

# Cooperative Extension

UNIVERSITY OF CALIFORNIA

MAY 20 1993

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DATE: May 18, 1993  
TO: Ralph L. Phillips  
TITLE: Farm Advisor

FROM: Walter L. Graves  
TITLE: Range Plot on Grisedale Ranch,  
RE: Pine Mountain Road,, Evaluation of April 30, 1993  
and Twisselman's Ranch Evaluations

Dear Ralph:

I was most encouraged to find "remnants" of sub clovers and even some occasional plants of rose clover at the Grisedale Ranch range legume trial that you established in 1980. This is the end of the 13th growing season and considering that no phosphate fertilizer was used, I believe it would be worthwhile doing some further screening and testing of varieties and maybe some fertilizer fine-tuning trials.

We found a reasonable stand of Yarloop sub clover in all three replications, and a reasonable stand of Geraldton and Nungarin sub clover in one of the three reps, and some occasional plants of Hykon and Kondinin rose clovers.

Oddly enough, the pods that I dug up in the Yarloop sub clover plots, dried out as "black" seed. The Yarloop variety is a cream-colored seed type, so the plants that have persisted are a sub clover type that was an "off-type" or another variety impurity/contamination in the original seed lot. This is common in the seeds we get from Australia since their certification program allows up to 5 percent non-certified types in the certified variety field to be harvested. The big question is "what is the off type?"

Since we cannot easily determine this, maybe we could reestablish another range legume trial this fall 1993 in this location, or some similar location where livestock will be using the area during establishment.

I think that we could go with three persistent varieties that we found: Yarloop, Geraldton, and Nungarin and add a few other early varieties that were not tried in your 1980 trial. We could superimpose a fertilizer trial to look at P and S and try to establish minimum levels that would be needed to successfully establish range legumes and have them persist, with the objective of providing more range feed of quality in the poor or less-than-average range forage years. Rollie Meyer has been doing some good work on looking at the minimum P and S levels needed to accomplish this objective, so you may want to get him to help us with the layout and interpretation.

-2- Ralph Phillips, Kern Co  
May 18, 1993

I can supply the seed and help you put in the test site, so let's talk about it some more if you are interested and can find a cooperator.

Maybe we could get a soil sample of say, 0-3, from the site and have it run through DANR analytical lab to help us define some of the baseline parameters.

I have also included the analysis for the Twisselman's Ranch first-year establishment trial.

cc: Craig Thomsen

May 19 - 1983

Range Plot on Grisedale Ranch

Pine Mountain Rd.

	Reps			
	I	II	III	Avg.
A. Cicer milkvetch	0	0	0	0
B. Daliak subclover	3 M	2	2	2.3
C. Howard subclover	4 M-S	5	4	4.0
E. Nungarin subclover	2 M	3	2 M	2.3
F. Mt. Barker subclover	3 G	3	3	3.0
J. Seaton park subclover	4	2	1	2.3
L. Trikkala subclover	3	3	4 G	3.3
M. Wortham subclover	3 M	4 M	4	3.7
N. Yarloop subclover	3 M	3	1	2.3
S. Geraldton subclover	3	4	3 M	3.3
T. Woogenellup subclover	5	3	5	4.3
X. Dinninup subclover	4	4	5 G	4.3
D. Hannaford barrel medic	3	3	3	3.0
H. Harbinger barrel medic	3	3	4 G	3.3
R. Cypress barrel medic	2	1	3	2.0
U. Jimalong barrel medic	4 G	3 G	3 G	3.3
K. Kondinin Rose clover	3	2	3	2.7
V. Wilton Rose clover	3	4	3	3.3
W. Hykon Rose clover	3	3	3	3.0
P. crimson clover	2	1	0	1.0
Q. Bur clover	3	3	4 G	3.3
Y. Black medic	0	0	0	0
G. Senadella	0	0	0	0

Rated on a scale of 1-5 as to number of plants, vigor of plants  
1 being only 1 or 2 plants, 5 - good vigorous stand.

