Plane Reservations  A. L. Hormay
Salt Lake City & return

August 20  4:25 PM  Lv. SF  WA #24
           6:53 "  Ar. SL City
August 24  9:00 AM  Lv. SL City WA #677
           9:37 "  Ar. SF

Round trip fare $185.00
David Little  
Post Office Box 68  
Emmett, Idaho 83617  

Dear Dave:

I saw definite improvement on the portions of the Indian Jake Allotment that have been managed under a good form of rest-rotation grazing for a period of years. You, Jim and Brad are to be commended for working so hard to get rest-rotation grazing applied. It is the basis for sustained production of livestock and other wildland values.

As you are finding out, it takes time to develop a practical grazing system for an area—one that maintains the vegetation and fits the range and livestock operation. Some of the systems on Indian Jake are near final form. Others have to be developed further.

Attached are my latest recommendations on the grazing formulas (systems) that apply on Indian Jake. Let me know if you have any questions about them or if I can be of any further assistance.

A statement for services to date is enclosed.

Sincerely,

A. L. Hormay

Enc.
GRAZING MANAGEMENT RECOMMENDATIONS

Indian Jake Allotment, Idaho
David Little, Permittee.

<table>
<thead>
<tr>
<th>Land ownership and jurisdiction.</th>
<th>ACRES</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Resource Land (BLM)</td>
<td>51,040</td>
<td>57</td>
</tr>
<tr>
<td>Private</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Little</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>26,980</td>
<td>30</td>
</tr>
<tr>
<td>Cultivated</td>
<td>1,500</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>1,370</td>
<td>2</td>
</tr>
<tr>
<td>State</td>
<td>8,120</td>
<td>9</td>
</tr>
<tr>
<td>Allotment total</td>
<td>89,010</td>
<td>100</td>
</tr>
</tbody>
</table>

RECOMMENDATIONS

The following bears on the improvement and maintenance of vegetation on the range under livestock grazing use. No suggestions are made on the amount of vegetation that should be allocated to various land uses and values.

Winter-spring range areas

Grazing formulas (systems)

3-treatment formula (3-pasture system)

4-treatment formula (4-pasture system)
The 3- and 4-pasture systems are equally effective in improving and maintaining the vegetation. The latter provides greater flexibility for managing livestock. The A, B and C treatments are the same in both systems.

Under treatment A, grazing may be continued through spring into summer if desired. Under treatment C, grazing should be terminated at the beginning of the main growing season. This treatment is designed to reduce plant competition to newly germinated perennial plant seedlings. Heavy grazing is desirable with this treatment.

Any or all of the pastures in both systems may be grazed in the fall of the year before the new grazing season starts, here arbitrarily set at January 1. After this date the pastures should be grazed according to formula. See following diagrams:

### Pasture Treatments

<table>
<thead>
<tr>
<th>Present Year</th>
<th>Next Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 A</td>
<td>2 B</td>
</tr>
<tr>
<td>2 B</td>
<td>3 C</td>
</tr>
<tr>
<td>3 C</td>
<td>4 D</td>
</tr>
<tr>
<td>4 D</td>
<td></td>
</tr>
</tbody>
</table>

Jan 1 Jan 1 Jan 1

#### Summer Range Areas

Grazing formulas (systems)

### 3-treatment formula (3-pasture system)

A

B

C

### 4-treatment formula (4-pasture system)

A

B

C

D

Jan 1 Flower stalks key grass in boot July 1 Seed ripe Main growing season Dec 31 Grazing Year
As in the case of winter-spring ranges the 3- and 4-pasture systems are equally effective. The 4-pasture system provides more flexibility in handling livestock. All pastures can be grazed in the fall if necessary. But only the pasture getting treatment C in the 4-pasture system can be grazed without some possible adverse effects on livestock and other values.

The 3-pasture system described here is usually more practical on montainous summer ranges than the 4-pasture system. It offers the most promise on Indian Jake.

A. L. HORMAY
August 8, 1979
August 7, 1979

David Little
Post Office Box 68
Emmett, Idaho 83617

Dear Dave:

For consulting services June 10-13, 1979, Indian Jake, Bear Valley and Landmark ranges.

