

**PROJECT TITLE:** 2001 Evaluation of non-alfalfa perennial legumes.

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**OBJECTIVES:**

Determine yield levels of modern varieties non-bloat causing perennial forage legumes: sainfoin, birdsfoot trefoil, and cicer milkvetch relative to yields of alfalfa check varieties.

**METHODS:**

Entries are seeded in RCB arrangement in 4-5' x20'plots with 1' row spacing. Species are to be harvested with a self-propelled forage plot harvester when the alfalfa is in early bloom. This nursery has been established at other Montana research centers and the Sheridan WY research and extension center.

**RESULTS:**

Dry weather and other droughty conditions have been hard on the non-bloat causing perennial legumes. In 2001, alfalfa entries have proved to be superior in dry matter yield production than the entries of sainfoin, birdsfoot trefoil, and cicer milkvetch. There appears to be some difference between varieties, for forage yield, with in each of species (See Tables F 5 &F 6). Due to the unusually dry weather the past couple of years, hopefully it remains classified as “unusually dry” rather than the beginning of a new norm, it is best not to make any conjectures about relative yield levels of the various varieties.

**FUTURE PLANS:** These two nurseries are scheduled to be in place for five to ten years. However, significant mortality in some plots may make it difficult.

Table F 5 2001 Yield of 2000 perennial legume species and variety trial.

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ID	Variety	Species	Plant		Dry Content	Matter Yield
			Ht.	Bloom		
			"	%		t/a
PL1	Remont	sainfoin	12	50	0.320	0.280
PL2	Delaney	sainfoin	11	50	0.310	0.327
PL3	Nova	sainfoin	12	30	0.260	0.334
PL4	WY-PX2-9	sainfoin	12	40	0.280	0.304
PL5	Eski	sainfoin	11	40	0.260	0.309
PL6	1,2 Synth	birdsfoot trefoil	6	40	0.251	0.111
PL7	Shaw	alfalfa	8	30	0.338	0.636
PL8	Ladak 65	alfalfa	8	20	0.338	0.643
PL9	Windsor	cicer mlkvтч	7	0	0.251	0.110
PL10	Monarch	cicer mlkvтч	7	0	0.251	0.081
PL11	Lutana	cicer mlkvтч	7	0	0.251	0.053
PL12	Leo	birdsfoot trefoil	7	30	0.243	0.119
PL13	Empire	birdsfoot trefoil	7	20	0.243	0.108
PL14	Viking	birdsfoot trefoil	6	20	0.243	0.101
PL15	Tretana	birdsfoot trefoil	5	50	0.243	0.094
PL16	Forager	alfalfa	11	50	0.328	0.543
OVERALL MEAN						0.259
CV (S/MEAN) %						24.3
LSD(0.05 by t)						0.090
Seeded:	3-May-01		Harvested:		16-Jun	

Table F 6 2001 Forage yield of the 1999 perennial legume species/variety trial.  
99PLG01 Central Agricultural Research Center, Moccasin, Montana.

Variety	Species	2000		2001			
		PltHt	Yield	Plant Ht	DM Cntnt	DM Yield	
		"	t/a	"	%	t/a	
PF1	AC Grazeland	alfalfa	20	0.469	12	33.7	0.740
PF3	Ladak-65	alfalfa	20	0.459	12	33.9	0.756
PF4	97-1	sainfoin	18	0.191	14	29.0	0.239
PF5	Remont	sainfoin	15	0.097	16	32.0	0.299
PF6	RnDInyWY	sainfoin	12	0.125	10	26.1	0.216
PF7	WYPX 2-94	sainfoin	12	0.146	13	23.4	0.199
PF8	Eski	sainfoin	12	0.125	13	22.6	0.168
PF9	Monarch	cicer mlkvтч	15	0.232	9	23.4	0.156
PF10	Windsor	cicer mlkvтч	14	0.207	8	22.0	0.130
PF11	Lutana	cicer mlkvтч	13	0.290	7	23.0	0.201
PF12	L-2 Synthetic B	birdsft trefoil	15	0.403	10	21.9	0.277
PF13	Tretana	birdsft trefoil	14	0.309	8	22.6	0.178
PF15	3lbs+8lbs	alfalfa+sainfoin	19	0.449	12	22.7	0.506
PF16	3lbs+16lbs	alfalfa+sainfoin	18	0.390	12	27.8	0.614
Mean				0.273			0.334
F-Ratio				11.78			22.9
P-Value				0.00			0.000
CV (S/MEAN) %				24.92			27.740
LSD(0.05 by t)				0.097			0.133

Seeded: 14-May-99 Harvested: 3"ht 26-Jun maco at 3" ht. 16-Jun

Row spacing: 24"

Due to a partially plug drop tube, at seeding, everyother row was removed.

C.V. is very high. This reflects the shortness of the stand and inability to pick up all the forage.

**A:FBPLEGUM.FRD(DBF)**