S - spreading

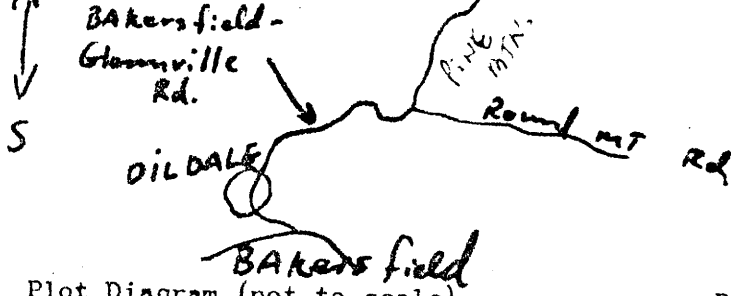
M - Mature

G - Green

General observation:

1. The subclovers were more aggressive and had spread out of original plot.
2. Double normal rainfall from September through April.
3. The crimson and rose clovers did not appear to reseed very well last year; very few plants, hard to find plot.

Evaluated by Win Engvall and Ralph L. Phillips

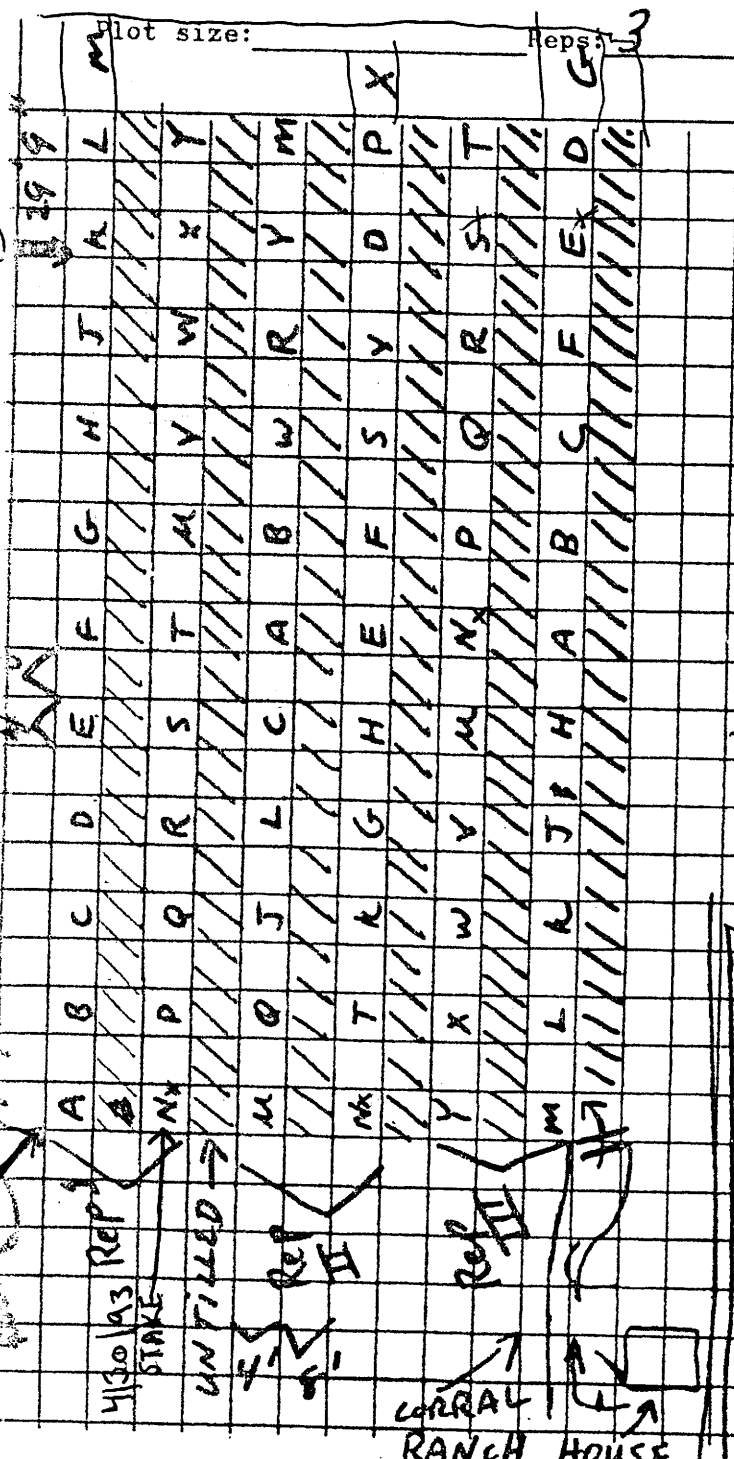


COOP: Grant Grisdale  
 CROP: Pasture to  
RANGE - Legumes  
 DATE: 12/11/1980  
 TEST NO. M-1-80

A. Plot Diagram (not to scale)

B. Herbicide Treatments

RANGE  
2400'



Herbicide Trade name	lb/A product	lb/A active
A Cicer milkvetch		
B DALIAR (Sub)		
C HOWARD (Sub)		
D HANNAFORD BARREL Medic		
E HUNGARIN (Sub)		
F MT. BARKER (Sub)		
G Serradella (Sub)		
H HARBINGER BARREL MEDIC		
J SEATON PARK (Sub)		
K KONDININ Rose		
L TRIKKALA (Sub)		
M NORTHAM (Sub)		
N YARLOOP (Sub)		
P CRIMSON CLOVER		
Q Bur clover		
R cyprus BARREL Medic		
S Geraldton (Sub)		
T Woogenellup (Sub)		
U Jemalong Barrel Medic		
V Wilton (Rose)		
W Hykon (Rose)		
X Dinnilup (Sub)		
Y Black medic		
Z		

C. COMMENTS ON APPLICATION:

All sown plots are 4' x 4'. There is 8' between each lot; in rows (E to W) the borders are tilled, in columns (1-5) the borders are the grass pasture already existing.

Evaluation of legumes seeded in tilled rangeland. (R-1-81) Glennville, California

Plot size: 4' x 4' with 4' tilled borders on two sides.