<table>
<thead>
<tr>
<th></th>
<th>Personal and other services $</th>
<th>Meals, lodging, etc. $</th>
<th>Plane fare $</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 10</td>
<td>200.00</td>
<td>50.00</td>
<td>San Francisco to Boise and return</td>
</tr>
<tr>
<td>11</td>
<td>200.00</td>
<td>50.00</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>200.00</td>
<td>50.00</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>200.00</td>
<td>50.00</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>800.00</td>
<td>200.00</td>
<td>154.00</td>
</tr>
</tbody>
</table>

Total $1,154.00

Hope I can be of help to you in the future.

A. L. Hormay

A. L. Hormay
August 8, 1979

MEMO TO: Joe Lane, Dean Rhoads
FROM: Ronald A. Michieli
SUBJECT: Grazing Systems vs: Stocking Intensities

Enclosed, a reprint from the July 1974 Journal of Range Management which should be of interest to you.

I have great difficulty in accepting the Van Poollen and Lacey conclusions since here again they carry no relationship between past reductions and range trend data which is sorely missing.

cc: Bill Swan
    Gus Hormay
    Jim Smits
Herbage Response to Grazing Systems and Stocking Intensities

H. WALT VAN POOLLEN AND JOHN R. LACEY

Abstract

A review of pertinent literature shows that grazing systems and grazing intensities both influence herbage production on Western ranges. Mean annual herbage production increased by 13% when grazing systems were implemented at a moderate stocking intensity. Increases were larger (35% and 27%) when continuous livestock use was reduced from heavy to moderate, and moderate to light, respectively. This suggests that adjustments in livestock numbers have a greater effect on herbage production than do grazing systems.

Grazing systems are being implemented on Western ranges by land management agencies. These agencies use studies by Horney and Talbot 1961, Horney and Evanko 1958, Merrill 1954, Reardon and Merrill 1976, Martin 1973, and Hickey and Garcia 1964, among others, to support this action. These grazing system studies report better livestock distribution, greater herbage and livestock production, and improved range condition. However, literature reviews (Hickey 1968; Heady 1961; Herbel 1971; and Shiflet and Heady 1971) also summarize grazing system studies which report nonsignificant forage responses, reductions in livestock production, and cost increases. Some researchers (Heady 1961; Mathis and Kothmann 1968; Cook 1966; and McMeekan 1956) feel that vegetation is affected more by grazing intensity than by grazing systems.

One objective of this paper is to review and analyze data from grazing system and grazing intensity studies. The second objective is to determine whether livestock adjustments have a greater effect on herbage production than do grazing systems.

Methods

We have compared specialized grazing systems to continuous grazing. Heady (1961) treated rotation, deferred, rest rotation, and deferred rotation systems as specialized systems and considered season-long and year-long grazing to be continuous use. This approach is logical because differences between vegetative types and periods of use and nonuse make it difficult to compare one specialized system to another.

Herbage production data are the most reliable measure of grazing management procedures (Kipple 1960). Consequently, grazing studies were reviewed to find those which compared herbage production data under continuous use and specialized grazing systems. Results were used only from studies describing use at a moderate level (40-60%). Herbage production under the respective systems was tabulated from each of 18 studies and the difference in productivity between the grazing systems and continuous are determined. An average difference for all studies was calculated. An average difference was also calculated for the four geographic regions. These means were compared by an analysis of variance. We have used these average differences as a measure of the vegetal response that can be expected when a specialized grazing system is implemented.

Differences in herbage production under light, moderate, and heavy livestock use were also tabulated from 14 studies. Results were used only from studies describing use at a comparable level as follows: heavy, 60-80%; moderate, 40-60%; and light 20-40%. Average differences between production at the three use levels were calculated. An average difference was also calculated for two geographic regions. These means were compared by an analysis of variance. We have used these average differences as a measure of the vegetal response which can be expected when livestock use is reduced from heavy to moderate, and from moderate to light, respectively.

Results and Discussion

Herbage Response to Grazing Systems

Herbage production averaged 13% higher when livestock use was controlled by a specialized grazing system, rather than being continuous (Table 1). Two of the studies (Hamilton et al. 1978)...

Fig. 1. Herbage production response for three geographical areas under different grazing intensities (heavy to moderate, moderate to light and under grazing systems. Nodes represent means and confidence intervals at 95%.

Both authors were employed by the Bureau of Land Management as range conservationists in Southern New Mexico. Van Poollen is now at the Department of Agricultural Economics, Utah State University, Logan. The authors wish to thank Dr. Robert P. Gibbons and Dr. Pat O. Currie for their helpful discussions.

