Report on
EXTENSION REST-ROTATION GRAZING

Following is a report on my trip to the Ochoco Forest, R-6, October 3-5:

I came in contact with both Forest Service and Bureau of Land Management personnel on this swing. The Ochoco Forest sought advice on starting rest-rotation grazing on two allotments, Big Summit and South Gray Butte, and the BLM in further details on a rest-rotation grazing plan for the Jackson allotment near Hampton, Oregon, which I visited in July 1960.

Ochoco Forest Projects

Big Summit Allotment. This range is being converted from sheep grazing to cattle grazing under the same permittee. The forest has planned a 5-unit rest-rotation system for allotment. Fencing was started during the summer and cattle will be grazed on the area in 1962. The grazing plan will be put into effect in the units fenced by that time. The permittee is bearing the cost of fence construction.

This allotment is covered by pine, sagebrush, grassland and meadow types typical of the mountains of eastern Oregon. It was formed from four small sheep allotments and is U shaped. Encompassed in the U, is an extensive sagebrush-meadow flat (Big Summit Prairie) owned by the permittee. Because of distances between units, particularly across the open end of the U and because of the dense timber cover, it is not practical to gather and move cattle between units during the season.

The 5-units grazing plan, worked into nearly final form while I was on the forest, was designed to make moving cattle between units unnecessary. This was possible because of the proximity of range owned by the permittee. Cattle are moved from Big Summit Prairie into the appropriate allotment units at the proper time.

In this plan, 3 units out of 5 are grazed each year. Cattle are put into 2 units at the beginning of the grazing season and kept there until the end of the season. Additional cattle are put into the third unit at seed ripening time and these too are left for the remainder of the season. The season on the allotment is July 1 to September 30. Range improvement and maintenance are well provided for in this plan. I have since heard from the forest that the permittee likes the plan. A description of this allotment and a diagram of the rest-rotation grazing plan are attached.

South Gray Butte Allotment. This range is part of the Crooked River National Grassland but it includes relatively little tillable land. It is mountainous and is covered mainly by juniper and sagebrush types.
Conditions on the range vary from poor to good. Production of forage and livestock is only about half of potential. Near future increases in grazing capacity can be expected, mainly from increased plant vigor, artificial reseeding, and spraying.

The forest has prepared a 6-unit rest-rotation plan for the allotment and is moving on a fencing program. This plan was adjusted slightly as a result of my visit. The latest, and probably final plan, is attached, together with a writeup of the allotment.

Forest Interest

All men concerned with range and wildlife on the forest (the supervisor and his immediate staff, the 4 district rangers and their assistants, including some forest management personnel, and the men handling the national grassland area) went on the field trips and attended the indoor discussions on rest-rotation grazing and on problems and plans for the allotments. A total of 8 hours in 2 days was given to office sessions. The enthusiasm and interest of the men indicated these were highly profitable. Donald Robbins and Mark McBride of B.L.M. joined the forest group the second day when the South Gray Butte allotment was visited and discussed.

Jackson Allotment (B.L.M.). The Bureau of Land Management is going ahead setting up the Jackson allotment as a demonstration area for rest-rotation grazing and other range improvement practices. I reviewed the management plan for this area with Mr. Robbins and Mr. McBride in their Prineville office.

Fencing of the area is completed. Some water development, reseeding spraying and larkspur control remain to be done in the next few years. However, grazing management will be started next year.

The ultimate rest-rotation grazing plan for the allotment calls for use of 7 units. However, because of shortage of water in one unit at present and certain aspects of the larkspur problem, grazing will be started using a 6-unit rotation plan. See attached diagram. When the water and larkspur problems are resolved, the 7-unit plan will be put into effect. This should prove to be a good demonstration for what may be expected from a rather dry, deteriorated range.

With this report, I am making the last request for counsel on rest-rotation grazing that has come to the station this fiscal year.