Elevation: About 2000' Winter annual rainfall: Last rainfall: 4-16-81, about 1"

Sequence of experiment: On 12-11-80, approximately one week after a first winter annual rain, established annual rangeland was tilled with a garden mulcher to prepare a seedbed for the legumes. One oz. aliquots of seeds of 22 different legumes, previously inoculated with rhizobia and stored in a refrigerator, were seeded in three 4 ft. x 4 ft. tilled plots. The seeds were lightly raked in.

Legume name	Legume Response						
	% Ground Cover <sup>1</sup>			Ratings <sup>2</sup>			Seed Prod.
	3-24-81	4-30-81	7-23-81	3-24-81	4-30-81	4-30-81	7-23-81
A. Cicer milk vetch	12%	5%	ND	1	1	V	-
B. Daliak (sub)*	23	33	ND	1.8	3	LF	-
C. Howard (sub)	30	50	4%	1.8	5	LF	ND
D. Hannaford Barrel Medic	10	40	4	1.3	6	F	ND
E. Nungarin (sub)	30	43	ND	1.8	2½	LF	-
F. Mt. Barker (sub)	20	50	13.3	1.9	3	F	ND
G. Serradella (grass)	4	17	ND	.8	-	-	-
H. Harbinger Barrel Medic	27	57	ND	1.5	5	S	-
J. Seaton Park (sub)	33	66	5.7	2.3	5	F	ND
K. Kondinin (Rose)**	8	23	7.3	1.0	5	EF	Yes
L. Trikkala (sub)	30	70	2.0	2.2	7	F	ND
M. Northam (sub)	33	53	ND	2.0	4	S	-
N. Yarloop (sub)	18	50	4.7	2.5	2	F	Yes
P. Crimson clover	33	57	15.0	2.3	4	V	Yes
Q. Bur clover	10	13	ND	1.2	3	LF	-
R. Cyprus Barrel Medic	8		ND	.8			-
S. Geraldton (sub)	37	43	ND	1.8	7	S	-
T. Woogenellup (sub)	30	63	20.0	2.5	4	F	Yes
U. Jemalong Barrel Medic	40	57	5	1.8	5	LF	ND
V. Wilton (Rose)	0	13	2	.3	3	V	Yes
W. Hyken (Rose)	43	47	13	2.3	6	F	Yes
X. Dinninup (sub)	30	63	18	2.3	7	F	ND
Y. Black Medic	18	30	6.7	1.2	3	V	ND