Manuscript received May 30, 1978.

JOURNAL OF RANGE MANAGEMENT 32(4), July 1979
Northwest because of the restricted number of studies. The analysis of variance showed the means were not significantly different. However, Table 1 suggests that responses in the Flint Hills and Texas regions are similar, and that these are different from the responses in the Northern Great Plains. The data also suggest that additional research is needed in the Southwest before geographic differences can be fully analyzed.

Variation measured on different range sites at or near the Santa Rita Experimental Range (Martin and Ward 1976); in the Flint Hills region (Herbel and Anderson 1959); and in the Texas region (Kothmann et al., 1975) is similar to the variability between geographical regions. Therefore, the 13±8% increase is a realistic estimate of mean herbage response to grazing systems on Western ranges.

Herbage Response to Grazing Intensity

Herbage responses are fairly consistent when livestock numbers are reduced on Western ranges (Tables 2 and 3). Mean herbage production increases 35 and 28% when use is reduced from heavy to moderate, and from moderate to light, respectively. Currie and Smith (1970) studied seeded pastures, the remaining native ranges. Cook's (1971) study was omitted from the analysis because he used a clipping technique to simulate livestock grazing on seven plant species. Data from Smith (1970) and Skovlesn (1976) were not analyzed because their utilization levels were lighter than those considered in this analysis.

Only two geographic regions had enough studies to permit comparison on native ranges (Fig. 1, Tables 2 and 3). The analysis of variance showed no significant difference. However, the response from reducing livestock use from heavy to moderate in the Flint Hills (42±65%) was higher than it was in the Northern Great Plains (25±27%). But the response from reducing livestock use from moderate to light was greater in the Northern Great Plains than in the Flint Hills. The differential response may reflect the interplay of short-, mid-, and tall-grass species.

Variation between range sites measured in South Dakota (Lewis et al. 1956) and in the Flint Hills (Herbel and Anderson 1959) is similar to the variability between geographical regions. Therefore, the 35±14%, and the 28±13% increases are realistic estimates of mean herbage response to livestock adjustments that reduce use from heavy to moderate, and moderate to light, respectively.

Management Implications

Tables 2, and 3 can be interpreted to predict herbage response to grazing management procedures on Western ranges. Herbage production can be expected to increase an average of 13±8% when grazing systems are implemented. Federal land management agencies could also use the 13±8% increase as a basis for associated livestock and socio-economic predictions in their environmental impact statements.

Geographically, herbage response to grazing systems was most variable in the Southwest. This variation (6±41%) makes it difficult, if not impossible to predict consistent herbage response. Therefore, it appears that livestock adjustments become increasingly important as a management tool in this region. In contrast, herbage response to grazing system implementation is less variable in Texas. Thus, it becomes a more feasible management tool in this region.

It is not possible to evaluate grazing system implementation at a light stocking intensity. Gibbens and Fisser's (1975) study