Attachments

Orig & cc WO
cc: Hormay

A. L. HORMAY

A HORMAY: dn
Cleon L. Clark, Supervisor

Region 6  National Forest  Ochoco  State Oregon

Saver Dist  Big Summit  Acre  Big Summit  Date examined 10/3/61

Personal presence: Yes

Andrew C. Wright, Asst. RWL

(Forest-cont'd)

Lee Simon, Ranger, Snow Mt. Dist.
Joseph M. Mohan, Crooked River LU Proj.
Joseph Chapman, Asst.

Eugene W. Wilton, RWL staff
Don James, Ranger, Big Summit Dist.
Gray Turner, Asst. Rgr.
James L. Davis, Forester
George Boyeson, Ranger, Prineville Dist.
James L. Martin, Asst. Rgr.
Joseph Swank, Forester
Donald Campbell, Dist. Rgr. Pauling Dist.
James Overbay, Asst. Rgr.

WEATHER OF EXTENDED CMEASUREMENT PERIOD

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Class of stock Cattle  Number 600  Age 1300

Season of growth July 1  Sept. 30 (3 months)

Character of forage gently sloping to moderately steep

Table: Analysis of area of vegetation:

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Acreage</th>
<th>On-Acre</th>
<th>In-Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conifer (pine, fir)</td>
<td>34,500</td>
<td>9,000</td>
<td>25,000</td>
</tr>
<tr>
<td>2. Sagebrush, big</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>3. Sagebrush (rigida)</td>
<td>3,000</td>
<td>500</td>
<td>1,500</td>
</tr>
<tr>
<td>4. Grassland</td>
<td>10,000</td>
<td>5,000</td>
<td>9,000</td>
</tr>
<tr>
<td>5. Wet meadow</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>6. Juniper</td>
<td>4,000</td>
<td>2,000</td>
<td>3,500</td>
</tr>
</tbody>
</table>

Total 55,000 20,000 42,500
Table A -- Anticipated changes in annual production, 1966, from planned cultural practices

<table>
<thead>
<tr>
<th>Cover type</th>
<th>Area (Acres)</th>
<th>Total (Total Acreage)</th>
<th>Yields (Yield Acreage)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(per Acre)</td>
<td>(per Acre)</td>
<td>(Total Acreage)</td>
</tr>
<tr>
<td>Conifer</td>
<td>13.0</td>
<td>692</td>
<td>10.0</td>
</tr>
<tr>
<td>Sagebrush, big</td>
<td>20.0</td>
<td>25</td>
<td>15.0</td>
</tr>
<tr>
<td>Sagebrush (rigida)</td>
<td>50.0</td>
<td>10</td>
<td>50.0</td>
</tr>
<tr>
<td>Grassland</td>
<td>10.0</td>
<td>500</td>
<td>7.0</td>
</tr>
<tr>
<td>Wet meadow</td>
<td>2.0</td>
<td>1,500</td>
<td>1.5</td>
</tr>
<tr>
<td>Juniper</td>
<td>10.0</td>
<td>200</td>
<td>7.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10.0</strong></td>
<td><strong>2,927</strong></td>
<td><strong>7.0</strong></td>
</tr>
</tbody>
</table>

Table B -- Anticipated changes in grazing intensity from planned cultural practices

<table>
<thead>
<tr>
<th>Cover type</th>
<th>Area (Acres)</th>
<th>Forage 1</th>
<th>Forage 2</th>
<th>Good to Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Acres)</td>
<td>(Acre%)</td>
<td>(Acre%)</td>
<td>(Acre%)</td>
<td>(Acre%)</td>
</tr>
<tr>
<td>Sagebrush, big</td>
<td>250</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grassland</td>
<td>250</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table C -- Anticipated changes in grazing capacity of areas grazed at present

