

**PROJECT TITLE: 2004 IRRIGATED INTRASTATE ALFALFA YIELD TRIAL**

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**OBJECTIVE:** Compare yield potential of new releases and experimental lines with older, established cultivars under irrigated conditions.

**METHODS:** The trial was seeded on 4/23/04. Thirteen cultivars were seeded in 5-ft by 20-ft plots consisting of 7 rows spaced 6-inches apart. Seeding rate was 9 lbs/acre pure live seed, and seeding depth was 0.5 in. Mono-ammonium phosphate fertilizer (11-52-0) was applied preplant at a rate of 120 lbs/acre. Pursuit (3 oz./a) and Prowl (1.8 pt/a) were preplant incorporated for weed control. The experimental design was a randomized complete block with 13 cultivars and four replications.

Crop year precipitation was 22.81 inches. Average monthly temperatures were 43.9, 52.6, 60.7, 69.1, and 63.8 degrees F from April to August, respectively.

Forage yield harvest dates were 6/22, 7/27, and 9/28/06. Plots were harvested with a sickle-bar research plot swather. Harvest area was 100 ft<sup>2</sup>. After recording the fresh harvest weight, a subsample of approximately 500 g was taken, weighed, dried at 60°C in a forced air oven for 48 to 72 h, and reweighed to determine DM content.

Analysis of variance was calculated by the ANOVA procedure of XLSTAT Ver.7.5 (2004). Critical value for a significant F-test was tested at P=0.05. Treatment effects were compared by protected LSD when the F test for treatment was significant.

**RESULTS:** The total yields for 2006 ranged from 3.87 t/a ('Ladak 65') to 4.72 t/a ('Shaw'). There were no significant yield differences in 2006.

[See table on next page.]

**2004 INTRASTATE ALFALFA YIELD TRIAL - Irrigated**

KalisPELL, 2006

Variety	MTNO	Total Dry Matter Yield			2006	2005	2005-	%Mean	2004
		Harv-1	Harv-2	Harv-3	Total	Total	06		Total
		<i>t/a</i>	<i>t/a</i>	<i>t/a</i>	<i>t/a</i>	<i>t/a</i>	<i>t/a</i>		<i>t/a</i>
Ladak 65	2	1.64	1.37	0.86	3.87	3.49	7.36	93	2.98
Shaw	328	2.04	<b>1.52</b>	1.15	4.72	<b>3.74</b>	8.46	107	3.08
MT-9321	333	1.84	1.37	1.04	4.25	<b>3.62</b>	7.87	100	3.11
Cooper	335	1.74	1.29	1.02	4.04	<b>3.65</b>	7.69	97	3.19
VL02	392	1.95	<b>1.60</b>	1.10	4.65	<b>3.69</b>	8.34	106	2.83
54Q25	393	1.72	<b>1.62</b>	0.92	4.26	<b>3.59</b>	7.85	99	3.06
Lightening Xtra	394	1.80	<b>1.58</b>	1.01	4.38	<b>3.94</b>	8.32	105	3.16
DKA 33-16	395	1.55	<b>1.63</b>	1.10	4.29	3.45	7.74	98	2.68
DKA 50-18	396	1.63	<b>1.47</b>	1.10	4.20	<b>3.60</b>	7.80	99	2.76
Boulder	397	1.92	1.36	1.05	4.34	<b>3.89</b>	8.22	104	2.89
Rebound 5.0	398	1.62	<b>1.45</b>	1.10	4.17	3.41	7.57	96	2.95
6400HT	399	1.57	1.41	1.03	4.01	3.45	7.46	95	2.76
MT-2003-1	400	1.73	<b>1.44</b>	1.16	4.32	3.56	7.88	100	2.93
mean		1.75	1.47	1.05	4.27	3.62	7.89		2.95
Pr>F		0.1516	0.0006	0.3870	0.4231	0.3800	0.3852		0.46
LSD(0.05)		NS	0.22	NS	NS	0.015	0.97		0.44
CV(%mean)		14.1	10.71	15.89	10.8	7.4	8.6		10.9

Seeded 4/23/04

Harv-1: 6/22/06

Harv-2: 7/27/06

Harv-3: 9/28/06

Fertilizer: 22 lbs N/a + 104 lbs P<sub>2</sub>O<sub>5</sub>/a -  
4/15/05