<p>| Table 3. Herbage production (lb/acre) under two grazing intensities and mean differences in production for 12 studies in 8 geographic areas. |
|---------------------------|-------------------|-------------------|-------------------|</p>
<table>
<thead>
<tr>
<th>Author</th>
<th>Moderate</th>
<th>Light</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Great Plains</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hanson et al. 1970</td>
<td>2092</td>
<td>3700</td>
<td>77</td>
</tr>
<tr>
<td>Johnson et al. 1971</td>
<td>1571</td>
<td>2046</td>
<td>30</td>
</tr>
<tr>
<td>Lewis et al. 1976</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ridges</td>
<td>1091</td>
<td>1059</td>
<td>5</td>
</tr>
<tr>
<td>South slopes</td>
<td>1300</td>
<td>1289</td>
<td>-1</td>
</tr>
<tr>
<td>North slopes</td>
<td>1343</td>
<td>1389</td>
<td>3</td>
</tr>
<tr>
<td>Draw</td>
<td>2231</td>
<td>2885</td>
<td>29</td>
</tr>
<tr>
<td>Reed et al. 1971</td>
<td>381</td>
<td>564</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>( \bar{x} = 27% )</td>
<td>( \bar{s} = 11)***</td>
<td></td>
</tr>
<tr>
<td>Flint Hills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herbel et al. 1959</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ord. upland</td>
<td>1749</td>
<td>2080</td>
<td>19</td>
</tr>
<tr>
<td>Limestone break</td>
<td>1419</td>
<td>1916</td>
<td>28</td>
</tr>
<tr>
<td>Clay upland</td>
<td>1116</td>
<td>968</td>
<td>-13</td>
</tr>
<tr>
<td>Launuchbaugh 1957</td>
<td>1245</td>
<td>1963</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>( \bar{x} = 23% )</td>
<td>( \bar{s} = 15)***</td>
<td></td>
</tr>
<tr>
<td>Colorado Seeded Range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currie et al. 1971</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agropyron cristatum</td>
<td>1270</td>
<td>1264</td>
<td>0</td>
</tr>
<tr>
<td>Bromus inermis</td>
<td>755</td>
<td>787</td>
<td>4</td>
</tr>
<tr>
<td>Ager and Brin</td>
<td>1578</td>
<td>1479</td>
<td>-6</td>
</tr>
<tr>
<td>Agropyron intermediate</td>
<td>894</td>
<td>907</td>
<td>2</td>
</tr>
<tr>
<td>Elymus junceus</td>
<td>638</td>
<td>885</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>( \bar{x} = 8% )</td>
<td>( \bar{s} = 8)***</td>
<td></td>
</tr>
<tr>
<td>New Mexico</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valentine 1970</td>
<td>77</td>
<td>159</td>
<td>106</td>
</tr>
<tr>
<td>Colorado</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smith 1967</td>
<td>+85</td>
<td>+18</td>
<td>-79</td>
</tr>
<tr>
<td>Wyoming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pond 1961</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granite soil</td>
<td>.74</td>
<td>.9</td>
<td>72**</td>
</tr>
<tr>
<td>Sedimentary soil</td>
<td>1.48</td>
<td>2.58</td>
<td>74**</td>
</tr>
<tr>
<td>Utah</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cook 1971</td>
<td>-11%</td>
<td>+17%</td>
<td>255*</td>
</tr>
<tr>
<td>Pacific Northwest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skovlesn et al. 1976</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grassland</td>
<td>+57</td>
<td>+43</td>
<td>-25*</td>
</tr>
<tr>
<td>Forest</td>
<td>-128</td>
<td>-108</td>
<td>16*</td>
</tr>
<tr>
<td>Average for Western Range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>( \bar{x} = 28% )</td>
<td>( \bar{s} = 33)***</td>
<td></td>
</tr>
</tbody>
</table>

Treated as outliers, and not included in the analysis. Measured in grams per plant. Confidence interval of the mean was calculated at a 95% level.

on a big sagebrush range is most applicable. They felt that a light stocking rate was the reason vegetal cover did not show differences between rest rotation, deferred, or seasonlong grazing.

It is possible to compare the alternatives of implementing a grazing system at moderate use or of reducing livestock numbers to a light level. For example, in the Northern Great Plains, herbage response will increase by 27±21% when livestock use is reduced from moderate to light. Herbage response to grazing systems averages -0.7±9%. In this situation, livestock adjustments may be more economically feasible for an individual operator (Klipple and Bement 1961). But land management agencies must consider social, economic, and

252 JOURNAL OF RANGE MANAGEMENT 32(4), 1979
Berkeley, California
August 10, 1979

Dear Bill:

The following excerpts are from a memorandum from me to the
Director of the Pacific Southwest Forest and Range Experiment Station,
Berkeley, California, in March 1977. They will give you some idea of
my plans and needs for completing my studies and publishing more on
rest-rotation grazing and multiple-use land management.

"You no doubt are aware that I will be reaching
mandatory retirement age in May. It is all too soon.
I have not completed my research at the Station nor
brought it to a satisfactory stage yet. This I
would like to do with the help of the Station after
I "retire."

I have considerable data in my files ready for
casting into manuscripts. Several field studies
could be concluded and others brought to a reportable
stage with another set of measurements. Some of
these studies span periods of 20 to 40 years. No one
is likely to repeat them. Several publications could
be generated in the next few years."

(Bill! See a list of subjects attached. I feel item
8 would be of great value to ranchers, agencies and
environmentalists. The need for it has become in-
creasingly urgent in the last year. It would be a
first priority publication. A copy of the 1970 issue
of TT-4 (2200) is enclosed.)

"Rest-rotation grazing, the principle result of
my work, is the first major advance in range manage-
ment in over fifty years.

