

San Luis Valley, Colorado, Alfalfa Variety Performance Test at Center, 2009.

Merlin A. Dillon ^{1/}

Summary

The 2009 results of Colorado State University's alfalfa variety performance test at Center are presented together with 2007-08 in Table 1. Plots were planted in July 2006 and the first harvest year was 2007. The trial will be harvested for three years. Alfalfa stands are excellent and plots have been fairly well weed-free both years. The field had insecticide applied for alfalfa weevil prior to second cutting in 2008. The field is center-pivot irrigated as needed.

There was good snow cover in 2009 and stand loss was minimal. Rains were plentiful in the month prior to first cutting, thankfully, there were very few rains during curing. First cutting was a little earlier than normal this year. Harvest was excellent with very good precision. Vernal and Ranger had the lowest yields. Ten (10) of the cultivars were in the top yield group for first cutting. Second cutting was also early, yields averaged only 1.6 ton/acre. There were only two varieties in the top yield group for second cutting.

Table 1. Forage yields of 16 alfalfa varieties at Center, CO (San Luis Valley)^{2/} in 2007-9.

Variety	Source	Total 2008	Total 2007	2-Year Average	2009 1st	2009 2nd	2009 3rd	Tot
-----tons/acre ³ -----								
FSG 406	Allied Seed	6.13*	5.56*	5.85*	1.98*	1.68*		
L 447 HD	Legacy Seeds	5.81*	5.74*	5.77*	1.88*	1.64		
Lariat 120	JR Simplot Co	5.84*	5.64*	5.74*	1.86*	1.82*		
Ameristand 407TQ	America's Alfalfa	5.82*	5.58*	5.70*	1.90*	1.67		
Genoa	NK/Syngenta	5.58*	5.69*	5.63*	1.86*	1.63		
WL 357 HQ	WL Research	5.65*	5.61*	5.63*	1.95*	1.63		
Mountaineer 2.0	Croplan Genetics	5.78*	5.44	5.61*	1.82	1.62		
FSG 351	Allied Seed	5.39	5.82*	5.61*	1.85*	1.52		
Ranger	USDA-NE AES	5.38	5.65*	5.51*	1.72	1.44		
54V09	Pioneer	5.58*	5.42	5.50*	1.76	1.60		
Whitney	Eureka Seeds	5.32	5.56*	5.44	1.79	1.54		
FSG 408 DP	Allied Seed	5.39	5.44	5.42	1.84*	1.54		
Vernal	USDA-WI AES	5.27	5.43	5.35	1.74	1.59		
WL 355 RR	WL Research	5.43	5.03	5.23	1.77	1.60		
Medalist	Int. Farmers Assoc.	4.88	5.50	5.19	1.94*	1.57		
FSG 425 RR	Allied Seed	4.71	5.14	4.93	1.86*	1.67		
Average		5.50	5.52	5.51	1.85	1.61		
CV (%)		10.4	4.5	6.2	5.6	7.4		
LSD (0.10)^{4/}		0.68	0.29	0.41	0.12	0.14		

^{2/} Trial conducted on the Richard Ramstetter Farm, Saguache County Road 44 & Road B; seeded 7/20/06 at 20 #/acre.

^{3/} Yields calculated on oven-dry basis.

^{4/} Least Significant Difference: yield differences less than LSD are not statistically different.

* Top Yield Group; yields followed by * are not significantly different from the highest yield in the table (LSD 10%).

Site Information:

Elevation = 7700 ft.

Average annual precipitation = 6.92 inches.

Average frost-free days = 88 days (32⁰F).

Average last spring frost - June 10; average first fall frost - September 6.

Soil Series: Platoro Loam / Norte gravelly sandy loam.

^{1/} **Contact Information:** Merlin A. Dillon, Area Extension Agronomist

San Luis Valley Research Center

0249 E Road 9 North, Center, CO 81125

Phone: 719-754-3494 x12 email: merlin.dillon@colostate.edu

Western Colorado Alfalfa Variety Performance Test at Fruita 2009

Calvin H. Pearson¹

Summary

The 2009 results of Colorado State University's alfalfa variety performance test at Fruita for the first, second, and third cuttings are presented below in Table 1. Plots were planted during fall 2007 and data for 2009 are for the second year of the three-year testing period. Alfalfa stands are excellent and weed free. The field is furrow-irrigated using gated pipe.

