

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 21.88 inches. Average monthly temperatures were 43.9, 51.8, 55.3, 62.6, and 62.8 degrees F from April to August, respectively.

Forage yield harvest dates were 7/1, 8/5, and 10/10/05. Plots were harvested with a sickle-bar research plot swather. Harvest area was 100 ft². 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 2005 ranged from 3.41 t/a ('Rebound 5.0') to 3.94 t/a ('Lightening Xtra'). A table is presented on the next page.

2004 INTRASTATE ALFALFA YIELD TRIAL - Irrigated

Kalispell, 2005

<u>Variety</u>	<u>MTNO</u>	<u>Total Dry Matter Yield</u>			2005	<u>%Mean</u>	2004
		<u>Harv-1</u>	<u>Harv-2</u>	<u>Harv-3</u>	<u>Total</u>		<u>Total</u>
		<u>t/a</u>	<u>t/a</u>	<u>t/a</u>	<u>t/a</u>		<u>t/a</u>
Lightening Xtra	394	1.70	1.54	0.70	3.94	108.9	3.16
Boulder	397	1.59	1.60	0.70	3.89	107.4	2.89
Shaw	328	1.67	1.48	0.58	3.74	103.3	3.08
VL02	392	1.65	1.33	0.71	3.69	101.9	2.83
Cooper	335	1.62	1.49	0.54	3.65	100.7	3.19
MT-9321	333	1.72	1.42	0.48	3.62	100.1	3.11
DKA 50-18	396	1.51	1.35	0.74	3.60	99.4	2.76
54Q25	393	1.62	1.36	0.61	3.59	99.2	3.06
MT-2003-1	400	1.54	1.35	0.67	3.56	98.4	2.93
Ladak 65	2	1.75	1.37	0.38	3.49	96.5	2.98
DKA 33-16	395	1.46	1.40	0.60	3.45	95.3	2.68
6400HT	399	1.56	1.40	0.48	3.45	95.3	2.76
Rebound 5.0	398	1.46	1.33	0.62	3.41	94.2	2.95
mean		1.60	1.42	0.60	3.62		2.95
LSD(0.05)		0.11	0.25	0.17	0.38		0.46
Pr>F		0.380	0.723	0.578	0.015		0.44
CV(%mean)		5.0	12.3	20.4	7.4		10.9

Seeded 4/23/04

Harv-1: 7/1/05 - ebl

Harv-2: 8/5/05 - mbl

Harv-3: 10/10/05

Fertilizer: 22 lbs N/a + 104 lbs P₂O₅/a - 4/15/05