PROJECT TITLE: **2002 DRYLAND INTRASTATE ALFALFA YIELD TRIAL**

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

METHODS: The experiment was established on 5/8/02. Fourteen cultivars were seeded in 5-ft by 20-ft plots consisting of 7 rows spaced 6-inches apart. Seeding rate was 5 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 400 lbs/acre and at 120 lbs/acre each spring following. The experimental design was a randomized complete block with 14 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 6/19 and 7/25/06. The trial was terminated after the second harvest. Plots were harvested with a sickle-bar research plot swather. Harvest area was 100 ft^2. 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 highest yields for 2006 included ‘Shaw’, ‘Cooper’, ‘Plumas’, ‘Ladak DL’, ‘6420’, ‘Rebel’, ‘Rugged’, and ‘WL319HQ’. Over the 4 years of the study, ‘HybriForce 400’ was most productive (15.84 t/a), and Ameristand 403T was least productive (11.32 t/a).

[See table on next page.]

2006 Summary of the
2002 DRYLAND INTRASTATE ALFALFA YIELD TRIAL

Cultivar	Harvest-1	Harvest-2	2006 Total	2005 Total	2004 Total	2003 Total	2003-06 Total	%Mean
	t/a	*t/a*	*t/a*	*t/a*	*t/a*	*t/a*	*t/a*	
Ladak 65	1.20	1.25	2.45	2.72	**4.18**	2.65	11.99	86
Wrangler	1.29	1.41	2.70	3.21	**4.79**	**3.25**	**13.95**	101
Shaw	1.77	1.36	**3.13**	3.23	**4.25**	**3.03**	**13.63**	98
Cooper	1.58	1.43	**3.00**	3.37	**4.23**	**2.94**	**13.55**	98
Plumas	1.47	1.44	**2.91**	3.64	**4.61**	**3.14**	**14.30**	103
Ameristand 403T	1.23	1.40	2.62	2.93	3.39	2.38	11.32	82
Ladak DL	1.32	1.45	**2.78**	3.47	**4.89**	**3.08**	**14.21**	102
HybriForce 400	1.12	1.57	2.69	4.28	**5.34**	**3.52**	**15.84**	114
HybriForce-420/Wet	1.06	1.58	2.64	4.05	**4.91**	**3.07**	**14.68**	106
XTRA-3	1.28	1.45	2.73	3.48	**4.29**	2.85	**13.35**	96
6420	1.30	1.50	**2.80**	3.89	**5.07**	**3.00**	**14.77**	106
Rebel	1.36	1.44	**2.80**	3.67	**4.28**	**2.93**	**13.68**	99
Rugged	1.44	1.52	**2.96**	3.76	**4.52**	**3.07**	**14.31**	103
WL 319HQ	1.20	1.59	**2.79**	3.84	**4.84**	**3.12**	**14.59**	105
mean	1.33	1.46	2.79	3.54	4.54	3.00	13.87	
LSD(0.05)	NS	NS	0.38	0.81	1.38	0.63	2.61	
Pr>F	0.3030	0.5414	< 0.0001	0.603	0.00	0.00	< 0.0001	
CV(%mean)	9.4	8.9	9.6	16.2	21.3	20.1	13.2	

Planting date: 5/8/02

Fertilizer: 22 lbs N/a + 104 lbs P_2O_5/a - 4/15/05
13 lbs N + 62 lbs P_2O_5/a - 4/14/06