

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

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### 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)<sup>2/</sup> 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 <sup>3</sup> -----								
<b>FSG 406</b>	Allied Seed	5.56*	6.13*	1.98*	1.68*	1.48	5.13*	5.61*
<b>Lariat 120</b>	JR Simplot Co	5.64*	5.84*	1.86*	1.82*	1.51	5.19*	5.56*
<b>L 447 HD</b>	Legacy Seeds	5.74*	5.81*	1.88*	1.64	1.52*	5.04*	5.53*
<b>Ameristand 407TQ</b>	America's Alfalfa	5.58*	5.82*	1.90*	1.67	1.47	5.04*	5.48*
<b>WL 357 RR</b>	WL Research	5.61*	5.65*	1.95*	1.63	1.54*	5.12*	5.46*
<b>Mountaineer 2.0</b>	Croplan Genetics	5.44	5.78*	1.82	1.62	1.60*	5.05*	5.42*
<b>Genoa</b>	NK/Syngenta	5.69*	5.58*	1.86*	1.63	1.47	4.96*	5.41*
<b>FSG 351</b>	Allied Seed	5.82*	5.39	1.85*	1.52	1.55*	4.92	5.38*
<b>54V09</b>	Pioneer	5.42	5.58*	1.76	1.60	1.47	4.83	5.27
<b>FSG 408 DP</b>	Allied Seed	5.44	5.39	1.84*	1.54	1.54*	4.92	5.25
<b>Whitney</b>	Eureka Seeds	5.56*	5.32	1.79	1.54	1.50	4.83	5.24
<b>Ranger</b>	USDA-NE AES	5.65*	5.38	1.72	1.44	1.45	4.60	5.21
<b>Vernal</b>	USDA-WI AES	5.43	5.27	1.74	1.59	1.47	4.82	5.18
<b>Medalist</b>	Int. Farmers Assoc.	5.50	4.88	1.94*	1.57	1.46	4.98*	5.12
<b>WL 355 RR</b>	WL Research	5.03	5.43	1.77	1.60	1.39	4.75	5.07
<b>FSG 425 RR</b>	Allied Seed	5.14	4.71	1.86*	1.67	1.45	4.97*	4.94
<b>Average</b>		<b>5.52</b>	<b>5.50</b>	<b>1.85</b>	<b>1.61</b>	<b>1.49</b>	<b>4.95</b>	<b>5.32</b>
<b>CV ( %)</b>		<b>4.5</b>	<b>10.4</b>	<b>5.6</b>	<b>7.4</b>	<b>5.3</b>	<b>4.6</b>	<b>4.7</b>
<b>LSD (0.10)<sup>4/</sup></b>		<b>0.29</b>	<b>0.68</b>	<b>0.12</b>	<b>0.14</b>	<b>0.09</b>	<b>0.27</b>	<b>0.30</b>

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

<sup>3/</sup> Yields calculated on oven-dry basis; average of four replications.

<sup>4/</sup> 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%).

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**Site Information:**

Elevation = 7700 ft.

Average annual precipitation = 6.92 inches.

Average frost-free days = 88 days (32<sup>o</sup> F).

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

Soil Series: Platoro Loam / Norte gravelly sandy loam.

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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.