My need is for office space, support services, a
secretary and technical assistants, the latter to
help complete field and laboratory studies, compile
and analyze data and write reports and manuscripts."
To date, the Station has not been in a position to supply me with more than office space and some typing help. I have worked regularly at the Station as any permanent employee, voluntarily and without compensation, since "retiring." I have borne the expenses of field work, travel and incidentals.

My need is for one technical assistant and a full time secretary. I would like the assistant to be from Forest Service administration, a man who has had on-the-ground experience and is or has been a district ranger. I visualize this man going back to administration in 3 or 4 years to a position where he could promote the principles of rest-rotation grazing and multiple-use land management.

I estimate it would take about $75,000 to $80,000 a year to fund such a program. I will be glad to discuss details with the Forest Service if it is interested. I could use the help immediately.

A. L. HORMAY
Prospective publication subjects:

1. Seed germination - bitterbrush
2. Reproduction - bitterbrush
3. Grazing and resting on growth - bitterbrush
4. Management - bitterbrush
5. Effect of logging and vegetation regeneration on grazing capacity, pine type, northeastern California
6. Effect of moving cattle between pastures on weight gains
7. A method for monitoring vegetation changes on rangelands for land managers
8. Revised edition of Training Text-4 (2200), Principles of rest-rotation grazing and multiple-use land management
REPLY TO: 1630 Written Information

SUBJECT: Perennial-Type Range Research Program

TO: A. L. Hormay, Berkeley

Attached is a listing of completed and uncompleted study titles and manuscript dates submitted by you to Station Director Callaham in an undated memorandum. Also attached is a memorandum dated May 31, 1977 which responds to your request for financial support. In general our response was that manuscripts should be prepared on completed studies. Although, before final decision is made on support for manuscript preparation we would have to review the proposed manuscript outlines.

In order for us to consider support for manuscripts we need:
(1) Specific manuscript titles, (2) outline of manuscript, (3) manuscript completion date, (4) an estimate of funds necessary to complete the manuscript and (5) if the manuscript will not be completed this FY how much support is needed for manuscript preparation this current year.

I sincerely hope we can resolve the question of financial support soon after we receive your reply.

GALE L. WOLTERS
Project Leader
FWU 1701
TITLES OF SOME PROSPECTIVE PUBLICATIONS
FROM MOUNTAIN RANGE STUDIES

Completed studies

1. Bitterbrush seed germination

2. Effect of logging on grazing capacity, pine type northeastern California

3. Effect of moving cattle between pastures on weight gains

Manuscript date

April 1978

June 1978

September 1978

Uncompleted studies

1. Reproduction in bitterbrush

2. Effect of grazing and resting on the vigor and growth of bitterbrush

3. A method for appraising vegetation changes on range lands

4. Effect of forest regeneration on grazing capacity, pine type northeastern California

5. Effect of forest regeneration on bitterbrush and other shrubs, pine type, northeastern California

6. Regeneration of conifers and shrubs following cutting in the mixed conifer type, northeastern California

7. Management of bitterbrush

Manuscript date

January 1979

April 1979

September 1979

January 1980

April 1980

September 1980

December 1980

Other - the Harvey Valley Demonstration Area

1. Revised plan

2. Progress report (in service use)

Manuscript date

February 1978

June 1979
REPLY TO: 1630 Written Information

SUBJECT: Perennial-Type Range Research Program

TO: Charles W. Philpot, Assistant Director

The following comments are in regard to support for A. L. Hormay research and writing after his retirement.

Completed studies (see attachment) were generally supported by the old perennial grass project (PSW).

Bitterbrush seed germination--In 1967 the old perennial grass range project supported completion of this study. It should be written for publication.

Effect of logging on grazing capacity, pine type northeastern California--In 1967 the old perennial grass range project supported remeasurement of the plots, and contributed programming and data processing assistance. The results of this long term study are still of value and should be published.

Effect of moving cattle between pastures on weight gains--Matliff, Reppert, and McConnel (1972) reported on the 14 possible comparisons of effects of moving cattle between pastures. The data used was the same as Hormay would use here. We see little value in a second publication on this subject. Hormay has information on the effects of shrink on cattle weights, and it seems to us that publication of those effects would be of greater value.

