

Greenar Wheatgrass Hay Stage of Harvest Study - 1966
 Carl Olsen Ranch - 3 Miles East of Madeline, California
 Study conducted by Agricultural Extension Service, Lassen County, Calif.
 Data is average of 4 replications for each stage of harvest

CARL OLSEN RANCH

Stage of Harvest - - - - -	Boot	Early Flower	Mature
Date of Harvest - - - - -	6/27/66	7/21/66	8/10/66
Harvest Weight (lbs.)- - - - -	3.12	2.87	2.67
Moisture (%) - - - - -	60.10	49.15	38.02
Dry Matter (%) - - - - -	39.90	50.85	61.98
Dry Matter per Replication (lbs.) - -	1.24	1.46	1.65
Dry matter per acre (lbs.) - - - - -	1500	1767	1996
Crude Protein per acre (%) - - - - -	7.20	5.12	4.80
Crude Protein (lbs. per acre) - - - -	108.00	90.47	95.81
Ash (%) - - - - -	13.67	10.87	14.75
Ash (lbs. per acre) - - - - -	205.05	192.07	294.41
Fat (%) - - - - -	3.10	3.10	2.62
Fat (lbs. per acre) - - - - -	46.50	54.78	52.29
Fiber (%) - - - - -	27.07	27.95	25.00
Fiber (lbs. per acre)- - - - -	406.05	494.23	499.00
Digestible Protein (%)* - - - - -	3.21	1.28	.98
Digestible Protein (lbs. per acre) - -	48.15	22.62	19.6
Total Digestible Nutrients (%)* - -	38.99	36.17	37.91
Total Digestible Nutrients (lbs/a.) -	585	639	757

*The formulas used to determine D.P. and T.D.N. are those developed by R. S. Adams, Penn State Forage Testing Service, and are as follows:

$$D.P. = C.P. \times 0.929 - 3.48$$

$$TDN = 50.41 + 1.04 \times CP - 0.07 CP$$

Precipitation
Madeline, Calif.

Sept. 1965 to Aug., 1966

	1965				1966							
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
1						.10	.03					
2							.01					
3												
4		.02			.02		.04	.07	.07			
5							.03					
6							.02					
7			.04				.08			.14		
8						.05						
9							.02		.13		.47	
10							.02	.03				
11			.47					.01				
12			.02				.03				.06	
13												
14		.07	.12									
15			.02				.02					
16			.15				.02					
17			.48									
18			.05				.01					
19			.02									
20												.06
21												
22			.04			.05						
23			.18			.15						
24			.10									
25												
26												
27												
28												
29					.04				.45			
30					.02				.42			
31					.02				.05			
Total	1.00	.09	1.69	—	.10	.35	.33	.04	1.12	.14	.53	.06

From U.S. EDS

12 month total — 4.45

Temperature
 Terro, Calif.
 (Madeline Plains)
 April 1966 to Aug. 1966
 (From: U.S., E.D.S.)

1966

	April		May		June		July		Aug	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	79	29	77	22	57	36	76	37	92	45
2	70	32	79	21	56	25	64	28	95	45
3	63	27	81	31	60	28	77	26	94	57
4	66	29	80	39	69	21	84	26	93	50
5	72	23	73	44	70	26	81	39	92	47
6	72	26	69	37	62	46	86	35	94	45
7	72	35	77	24	61	40	80	38	94	50
8	65	26	79	40	74	40	81	35	92	49
9	54	36	69	45	74	46	74	48	92	44
10	55	32	68	41	70	44	74	34	93	49
11	49	27	62	28	72	30	70	30	88	47
12	53	25	70	30	79	30	73	35	89	40
13	62	17	70	32	88	40	77	33	90	45
14	70	19	63	33	89	43	77	35	92	44
15	70	25	70	23	89	30	80	28	96	49
16	72	34	70	30	84	40	81	30	93	53
17	62	29	72	26	87	41	84	33	92	45
18	46	21	75	36	85	37	88	36	89	44
19	47	10	83	29	85	39	90	41	88	42
20	57	10	83	38	75	42	87	38	84	41
21	56	24	84	39	75	33	90	40	86	45
22	62	19	75	37	66	35	94	41	88	43
23	70	22	72	33	69	36	91	45	86	37
24	74	26	81	29	71	32	87	46	87	37 31
25	69	34	86	36	80	36	87	37	79	46
26	57	28	84	37	85	35	88	35	69	36
27	60	12	80	36	90	39	90	32	83	30
28	64	13	79	36	87	42	91	36	86	31
29	69	16	79	36	82	41	97	40	84	35
30	71	20	56	42	83	37	77	50	78	36
31	-	-	56	32	-	-	88	50	76	29
Aver.	63.6	24.2	74.3	33.6	75.8	36.3	82.7	36.7	88.2	42.9