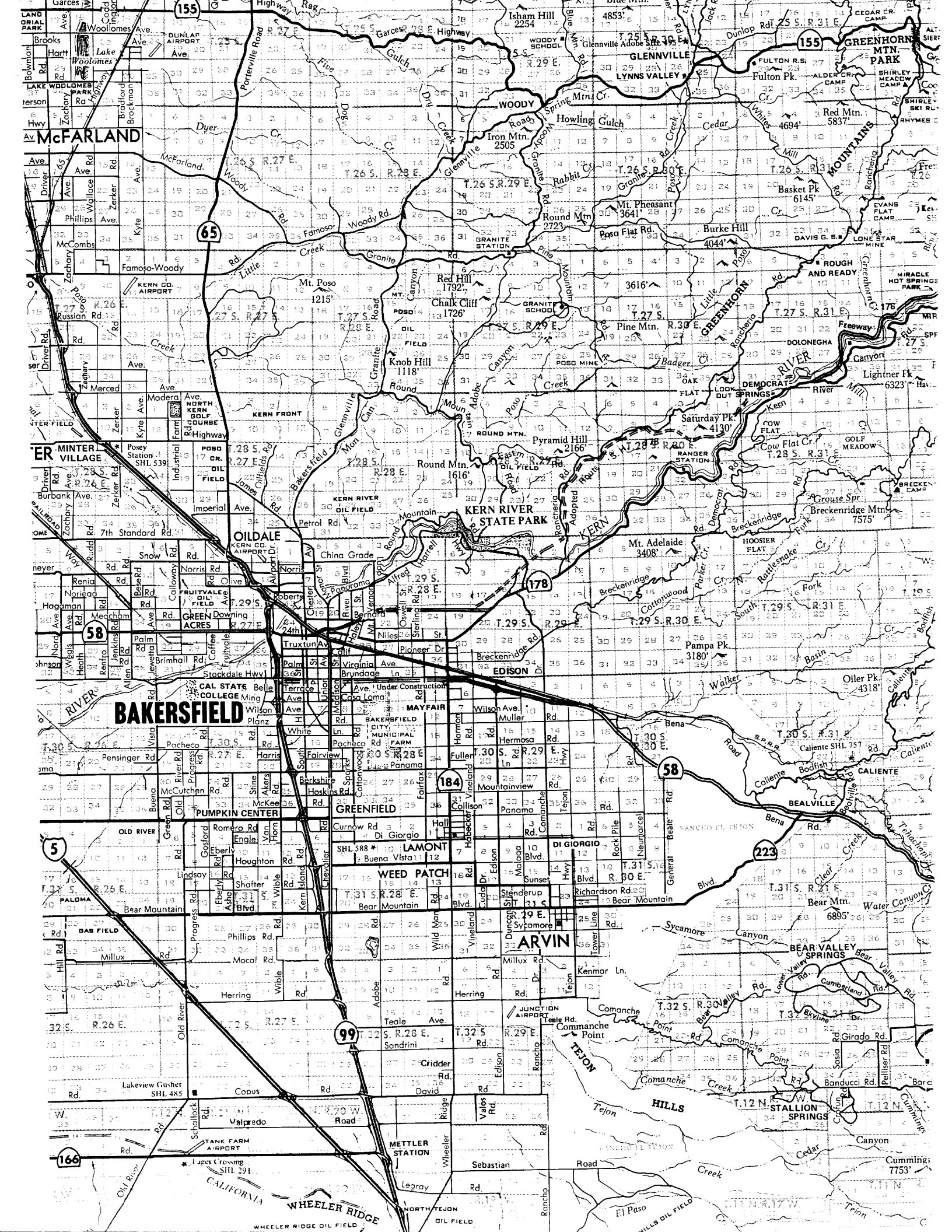
\* (sub) = subclovers \*\* (Rose) = Rose clovers

1) % ground cover estimated.

