

Western Colorado Alfalfa Variety Performance Test at Fruita 2005

The 2005 results of Colorado State University's alfalfa variety performance test at Fruita are presented in this report. Plots were planted Fall 2004 and the 2005 data are for the first year of a three-year testing period. Results for 2005 are presented in Table 1. Alfalfa stands are excellent and plots were weed-free during the growing season. The field was furrow-irrigated using gated pipe. Summer 2005 in western Colorado was moderate and alfalfa yields were good.

In 2005, there were 10 ten days during the summer when temperatures reached 100°F. In 2004, there were only two days when temperatures were at or above 100°F, but in 2003 there were 27 days when temperatures reached 100°F. The average growing season for Fruita is 181 days. The 2005 growing season was 199 days.

Table 1. Forage yields of 11 alfalfa varieties at the Western Colorado Research Center at Fruita in 2005.¹

Variety	Brand/Source	1 st Cut	2 nd Cut	3 rd Cut	4 th Cut	2005
		May 26	July 6	Aug 19	Oct 6	Total ²
		----- tons/acre ³ -----				
FSG 351	Allied Seed, L.L.C.	3.20	2.54	2.66	1.43	9.84
Mountaineer 2.0	Croplan Genetics	3.25	2.22	2.60	1.57	9.64
4S42	Forage Genetics International	3.02	2.28	2.79	1.56	9.64
FSG 505	Allied Seed, L.L.C.	3.15	2.42	2.52	1.51	9.60
CW13014	CalWest Seeds	3.32	2.24	2.56	1.45	9.56
CW15030	CalWest Seeds	3.02	2.33	2.60	1.52	9.47
FSG 406	Allied Seed, L.L.C.	3.06	2.44	2.43	1.48	9.40
WL 357 HQ	W-L Research	3.14	2.35	2.42	1.46	9.37
FSG 408DP	Allied Seed, L.L.C.	3.02	2.35	2.42	1.46	9.26
Garst 6530	Garst	3.07	2.19	2.46	1.50	9.22
Bullseye	Target Seed	2.91	2.00	2.34	1.53	8.78
Average		3.11	2.31	2.53	1.50	9.44
CV(%)		7.04	10.69	10.76	4.27	4.30
LSD _(0.30)		NS	0.1837	NS	0.0477	0.3027
LSD _(0.05)		NS	NS	NS	NS	NS

¹Seeded 26 August 2004 at 15 lbs/acre.

²Table is arranged by decreasing 2005 total yield.

³Yields were calculated on an air-dry basis.

Last spring frost – April 21, 2005; first fall frost – November 6, 2005. Frost-free days for 2005 - 199 days (28 F base). Fertilizer: 276 lbs P₂O₅/acre and 108 lbs N/acre broadcast as 18-46-0 on August 16, 2004 and plowed down prior to planting. Applied Raptor at 6 oz/acre (plus 2.5 gallons of UAN + 1 qt Activator 90 in 100 gallons of water) in 19 gals water/acre at 25 psi for weed control on 9 Mar 2005.

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Forage yields of 29 alfalfa varieties at Fort Collins (ARDEC) in 2005¹

Variety	Brand/Source	1 st Cut	2 nd Cut	3 rd Cut	2005
		June 16	Aug 2 & 3	Sept 21	Total
		tons/acre ²			
4S42	Forage Genetics Int'l.	2.06	3.22	2.59	7.87
Abundance	Sharp Bro. Seeed Co.	2.21	3.10	2.53	7.84
FSG 408DP	Allied Seed, L.L.C.	2.18	3.03	2.60	7.81
54V46	Pioneer Hi-Bred Int'l.	2.09	3.19	2.50	7.78
CW 15030	Allied Seed, L.L.C.	1.93	3.13	2.65	7.71
54Q25	Pioneer Hi-Bred Int'l.	2.11	2.98	2.59	7.68
Genoa	Syngenta Seeds Inc.	2.18	3.11	2.37	7.66
Everlast	Legacy Seeds, Inc.	2.32	3.00	2.32	7.64
WL 335 HQ	W-L Research	2.06	3.17	2.40	7.63
FSG 406	Allied Seed, L.L.C.	2.15	3.20	2.29	7.63
DKA50-18	Monsanto Co.	2.04	3.02	2.55	7.61
FSG 505	Allied Seed, L.L.C.	2.01	3.04	2.54	7.60
L-311	Legacy Seeds, Inc.	2.27	2.89	2.38	7.54
A 30-06	PGI Alfalfa Inc.	2.10	3.02	2.41	7.53
WL 357HQ	W-L Research	2.07	3.03	2.43	7.52
HybriForce 420/Wet	Dairyland Seed Co.	2.15	2.97	2.38	7.50
Legendairy 5.0	Croplan Genetics	2.09	2.96	2.44	7.49
Mountaineer 2.0	Croplan Genetics	2.20	2.84	2.42	7.46
L-411 HD	Legacy Seeds, Inc.	2.32	2.95	2.19	7.46
Enhancer	Sharp Bro. Seeed Co.	2.13	2.96	2.29	7.38
FSG 351	Allied Seed, L.L.C.	2.03	3.01	2.30	7.33
4A421	Mycogen Seeds	2.00	3.01	2.28	7.29
ZG 0347A	ABI Alfalfa, Inc.	2.11	2.92	2.25	7.28
Goliath	Allied Seed, L.L.C.	2.14	2.97	2.13	7.25
DKA42-15	Monsanto Co.	2.24	2.92	2.08	7.24
Garst 6400 HT	Garst Seed Co.	2.11	2.86	2.26	7.23
GH-711	J.C. Robinson Co.	2.15	2.74	2.28	7.16
Jade III	NC+ Hybrids	2.16	2.84	2.02	7.02
ZG 0353A	ABI Alfalfa, Inc.	1.98	2.86	1.86	6.71
Average		2.12	3.00	2.36	7.48
CV%		10.31	7.93	12.58	6.44
LSD _(0.30)		NS	NS	2.19	0.36
LSD _(0.05)		NS	NS	NS	NS

