

Project Title: 2006 Intrastate Alfalfa Yield Trial – Irrigated

Project Leader: Dennis Cash

Project Personnel: Louise Strang

Objectives: To evaluate the yield performance of alfalfa cultivars in a northwestern Montana high moisture environment.

Results:

Eighteen alfalfa varieties were planted 4/28/06 in a randomized complete block design with 4 replicates. Three sainfoin cultivars were planted in a separate block with 4 replicates. Spring stands were very good for the alfalfa, but poor for the sainfoin especially the experimental 'RMR'. First harvest yields averaged 1.57 t/a. Hot, dry conditions in July and supplemental irrigation increased second cutting mean yield to 1.92 t/a. Post-frost regrowth yielded 1.47 t/a. Because of variation in the data, there were no significant differences in yield among varieties.

Due to stand decline, Exp. RMR yielded less total forage than the other 2 sainfoin varieties. There was very little regrowth following the first cutting.

Summary:

Second-year production ranged from 4.54 t/a ('Cooper') to 5.38 t/a ('Melton'). There were no significant differences among varieties in total 2007 production. Of the sainfoins, 'Eski' produced the most forage (3.37 t/a). None of the sainfoins produced sufficient regrowth for a late fall cutting.

Future Plans:

This trial will remain in production through 2009.

[See table on next page.]

2006 Montana Intrastate Alfalfa Variety Yield Trials - Irrigated

Kalispell, 2007

<u>Cultivar</u>	<u>MTNO</u>	<u>Std</u> <i>%occup</i>	<u>H-1</u> <u>Yield</u> <i>t/a</i>	<u>H-2</u> <u>Yield</u> <i>t/a</i>	<u>H-3</u> <u>Yield</u> <i>t/a</i>	<u>2007</u> <u>Total</u> <i>t/a</i>
Ladak 65	2	60	1.55	1.74	1.28	4.57
Shaw	328	88	1.58	1.91	1.61	5.10
Melton	333	88	1.78	1.98	1.62	5.38
Cooper	335	86	1.67	1.38	1.49	4.54
54Q25	393	90	1.58	1.90	1.43	4.92
4R200	401	90	1.51	2.04	1.46	5.00
Ameristand 407TQ	402	86	1.38	2.07	1.41	4.86
DKA34-17RR	403	91	1.43	1.95	1.36	4.74
DKA41-18RR	404	89	1.37	2.05	1.42	4.84
Genoa	405	86	1.58	2.04	1.50	5.12
GrandStand	406	90	1.62	1.83	1.50	4.94
HB8300	407	90	1.61	2.04	1.40	5.04
HB8400	408	90	1.63	1.85	1.60	5.08
Impressive	409	88	1.64	1.88	1.58	5.09
Lariat	410	88	1.67	1.98	1.57	5.21
WL 343HQ	411	93	1.80	1.95	1.34	5.09
WL 355RR	412	86	1.37	1.80	1.41	4.58
Whitney	413	85	1.54	2.13	1.55	5.22
mean		87	1.57	1.92	1.47	4.96
Pr>F		< 0.0001	0.17	0.5379	0.0749	0.3424
LSD(0.05)		9	NS	NS	NS	NS
CV(%mean)		7.0	12.4	18.4	10.1	12.5

<u>Sainfoin</u> <u>Cultivar</u>	<u>ID</u>	<u>Std</u> <i>%occup</i>	<u>Yield</u> <i>t/a</i>	<u>Yield</u> <i>t/a</i>	<u>2007</u> <u>Total</u> <i>t/a</i>
exp. "RMR"	S1	9	1.59	0.36	1.96
Remont	S2	29	1.27	1.07	2.35
Eski	S3	34	2.41	0.96	3.37
mean		24	1.76	0.80	2.56
Pr>F		0.1618	0.0982	0.0241	0.0281
LSD(0.05)		NS	NS	0.45	1.09
CV(%mean)		74.3	37.1	33.2	25.7

Seeded 4/28/2006

Harvest 1:	6/14	earlybl
Harvest 2:	7/25	fullbl
Harvest 3:	9/26	mbl