2) Ratings: 1. On 3-24-81, width of individual plants in each plot; 2. On 4-30-81 vertical height in inches; 3. On 4-30-81, stage of growth: V=vegetative; EF=early flowering; LF=late flowering; S=seed stage; 4. Seed production: ND=not detected.

Comments: Germination of legumes planted after the first winter rain occurred after a mid-December rain (unusually late for this area), emerging about February 1. The last rainfall before the Mediterranean summer was 4-16-81, about one inch. Therefore, ratings on 4-30-81 probably are indicative of which matured on soil moisture.

Legumes which did not grow tall were not readily visible at the 7-23-81 rating. Grasses (Bromus tectorum) were dominant in the plots, filaree (Erodium cicutarium) the second most common species. Other species included a chickweed species, riggut brome, owls clover, tarweed, lupine and fiddleneck.



# BAKERSFIELD

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**KERN COUNTY RANGE TRIAL  
TWISSELMAN'S RANCH**

Cooperators: Twisselman's Ranch  
Ralph Phillips  
Walter Graves

Inoculated: 12.21.92  
Planted: 12.22.92

ROWS I, II - UPPER LOAM SITE  
ROWS III, IV - LOWER SANDY SITE

	I	II	III	IV	
	3	2	2	1	1. Trhi Olympus
	1	1	1	1	2. Trch Yamina
	1	1	0	0	3. Mela GR 209
	4	2	3	1	4. Mela GR 190
	4	2	1	1	5. Mela GR 185
	0	0	1	0	6. Mela GR 184
	4	2	0	1	7. Mela GR 151
	1	1	1	1	8. Mela GR 136
	0	0	1	1	9. Mela GR 60
	2	2	1	1	10. Mela GR 56
	1	1	0	0	11. Mela GR 814
	1	2	1	0	12. Mela GR 869
	2	0	1	0	13. Mela GR 139
	4	2	1	1	14. Mela GR 144
	2	2	1	1	15. Mela GR 146
	5	3	3	3	16. Mela GR 155*
	3	3	0	1	17. Mela GR 195
	6	4	2	2	18. Mela GR 205*
	1	2	1	1	19. Mela GR 210
	2	2	1	1	20. Mela GR 215

	I	II	III	IV	
21. Mela GR 220	6	2	1	1	
22. Mela GR 222	5	1	2	1	
23. Mela GR 776	6	3	1	2	
24. Mela #19	5	4	0	2	
25. Mela #14	4	3	0	1	
26. Mela #13	4	4	1	2	
27. Mela T 41041 (mela-3)	3	4	2	2	
28. Mela T 41039 (mela-1)	4	4	2	2	
29. Mela PI 498891	3	3	0	3	
30. Mela PI 498847	2	1	1	2	
31. Mela KRAKRA*	2	3	2	2	
32. Mepo MP 8	6	5	1	3	
33. Mepo MP 9*	3	4	3	2	
34. Mepo MP 5*	6	7	4	3	
35. Mepo SA 4230	5	4	3	1	
36. Mepo SERENA	4	5	1	2	
37. Meli HARBINGER	3	1	1	1	
38. Metr SEPHI	3	3	1	1	
39. Mesc SAVA	1	1	1	1	
40. Mepo SANTIAGO	3	4	2	1	

RATING DATE:

0-10, 0 = NO PLANTS, 1 = FEW PLANTS,

10 = COMPLETE COVER - RATED: 3/30/93

Trhi = rose clover  
Trch = cup clover  
Mela = cut-leaf medic  
Mepo = bur clover/medic  
Meli = strand medic  
Metr = barrel medic  
Mesc = snail medic