

Western Colorado Alfalfa Variety Performance Test at Fruita 2004

The 2004 results of Colorado State University's alfalfa variety performance test at Fruita are presented in this report. Plots were planted fall 2001 and the 2004 data are for the third year of the three-year testing period. Results for 2002, 2003, and 2004 are presented in Tables 1, 2, and 3, respectively. Alfalfa stands were excellent and plots were very weed-free throughout the entire testing period. The field was furrow-irrigated using siphon tubes.

Summer 2002 in western Colorado was hot and dry which made for good haymaking conditions and alfalfa yields overall were good. The average growing season for Fruita is 181 days. The 2002 growing season was short at only 159 frost-free days. In 2003, there were 27 days during the summer with temperatures above 100EF. Sixteen of the 27 days were consecutively above 100EF.

Haymaking conditions during 2004 were good and alfalfa yields were also good. Summer 2004 was mild compared to 2003. In contrast to 2003, there were only two days during 2004 in which temperatures exceeded 100EF; yet, the growing season during 2004 was considerably longer than in 2003. The 2004 growing season was 207 days compared to 182 days for the 2003 growing season.

Table 1. Forage yields of 15 alfalfa varieties at the Western Colorado Research Center at Fruita in 2002.¹

Variety	Brand/Source	1 st Cut	2 nd Cut	3 rd Cut	4 th Cut	2002
		May 29	July 2	Aug 23	Oct 8	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
HybriForceJ400	Dairyland Seed	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.

Last spring frost - May 9, 2002; first fall frost - October 15, 2002. Frost-free days for 2002 - 159 days (28EF 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.

Table 2. Forage yields of 15 alfalfa varieties at the Western Colorado Research Center at Fruita in 2003.

Variety	Brand/Source	1 st Cut	2 nd Cut	3 rd Cut	4 th Cut	2003	2-yr
		May 28	July 8	Aug 19	Oct 7	Total	Total ¹
		----- tons/acre ² -----					
FG 3R139	J.R. Simplot Co.	3.06	2.17	2.32	1.14	8.70	17.86
Select	IFA	3.02	2.13	2.35	1.14	8.64	17.74
Mountaineer	Croplan Genetics	3.10	2.02	2.20	1.13	8.46	17.04
Goliath	Allied Seed, L.L.C.	3.08	2.00	2.20	1.08	8.36	17.38
WL 327	W-L Research	3.10	2.06	2.14	1.05	8.35	17.38
DU 201	Great Plains Res. Co., Inc.	2.92	2.01	2.21	1.15	8.29	17.32
FR 9802	Great Plains Res Co., Inc.	3.19	1.86	2.04	0.97	8.05	15.99
Dagger+EV	AgriPro	2.91	1.94	2.15	1.02	8.01	16.63
WL 342	W-L Research	2.86	1.94	2.14	1.04	7.98	16.89
Pawnee	Midwest Seed Genetics	2.81	1.97	2.13	1.04	7.95	16.59
Ameristand 403T	America=s Alfalfa	2.90	1.92	2.07	0.94	7.82	16.62
Journey Brand 204 Hybrid	Dairyland Seed	2.76	1.86	2.10	1.08	7.81	16.37
Enhancer	Sharp Bros. Seed Co.	2.78	1.91	2.08	1.02	7.79	16.28
Sendero	Allied Seed, L.L.C.	2.48	1.94	2.15	1.22	7.78	16.95
HybriForceJ400	Dairyland Seed	2.73	1.78	2.04	1.01	7.56	16.21
Average		2.91	1.97	2.16	1.07	8.10	16.88
CV (%)		8.4	5.9	4.6	7.2	4.2	3.6
LSD (0.05)		0.35	0.17	0.14	0.11	0.49	0.88

¹Table is arranged by decreasing, 2003 total yield.

²Yields were calculated on an air-dry basis.

Last spring frost - April 16, 2003; first fall frost - October 15, 2003. Frost-free days for 2003 - 182 days (28EF base).

For weed control in 2003, Sencor 4F was applied at 1 quart/acre in 22 gallons water/acre at 25 psi on January 22, 2003.

Table 3. Forage yields of 15 alfalfa varieties at the Western Colorado Research Center at Fruita in 2004.

Variety	Brand/Source	1 st Cut	2 nd Cut	3 rd Cut	4 th Cut	2004	3-yr
		May 28	July 8	Aug 19	Oct 7	Total	Total ¹
		----- tons/acre ² -----					
FG 3R139	J.R. Simplot Co.	2.82	2.18	2.34	1.70	9.04	26.90
Select	IFA	2.66	2.19	2.28	1.66	8.79	26.53
Goliath	Allied Seed, L.L.C.	2.72	2.14	2.21	1.65	8.72	26.09
WL 327	W-L Research	2.52	2.10	2.17	1.67	8.46	25.84
Mountaineer	Croplan Genetics	2.84	2.14	2.18	1.62	8.78	25.83
DU 201	Great Plains Research Co., Inc.	2.19	2.07	2.13	1.57	7.96	25.28
Sendero	Allied Seed, L.L.C.	2.05	2.10	2.25	1.59	7.99	24.93
WL 342	W-L Research	2.32	1.93	2.10	1.55	7.89	24.78
Pawnee	Midwest Seed Genetics	2.24	2.07	2.14	1.66	8.10	24.68
Dagger+EV	AgriPro	2.16	2.08	2.05	1.63	7.91	24.54

Ameristand 403T	America=s Alfalfa	2.10	1.86	1.98	1.44	7.38	24.00
FR 9802	Great Plains Research Co., Inc	2.43	1.94	1.99	1.60	7.96	23.95
Enhancer	Sharp Bros. Seed Co.	1.94	1.81	1.93	1.54	7.23	23.51
Journey Brand 204 Hybrid	Dairyland Seed	1.90	1.71	1.96	1.56	7.13	23.50
HybriForce™400	Dairyland Seed	1.92	1.75	2.03	1.54	7.24	23.45
Average		2.32	2.00	2.12	1.60	8.04	24.92
CV (%)		4.94	5.09	5.22	6.99	3.89	3.36
LSD (0.05)		0.16	0.14	0.16	NS	0.45	1.20

¹Table is arranged by decreasing, 3-year total yield.

²Yields were calculated on an air-dry basis.

Elevation: 4584 feet. Average annual precipitation is 8.4 inches. Average frost-free days is 181 days. Last spring frost - March 30, 2004; first fall frost - October 23, 2004. Frost-free days for 2004 - 207 days (28EF base).

For weed control in 2004, Sencor 4F was applied at 1 quart/acre in 20 gallons water/acre at 25 psi on March 5, 2004. Soil series: Youngston clay loam.

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