<table>
<thead>
<tr>
<th>Cover type</th>
<th>Utilization</th>
<th>Proportion</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>of forage 1</td>
<td>of species</td>
<td>forage species cover</td>
</tr>
<tr>
<td></td>
<td>(percent)</td>
<td>(L, M, H)</td>
<td>(percent)</td>
</tr>
<tr>
<td>Conifer</td>
<td>20</td>
<td>H</td>
<td>50-50</td>
</tr>
<tr>
<td>Sagebrush, big</td>
<td>20</td>
<td>M</td>
<td>30-70</td>
</tr>
<tr>
<td>Sagebrush (rigida)</td>
<td>50</td>
<td>L</td>
<td>5-95</td>
</tr>
<tr>
<td>Grassland</td>
<td>15</td>
<td>M</td>
<td>50-50</td>
</tr>
<tr>
<td>Wet meadow</td>
<td>90</td>
<td>M</td>
<td>95-5</td>
</tr>
<tr>
<td>Juniper</td>
<td>15</td>
<td>M</td>
<td>50-50</td>
</tr>
<tr>
<td><strong>Allotment average</strong></td>
<td>25</td>
<td>M</td>
<td>50-50</td>
</tr>
</tbody>
</table>
ANALYSIS AND SUGGESTIONS

1. Total anticipated increase in grazing capacity in 30 years above present level 100 percent.

2. General sources of increased grazing capacity

   Management of grazing
   Cultural practices

   Percent
   99 1

3. Specific sources of increased grazing capacity. (Pertinent factors are checked; the most important are circled)

(a) Management of grazing

   (1) Increase in plant vigor and yield

   (2) Change in plant composition

   (3) Increase in vegetation density

   (4) Greater use of forage on areas now grazed

   (5) Use of areas not grazed at present

(b) Cultural practices

   (1) Artificial seeding

   (2) Spraying

   (3) Other
Comments - Big Summit

Stocking. There appears to be adequate forage on the allotment for the 600 head of cattle to be permitted. These replaced 4,000 head of sheep - ratio 1 cow for 6.7 sheep.

Season of Grazing. The present season, July 1 - September 30, will be continued until need for change is indicated and is in the interest of both the range and livestock. An earlier beginning date of approximately June 1, with corresponding reduction in numbers but holding to 1,300 animal months' use, would increase livestock production and not jeopardize range improvement and maintenance.

Range Response. Improvement of this range will occur slowly, both because there is relatively little room to grow more forage on some areas (pine types) and because of poor range condition on others (sagebrush types). However, increased plant vigor, greater use of forage now within range of grazing and use of new areas made possible by cross fencing and development of more water, should permit heavier stocking in the near future.
TWO YEAR REPORT

Forest  6 National Forest Ochoco  State OREGON
Project District  Crooked River  National Grassland  Area  South Gray Butte  Date examined 10/4/61.

Personal Curry, In Chief  OR  INSPECTION
Andrew C. Wright, Ass't. RML

Bureau of Land Management:
Donald Robbins, Dist. Mgr.
Mark McBride, Range Mgr.

Cleon L. Clark, Supervisor
Eugene W. Wilton, RML staff
Don James, Ranger, Big Summit Dist.
Gray Turner, Ass't.
James L. Davis, Forester
George Boyeson, Ranger, Prineville Dist.
James L. Martin, Ass't. Rgr.
Joseph Swank, Forester
Donald Campbell, Dist. Rgr. Pauling Dist.
James Overbay, Ass't. Rgr.

X  March 1, 1961
X  June 1, 1961

Lee Simon, Ranger, Snow M. Dist.
Frank Barnhardt, Ass't. Rgr. Snow M. Dist.
Joseph M. Mohan, Crooked River LU Proj.
Joseph Chapman, Ass't.

SUMMARY OF RESULTS (A. G. A.)

State of stock  Cattle  Tones  300  Hts.  2078
State of pasture  May 1 to Nov. 30 (7 months)

Gently sloping to steep.