¹Trial conducted on the Agricultural Research, Development and Educational Center; seeded 8/30/04.

²Yields were calculated on an oven-dry basis.

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Forage yields of 32 alfalfa varieties at the Arkansas Valley Research Center in 2005¹

Entry/Variety	Brand/Source	1 st Cut	2 nd Cut	3 rd Cut	4 th Cut ²	2005 ³	2004
		May 26	Jul 8	Aug 16	Oct 28	Total	Total
		tons/acre ⁴					
55H05	Pioneer Hi-Bred Int'l	2.67	2.11	1.89	1.43	8.41	6.96
4M124	Croplan Genetics	2.82	1.99	1.87	1.28	8.10	7.13
DS307 Hyb	Dairyland Seed Co.	2.84	1.93	1.94	1.09	7.73	7.11
4M125	Syngenta Int'l AG	2.89	1.74	1.76	1.12	7.67	7.11
6420	Garst	2.21	1.65	1.70	1.42	7.53	7.12
15029	Cal/West	2.64	1.61	1.79	1.14	7.51	6.67
Evermore	Allied Seed	2.46	1.68	1.49	1.37	7.44	6.98
Abundance	Sharp Bros. Seed Co.	2.72	1.70	1.66	1.11	7.18	6.97
Goliath	Allied Seed	2.52	1.77	1.78	1.19	7.16	6.85
FSG 505	Allied Seed	2.35	1.65	1.54	1.23	7.15	6.95
Lahontan	USDA/NV	2.33	1.61	1.72	1.05	7.10	6.66
Expedition	Syngenta Int'l AG	2.38	1.75	1.68	1.23	7.08	6.60
FSG 406	Allied Seed	2.56	1.80	1.76	1.00	7.06	6.73
25035	Cal/West	2.67	1.52	1.48	1.10	7.05	6.13
05009	Cal/West	2.79	1.73	1.76	0.96	7.04	6.90
45098	Cal/West	2.70	1.85	1.71	1.08	7.01	7.39
05073	Cal/West	2.52	1.66	1.97	1.05	6.93	6.88
Cimarron VL400	Cimarron USA	2.48	1.62	1.66	1.15	6.92	7.52
WL 357 HQ	W-L Research	2.67	1.79	1.69	0.97	6.88	6.46
HybriForce-420/Wet	Dairyland Seed Co.	2.37	1.59	1.66	1.05	6.85	7.20
Baralfa42IQ	Barenbrug USA	2.74	1.47	1.71	0.86	6.80	6.63
Rebel	Target Seed	2.60	1.46	1.62	0.98	6.68	6.95
WL 327	W-L Research	2.74	1.61	1.71	0.92	6.50	7.25
Baralfa53HR	Barenbrug USA	2.48	1.59	1.47	0.96	6.35	6.79
6530	Garst	2.52	1.26	1.73	0.94	6.32	7.23
Reward II	PGI Alfalfa	2.33	1.65	1.46	1.05	6.24	6.75
DS311 Hyb	Dairyland Seed Co.	2.12	1.73	1.79	1.04	6.23	7.23
Arapaho	Dairyland Seed Co.	2.37	1.41	1.77	0.95	6.11	7.05
Bullseye	Target Seed	2.13	1.61	1.74	0.84	6.08	7.04
Masterpiece	J.R. Simplot	2.67	1.52	1.60	0.94	6.01	7.37
Rugged	Target Seed	2.16	1.32	1.72	0.93	5.95	6.61
DS304 Hyb	Dairyland Seed Co.	1.96	1.23	1.48	0.68	5.14	6.61
Average		2.51	1.64	1.70	1.07	6.88	6.93
LSD _(0.05)		NS	NS	NS	NS	NS	0.49

¹Trial conducted at the Arkansas Valley Research Center.

²Three replications only, some frost damage.

³Table is arranged by decreasing, 2005 total yield.

⁴Yield is on air-dry basis.

Site information:

Irrigation dates (2005): 3/24, 4/27-28, 6/6-8, 7/12, 8/24, and 11/10.

Fertilizer application: 150 lb/acre of 11-52-0 on 11/11/04 and on 11/9/05.

Comment:

The 2005 yields were highly variable (CV of 17 to 29%) due to drought stress (North half) and soil compaction.

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