

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 irrigated/high rainfall environment.

#### Results:

Eighteen alfalfa and three sainfoin cultivars were planted 4/28/06 in a randomized complete block design with 4 replicates. Spring stands showed good occupancy following a cool and dry winter. Below average precipitation in April was followed by above average rainfall in June and July (7.45 inches) which resulted in good late season production. Post-season regrowth yielded 1.29 t/a for a total season yield average of 4.91 t/a. Sainfoin cultivars 'Remont' and 'Eski' produced over 1.75 t/a forage. The exp. 'RMR' cultivar had very poor stand reestablishment.

#### Summary:

Third-year production ranged from 4.11 t/a ('Ladak 65') to 5.26 t/a ('HB8400'). There were no significant differences among alfalfa varieties in total 2008 production.

#### Future Plans:

This trial will remain in production through 2009.

**2006 Montana Intrastate Alfalfa Variety Yield Trials**

**Kalispell - Irrigated**

**2008**

<u>Cultivar</u>	<u>MTNO</u>	<u>Std</u> %occup	H-1 <u>Yield</u> t/a	H-2 <u>Yield</u> t/a	H-3 <u>Yield</u> t/a	2008 <u>Total</u> t/a	2007 <u>Total</u> t/a	Total <u>2007-08</u> t/a
Ladak 65	2	61	1.86	1.18	1.07	4.11	4.58	8.69
Shaw	328	75	2.02	1.35	<b>1.50</b>	4.87	5.10	9.97
Melton	333	75	2.22	1.42	1.40	5.03	5.44	10.46
Cooper	335	<b>80</b>	1.80	1.38	1.29	4.46	4.54	8.99
54Q25	393	<b>83</b>	2.10	1.39	1.30	4.78	4.55	9.33
4R200	401	<b>81</b>	2.33	<b>1.57</b>	1.30	5.20	5.00	10.20
Ameristand 407TQ	402	<b>81</b>	2.11	1.43	1.30	4.83	4.51	9.35
DKA34-17RR	403	<b>85</b>	2.47	<b>1.49</b>	1.21	5.17	4.38	9.55
DKA41-18RR	404	<b>84</b>	2.08	<b>1.49</b>	1.17	4.74	4.50	9.24
Genoa	405	<b>81</b>	2.43	1.39	1.19	5.01	5.13	10.13
GrandStand	406	<b>86</b>	2.39	<b>1.49</b>	1.32	5.20	4.94	10.14
HB8300	407	<b>85</b>	2.03	1.41	1.19	4.63	5.04	9.67
HB8400	408	<b>84</b>	2.29	<b>1.60</b>	1.37	5.26	5.08	10.33
Impressive	409	<b>88</b>	2.32	<b>1.49</b>	1.37	5.17	5.28	10.45
Lariat	410	<b>85</b>	2.38	<b>1.54</b>	1.32	5.24	4.83	10.07
WL 343HQ	411	<b>88</b>	2.13	1.41	1.08	4.62	5.09	9.71
WL 355RR	412	<b>83</b>	2.21	1.45	1.37	5.03	4.24	9.27
Whitney	413	79	2.05	<b>1.47</b>	<b>1.47</b>	4.99	4.83	9.82
mean		81	2.18	1.44	1.29	4.91	4.84	9.74
Pr>F		<.0001	0.51	0.0002	0.0038	0.1302	0.3006	0.0963
LSD(0.05)		9	NS	0.14	0.10	NS	NS	NS
CV(%mean)		7.5	17.9	6.8	11.3	10.3	12.0	8.2

**Sainfoin**

<u>Cultivar</u>	<u>ID</u>	<u>Std</u> %occup	<u>Yield</u> t/a	<u>Yield</u> t/a	2008 <u>Total</u> t/a	2007 <u>Total</u> t/a	Total <u>2007-08</u> t/a
exp. "RMR"	S1	11	0.36	0.06	0.41	1.32	1.73
Remont	S2	<b>46</b>	<b>1.66</b>	<b>0.37</b>	<b>2.03</b>	2.35	<b>4.37</b>
Eski	S3	<b>54</b>	<b>1.47</b>	<b>0.29</b>	<b>1.76</b>	2.70	<b>4.46</b>
mean		37	1.16	0.24	1.40	2.12	3.52
Pr>F		0.0506	0.0251	0.0451	0.0273	0.2742	0.0283
LSD(0.05)		35	0.90	0.24	1.13	NS	2.05
CV(%mean)		55.5	44.9	58.9	46.8	53.1	33.7

Seeded 4/28/2006

Harvest 1: 6/27/08

Stage at harvest: early bloom

Harvest 2: 7/29/08

Stage at harvest: mid bloom

Harvest 3: 9/30/08

Stage at harvest: mid bloom