfaLeaf II	Sharp Bros. Seed Co.	1.61	1.45	3.06
WL 325	W-L Research	1.58	1.46	3.03
DK 127	Dekalb Genetics Corp.	1.75	1.20	2.95
Ranger	Arkansas Valley Seed	1.58	1.35	2.93
Average		1.73	1.53	3.26
LSD _{.05}		0.28	0.21	0.22
CV %		11.46	9.49	7.00

¹On a dry basis (24% of fresh weight)

Planting date: May 15, 1996 @ about 20 lb acre⁻¹

Row spacing: 8"

Plot size: 4' x 20'

Experimental design: Randomized complete block with four replications.

Fertilizer: 65 lb P₂O₅ acre⁻¹ + 67 lb K₂O acre⁻¹ broadcast as 0-45-0 and 0-0-60 on May 2, 1996.

Irrigation: As needed

Average annual precipitation: 15.9 inches; average frost-free days - 115 days.

Cumulative precipitation from May 15 thru September 30, 1996: 4.10 inches.

Elevation: 6860 feet

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