A method for appraising vegetation changes on range lands--We feel that this study is a continuation of the work reported by Hormay in 1949. Completion of the study would likely involve remeasurement of the range condition and trend transects on the Harvey Valley allotment. The first records on these transects are from 1956-57. They were remeasured in 1962-63 and again by PSW in 1968 using the procedures stipulated by Hormay--with the exception that seedlings and their locations were not noted. These data (for all years) have been summarized by E.D.P. We would be happy to make the summaries available to Hormay so that he may further develop and publish on his method. However, we see no justification in remeasuring the transects at this time.
Effect of forest regeneration on grazing capacity, pine type northeastern California—There have been recent publications of this nature from the PNW station. We feel little is to be gained by financing additional field work.

However, before final decision is made on support for completed studies we would have to review manuscript outlines and consider level of funding required.

Our present thoughts are that we can not justify funding for uncompleted studies. E. C. Nord published on bitterbrush life history and Hubbard has several articles on bitterbrush. Uncompleted bitterbrush studies (1,2,5,6, and 7) are old long term studies that may contribute significantly to current knowledge without further field work. Before we would consider additional field work, we would have to know what his present data base is for each study and what questions additional sampling would resolve.

Other—the Harvey Valley demonstration area—In 1968 the station closed up shop in Harvey Valley. The Region took over specified condition and trend measurements such as Parker-3 step transects with the understanding that the station would no longer be involved in evaluating the rest-rotation program there. About that time we were given to understand that (because of the similarity of vegetation) range research in northeastern California would henceforth be the responsibility of the PNW station. In addition, Research Paper PSW-77 and the 1968 in service report are available and adequately tell the story of rest-rotation at Harvey Valley during the first 10 or so years. Therefore, we do not feel the station can justify additional expenditures on the rest-rotation program at Harvey Valley.

In our view, a far more valuable contribution can be made by Horsey in the following manner. Over the last several years he has been involved in the establishment of rest-rotation programs on many forest and BLM grazing allotments throughout the West. We would like to see a paper summarizing the vegetation and livestock responses on and the attitudes of permittees and administrators dealing with allotments under rest-rotation programs. A summary type paper such as this possibly would be supported cooperatively by BLM and NFS.

GALE L. WOLTERS
Project Leader
August 21, 1979

August L. Horman
Range Conservationist
Bureau of Land Management
P.O. Box 245
Berkeley, CA 94701

Dear Gus:

To let you know that I have not forgotten about you and a previous request for a speaking engagement.

Our Public Lands Executive Committee met and the request for your appearance was discussed. Regretfully, the finances preclude any paid participation.

Perhaps something can be arranged in the future so that the full expression of your talents will be given the public exposure they so rightfully deserve.

Meanwhile, continue your efforts. You really perform a service.

Sincerely,

[Signature]

Ronald A. Michieli
Director, Gov't. Affairs For Land & Natural Resources

RAM/das

cc: Dean Rhoads
    Joe Lane
    Bill Swan

Serving The Nation's Beef Cattle Industry
RR-MULand Management Course  
Utah N.F. Prado Utah  
Aug 20-24, 1979

Expenses (charges)  
<table>
<thead>
<tr>
<th></th>
<th>Fee</th>
<th>Meals/Lodge</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Aug 20</td>
<td>200</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>&quot; 21 &quot;</td>
<td>200</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>&quot; 22 &quot;</td>
<td>200</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>&quot; 23 &quot;</td>
<td>200</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>&quot; 24 &quot;</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>Total</td>
<td>800</td>
<td>200</td>
<td>1000</td>
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Airplane fare SF-Salt Lake City  186
Airport parking                   14
Car mileage; Residence airport 18x20 ft  4
35mm color film and processing; prints 36  73
Other absorbed                   0

\[410 \times 5.00 = 2050\]
\[8 \times 8 \times 5.00 = 12777\]

\[3280 + 46.80 = 72.80\]

Charge \# 1200
RK Provo Utah
Aug 23 1979

Over all concern, proper land manager
My background.

1) Role of livestock grazing

Subjects to be discussed today

2) Past-rotation grazing principles

3) How to appraise range condition
   and trend

4) Review management on the
   sheep allotments visited yesterday
   and the day before

Med Creek  cattle
Lee Okabrun sheep
Hobble Creek  cattle
Diamond Fork  cattle

5) Review questions raised on
    Trex, Mod.

