

PROGRESS REPORT ON SEED PRODUCTION RESEARCH

prepared by

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for

**PRESENTATION AT THE GRASS-LEGUME SEED INSTITUTE
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Weather:

Table 1. Monthly precipitation at Roseau, MN 1967-2001.

Trials:

Table 2. Kentucky bluegrass seeded in 1998-organic soil.

Table 3. Perennial ryegrass seeded in 2001 – winter injury.

Table 4. Perennial ryegrass winter hardiness trial seeded in 2001 – St. Paul campus.

Table 5. Cicer milkvetch seeded in 2002 – vigor.

Table 6. Birdsfoot trefoil seeded in 2002 – growth habit.

Table 7. Kura clover seeded in 2002 – vigor and stand – Roseau, Rosemount and Grand Rapids

Table 2. Percent heading, height, lodging, harvest date and seed yield for 17 varieties of Kentucky bluegrass seeded in 1998 on the Higgins(Eastman) farm north of Roseau on organic soil. 2001 data and 2002 estimated seed yields.

Variety	msp#	2001				Seed yield			
		% heading 6/6/03	6/14/03 heading	Harvest height (in)	Lodging at harvest*	Harvest date	2001 Estimate lbs/A	2002 Estimate	
Abbey	2606	2	53	25	1	7/10	288	513	325
Barmax	2861	2	65	21	3.8	7/6	250	464	325
Blacksburg	3094	2	48	24	1	7/10	50	174	100
Blackstone	3225	18	63	24	1.3	7/10	75	78	115
CAS-JC91L II	3164	0	43	28	1	7/10	238	504	350
Midnight	3153	1	25	27	1	7/10	238	386	275
Minnfine	2794	80	95	31	6.3	7/4	338	477	400
Moonlight	3226	38	65	29	1.8	7/10	144	279	200
Washington	3239	43	88	32	3.8	7/4	231	265	250
Optigreen	3156	6	50	30	1.5	7/10	163	326	200
Park	3021	70	93	30	4.3	7/4	238	488	250
Park	2552	63	88	31	3.3	7/4	188	473	250
Rugby	3038	3	43	30	1.5	7/10	125	330	175
484S exp	3232	4	48	25	1	7/10	294	439	300
1628S exp	3233	1	43	23	1	7/10	281	428	300
2073S exp	3234	4	50	23	1	7/10	212	406	325
3073S exp	3236	1	48	23	1	7/10	300	437	325
LSD @5%		14	15	3	1.1	1	97		109

*Lodging. 1=none; 9=severe lodging
Experimental design:RCB w/ 4 reps

Table 3. Perennial ryegrass variety trial seeded under spring wheat on 8/10/01 on the Magnusson farm - Roseau, MN.

Variety	msp#	Winter injury*
		5/19/02
Wh sel	3373	3.7
WH x TQ	3372	3.7
Spreader2	3393	6.0
P101	3366	6.7
NK-200	3179	7.0
TQ x SP	3274	7.0
Affinity	3030	8.2
Blackhawk	3031	8.2
LSD @5%		1.0

*Winter injury: 1=no injury to 9 = dead

Table 4. Perennial ryegrass winter hardiness variety trial seeded on 9/14/01 on the University of Minnesota, St.Paul Campus.

Variety	msp #	Winter injury*
		5/23/02
Wh sel	3373	4.0
WH x TQ	3372	4.0
NK-200	3179	5.3
Blackhawk	3031	6.3
Affinity	3030	6.5
Spreader2	3393	6.5
P101	3366	6.9
TQ x SP	3274	7.8
Mara	3432	8.0
Barspectra(annual)	3175	9.0
LSD @5%		1.8

Table 5. Cicer milkvetch varieties seeded 7/16/02 on the Magnusson Farm, Roseau, MN.

Variety	msp #	Vigor*
		9/12/02
Hi Pal	3436	7.0
Lutana	3215	4.5
Monarch	3216	5.0
LSD @5%		0.8

Vigor: 1 = poor to 9 = vigorous

Table 6. Birdsfoot trefoil variety trial seeded on 7/16/02 on the Magnusson Farm, Roseau, MN.

Variety	msp#	Growth habit*
MN 144 myco sel.	3465	5.0
Georgia 1	3143	5.0
Pardee	3422	5.0
Viking	3395	4.0
Roseau	3214	3.3
Low Tannin	3426	3.3
High Tannin	3428	3.0
Dawn	3142	3.0
WH. Selection	3249	2.8
Nuelfin	3213	2.8
Mn.FR 95-105	3325	2.8
Persist	3384	2.5
LSS syn.2	3332	2.5
NC-83 germplasm	3427	2.3
Persist II	3440	2.3
Fusarium Sel.	3378	2.0
Norcen	3173	1.5
LSD @5%		0.5

C4 progeny selected for resistance to for *Mycloplectodiscus terrestris*

New release from the Cornell University breeding program for improved disease resistance

Prince Edward Island selection for resistance to root lesion nematode

St. Paul pasture selection for persistence under grazing

Large seed selection

15 selected clones (9 of 15=Norcen)

Persistence under simulated grazing

Plant selection for resistance to fusarium at Rosemount

*growth habit, 1=prostrate, 5=erect

Table 7. Kura clover variety trial seeded 7/16/02 on the Magnusson farm-Roseau, MN.
Other data from Grand Rapids and Rosemount seeded in 2002

Strain	msp#	Roseau		Rosemount		Grand Rapids	
		vigor* 9/12/02	vigor* 6/6/02	ton/ac** 8/19/02	% stand	ton/ac** 8/19/02	% stand
Cossack	3209	5.8	7.3	1.3	58.8		
Endura	3085	5.8	6.5	1.5	43.8		
Erect bunch-C3	3448	5.8	6.5	1.5	63.8		(selections -2002 plants K9 for 2003 seed)
Erect spread-C3	3449	5.5	5.8	1.4	53.8		
Flowering-C3	3390	5.3	6.0	1.5	53.8		
Large Seed-C2	3379	5.8	6.8	1.6	67.5		
LP-C3	3267	4.0	5.8	1.6	15.0		(large plant - predecessor to 'LS' pop.)
LS-C2	3434	6.5	7.0	1.6	65.0		(large shoot- syn. 1 rosemount seed 2001)
NF-93-C2	3425	5.0	5.3	1.6	50.0		
NF-93-C3	3388	4.8	6.0	1.6	53.8		
Non-flowering-C3	3389	5.8	6.3	1.5	58.8		
Rhizo	3086	3.0	4.3	1.4	11.3		
Island PEI	3467	4.5					
Golf-C1	3268	4.3					
Hi R/S	3265	4.5					
Lo R/S	3266	4.8					
LSD @5%		0.9	0.8	0.2	14.2		
CV		13.4	9.4	9.9	19.9		

*vigor, 9=best, 1=least

**estimated 18% dry matter
clipped two times prior to 8/19/02 harvest