Table 1. Forage yields of 16 alfalfa varieties at the Western Colorado Research Center at Fruita in 2009.¹

Variety	Source/Brand	1 st cut May 19	2 nd cut June 29	3 rd cut Aug. 4	4 th cut	2009 Total ²	2-yr Total
				tons/acre ³			
AmeriStand 407TQ	America's Alfalfa	3.66	2.81	2.32			
AmeriStand 444NT	America's Alfalfa	3.70	2.86	2.48			
Archer III	America's Alfalfa	3.26	2.87	2.52			
EXP6452	Garst Seed	3.38	2.70	2.36			
FSG 5285F	Allied Seed	3.05	2.48	2.30			
Garst 6552	Garst Seed	3.44	3.24	2.36			
Garst 6415	Garst Seed	3.67	2.89	2.21			
Lariat	JR Simplot Co	3.40	2.62	2.13			
Masterpiece	JR Simplot Co	3.60	2.64	2.30			
Medalist	Intermountain Farmers Assoc.	3.34	2.74	2.14			
Mountaineer 2.0	Croplan Genetics	3.66	2.74	2.24			
PGI 424	Producer's Choice	3.42	2.74	2.40			
TS4002	Target Seed	3.26	2.50	2.04			
TS4028	Target Seed	3.61	2.80	2.25			
WL 343HQ	W-L Research	3.37	2.68	2.16			
WL 363HQ	W-L Research	3.44	2.90	2.38			
Ave.		3.45	2.76	2.29			
CV (%)		5.6	8.8	9.2			
LSD (0.05)		0.28	0.35	NS			

¹Seeded 20 August 2007 at 15 lbs/acre.

²At the end of the growing season the table will be arranged by decreasing 2009 total yield.

³Yields were calculated on an air-dry basis. The forage was green chopped and within 3-4 days after harvest the alfalfa was irrigated.

Last spring frost – April 7, 2009; first fall frost – TBD. Frost-free days for 2009 - TBD (28°F base).

Fertilizer: 140 lbs P₂O₅/acre and 30 lbs N/acre broadcast as 11-52-0 on August 16, 2007. Applied Raptor at 6.0 oz/acre plus Arrow (clethodium) at 1 pt/acre (plus 1 qt/acre crop oil concentrate and 1 gallon of URAN in 100 gallons of water) using 22 gallons water/acre at 28 psi for weed control on 12 Mar 2009.

¹ Contact information: Colorado State University
Agricultural Experiment Station, Western Colorado
Research Center – Fruita, 1910 L Road, Fruita, CO
81521. Ph. 970-858-3629; Fax 970-858-0461;
email: calvin.pearson@colostate.edu

San Luis Valley, Colorado, Alfalfa Variety Performance Test at Center, 2007-2009.

Merlin A. Dillon^{1/}

Summary

All three years and the final 3-year averages for Colorado State University's alfalfa variety performance test at Center are presented together in Table 1.

Randomized and replicated plots were planted in a farmer's center pivot irrigated alfalfa field in July 2006; the trial was first harvested in June 2007. The trial was harvested three times each year for three years. Alfalfa stands are still excellent and plots have been fairly well weed-free all three years. The field had insecticide applied for alfalfa weevil prior to second cutting in 2008. The field has adequate water; it is center-pivot irrigated as needed.

There was good snow cover in 2009 and stand loss was minimal. Rains were plentiful in the month prior to first cutting; thankfully, there were very few rains during curing. First cutting was a little earlier than normal this year; yield was somewhat smaller than normal. First harvest was excellent with very good precision. Vernal and Ranger had the lowest yields. Ten of the cultivars were in the top yield group for first cutting.

Second cutting was also early, and yields averaged only 1.6 ton/acre. There were only two varieties in the top yield group for second cutting. The third cutting was also early (Sept. 11) but this yield was slightly higher than normal.