XXX  "District Ranger"
<table>
<thead>
<tr>
<th>Slide Nos</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-21</td>
<td>Renewable resources</td>
</tr>
<tr>
<td>23-32</td>
<td>Condition</td>
</tr>
<tr>
<td>34-58</td>
<td>Ecology</td>
</tr>
<tr>
<td>60-62</td>
<td>Soil formation</td>
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</tbody>
</table>
| 64-66     | Plant successions
| 68-75     | Time         |

- **Why plant killed**
- **Rate recovery**
- **Density**
- **Composition**
- **Herbaceous perennials**
- **Shrubs, trees**
- **Annuals**
- **The problem, selective grazing**
- **Plant growth, food reserves**
- **Theory**

<table>
<thead>
<tr>
<th>Trays 3 &amp; 4</th>
<th>Results</th>
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<tbody>
<tr>
<td>1-12</td>
<td>Harvey Valley</td>
</tr>
<tr>
<td>13-31</td>
<td>Matador</td>
</tr>
<tr>
<td>32(31)-44</td>
<td>Hard Calc</td>
</tr>
<tr>
<td>45-47</td>
<td>Brave for, Modus, Little</td>
</tr>
</tbody>
</table>
Slides Uinta

Slide Nos. | Subject
------------|-------------------------
Traps 3 & 4

50-

Rate recovery
HV Enclosure 2
Brome Tectorum Conversion Unit 2
Enclosure #5
Excl. #2 spraying
ARE Ph

72-
Unit #3 " tractor blower
End Excl. #4
AUGUST L. HORMAY  
RANGE MANAGEMENT CONSULTANT  
101 ACADIA STREET • SAN FRANCISCO, CALIFORNIA 94131  

TO: U. S. Department of Agriculture  
   National Finance Center  
   P. O. Box 60075  
   New Orleans, Louisiana 70160

PURCHASER:  
   Uinta National Forest  
   88 W. 100 N.  
   Provo, Utah 84601

PURCHASE ORDER NO. 40-84A0-9-334

SERVICE:  
   Conducted a 3-day course in Rest-Rotation Grazing Management

DATE:  
   August 21 - August 23, 1979

PRICE PER DAY: $400.00

TOTAL AMOUNT: $1,200.00

A. L. "Gus" Horman
## UNITED STATES DEPARTMENT OF AGRICULTURE
### PURCHASE ORDER

<table>
<thead>
<tr>
<th>PAGE NUMBER</th>
<th>CONTRACT NUMBER</th>
<th>ORDER DATE</th>
<th>ORDER NUMBER</th>
<th>SUB</th>
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<td>1 of 1</td>
<td>0.M.</td>
<td>082079</td>
<td>40-8440-9-334</td>
<td></td>
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</table>

**CHECK ONE**
- Purchase Order (See Reverse)
- Delivery Order

**TO:** (Seller)
Pacific SW Forest Range Exp. Station
P.O. Box 245
Berkeley, CA 94701
ATTN: GUS HORDAY

**SHIP TO:** (Consignee and Destination)
Uinta National Forest
88 W. 100 N.
Provo, UT 84601

### LINE ITEM | ACT CODE | DESCRIPTION | QUANTITY | UNIT ISSUE | UNIT PRICE | AMOUNT |
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>01</td>
<td></td>
<td>Rest Rotation System Training (Range) (8/21 - 8/23/79)</td>
<td>3</td>
<td>DAY</td>
<td>460.00</td>
<td>1200.00</td>
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</tbody>
</table>

**FOB POINT**

**DISCOUNT TERMS**

**TIME FOR DELIVERY**

**SHIP VIA**

**Aug 21 - Aug 23, 1979**

**BILLING INSTRUCTIONS:**

Furnish invoice with our ORDER NUMBER to:
U.S. DEPARTMENT OF AGRICULTURE
National Finance Center
P.O. Box 60075
New Orleans, Louisiana 70160

FAILURE TO SHOW OUR PURCHASE ORDER NUMBER ON INVOICE WILL DELAY PAYMENT

**FREIGHT CHARGE OVER $25 REQUIRES BILL OF LADING**

**ISSUING OFFICE NAME AND ADDRESS**

Uinta National Forest
88 W. 100 N.
Provo, UT 84601

**ORDERED BY** (Name and Title)

Carol A. McFarland, Contract Specialist
PHONE (Area Code and Number)
(301) 377-5780, FAX-584-0277

**AUTHORIZED SIGNATURE**

(SELLER'S ORIGINAL)