Mostly the same group of varieties made up the top yield group for 2009 and for the 3-year average. This group of cultivars fairly consistently produced high yields in this trial. Vernal and Ranger (older check cultivars) produced 5.2 ton/acre compared to 5.5 ton/acre for the average of the top yield group.

Table 1. Forage yields of 16 alfalfa varieties at Center, CO (San Luis Valley)^{2/} in 2007-9.

Variety	Source	Total 2007	Total 2008	2009 6/18	2009 7/16	2009 9/11	2009 Total	3-Year Avg.
-----tons/acre ³ -----								
FSG 406	Allied Seed	5.56*	6.13*	1.98*	1.68*	1.48	5.13*	5.61*
Lariat 120	JR Simplot Co	5.64*	5.84*	1.86*	1.82*	1.51	5.19*	5.56*
L 447 HD	Legacy Seeds	5.74*	5.81*	1.88*	1.64	1.52*	5.04*	5.53*
Ameristand 407TQ	America's Alfalfa	5.58*	5.82*	1.90*	1.67	1.47	5.04*	5.48*
WL 357 RR	WL Research	5.61*	5.65*	1.95*	1.63	1.54*	5.12*	5.46*
Mountaineer 2.0	Croplan Genetics	5.44	5.78*	1.82	1.62	1.60*	5.05*	5.42*
Genoa	NK/Syngenta	5.69*	5.58*	1.86*	1.63	1.47	4.96*	5.41*
FSG 351	Allied Seed	5.82*	5.39	1.85*	1.52	1.55*	4.92	5.38*
54V09	Pioneer	5.42	5.58*	1.76	1.60	1.47	4.83	5.27
FSG 408 DP	Allied Seed	5.44	5.39	1.84*	1.54	1.54*	4.92	5.25
Whitney	Eureka Seeds	5.56*	5.32	1.79	1.54	1.50	4.83	5.24
Ranger	USDA-NE AES	5.65*	5.38	1.72	1.44	1.45	4.60	5.21
Vernal	USDA-WI AES	5.43	5.27	1.74	1.59	1.47	4.82	5.18
Medalist	Int. Farmers Assoc.	5.50	4.88	1.94*	1.57	1.46	4.98*	5.12
WL 355 RR	WL Research	5.03	5.43	1.77	1.60	1.39	4.75	5.07
FSG 425 RR	Allied Seed	5.14	4.71	1.86*	1.67	1.45	4.97*	4.94
Average		5.52	5.50	1.85	1.61	1.49	4.95	5.32
CV (%)		4.5	10.4	5.6	7.4	5.3	4.6	4.7
LSD (0.10)^{4/}		0.29	0.68	0.12	0.14	0.09	0.27	0.30

^{2/} Trial conducted on the Richard Ramstetter Farm, Saguache County Road 44 & Road B; seeded 7/20/06 at 20 #/acre.

^{3/} Yields calculated on oven-dry basis; average of four replications.

^{4/} Least Significant Difference at 10%: yield differences less than LSD are not statistically different.

* Top Yield Group; yields followed by * are not significantly different from the highest yield in same column (LSD 10%).

Continued Next Page

Site Information:

Elevation = 7700 ft.

Average annual precipitation = 6.92 inches.

Average frost-free days = 88 days (32^o F).

Average last spring frost - June 10; average first fall frost - September 6.

Soil Series: Platoro Loam / Norte gravelly sandy loam.

^{1/} **Contact Information:** Merlin A. Dillon, Area Extension Agronomist
San Luis Valley Research Center
0249 E Road 9 North, Center, CO 81125
Phone: 719-754-3494 x12 email: merlin.dillon@colostate.edu



Fig. 1. Alfalfa plots being harvested in 2008 at Richard Ramstetter Farm in Saguache County, Road B & Road 44. Each plot is cut with swather and weighed with electronic weigh box located under the cab.



Fig. 2. Alfalfa plots being harvested in 2008. Each variety is planted in 4 locations; plots are randomized and replicated. Moisture samples are weighed and oven dried to calculate yields.