DFA: plants and condition of plants

Re-seeded types  348  348  348
Sagebrush-rabbitbrush  2,331/  2,197  2,197
Juniper  8,420  8,420  8,420
Conifer (pine)  45  45  45
Waste  566  -  -

Total  12,713  11,510  11,510

1/ Includes unseeded abandoned cropland.
Table B -- Anticipated changes in grazing capacity from reseeding of pastures

<table>
<thead>
<tr>
<th>Cover type</th>
<th>Area before reseeding (Acres)</th>
<th>Grazed before (AUMS)</th>
<th>Area after reseeding (Acres)</th>
<th>Grazed after reseeding (AUMS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reseeded types</td>
<td>3.0</td>
<td>283</td>
<td>3.0</td>
<td>283</td>
</tr>
<tr>
<td>Sagebrush-rabbitbrush</td>
<td>11.0</td>
<td>200</td>
<td>4.0</td>
<td>549</td>
</tr>
<tr>
<td>Juniper</td>
<td>13.0</td>
<td>648</td>
<td>5.0</td>
<td>1,684</td>
</tr>
<tr>
<td>Conifer (pine)</td>
<td>5.0</td>
<td>9</td>
<td>5.0</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,140</strong></td>
<td></td>
<td><strong>2,525</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table C -- Anticipated changes in grazing capacity from planned cultural practices

<table>
<thead>
<tr>
<th>Cover type</th>
<th>Area before spraying (Acres)</th>
<th>Grazed before spraying (AUMS)</th>
<th>Area after spraying (Acres)</th>
<th>Grazed after spraying (AUMS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sagebrush-rabbitbrush</td>
<td>1,050</td>
<td>26</td>
<td>450</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
<td><strong>350</strong></td>
<td><strong>35</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>

Table D -- Utilization and condition of vegetation on areas grazed at present

<table>
<thead>
<tr>
<th>Cover type</th>
<th>Utilization</th>
<th>Vigor of forage</th>
<th>Proportion of species</th>
<th>Density of forage species (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reseeded types</td>
<td>50</td>
<td>H</td>
<td>99-1</td>
<td>90+</td>
</tr>
<tr>
<td>Sagebrush-rabbitbrush</td>
<td>30</td>
<td>L</td>
<td>75-25</td>
<td>50+</td>
</tr>
<tr>
<td>Juniper</td>
<td>30</td>
<td>L</td>
<td>5-95</td>
<td>50+</td>
</tr>
<tr>
<td>Conifer (pine)</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Allotment average</strong></td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

L = low  M = moderate  H = high
ANALYSIS AND SUGGESTIONS

1. Total anticipated increase in grazing capacity in 30 years above present level __100__ percent.

2. General sources of increased grazing capacity

   Management of grazing
   Cultural practices

   Percent
   __80__
   __20__

3. Specific sources of increased grazing capacity. (Pertinent factors are checked; the most important are circled)

   (a) Management of grazing
      (1) Increase in plant vigor and yield

      (2) Change in plant composition

      (3) Increase in vegetation density

      (4) Greater use of forage on areas now grazed

      (5) Use of areas not grazed at present

   (b) Cultural practices
      (1) Artificial reseeding

      (2) Spraying

      (3) Other
Best prevailing range conditions.

Juniper

Agropyron spicatum
Seed ripe July 20

May 1

Oct. 30

52

35

6

ES = early spring 5/1-5/30
SU = summer 7/20-9/30
LS = late spring 6/1-7/20
F = fall 10/1-11/30
Comments - South Gray Butte Allotment

**Stocking:** There appears to be sufficient capacity on the allotment at present for permitted numbers.

**Season of Grazing:** Termination of the season 2 to 4 weeks earlier with corresponding adjustment in numbers would increase livestock production.

**Range Response:** The rate of improvement of this range is going to be slow because of sagebrush and juniper competition. Increased grazing capacity will be realized in the near future primarily from increased plant vigor and artificial reseeding.
Jackson Allotment, Hampton, Oregon
Bureau of Land Management

Best management on area.

Sagebrush

Agropyron spicatum
Seed ripe July 20

Move cattle after seed ripe.

March 1  Oct. 31

C  D  E  F  A
D  E  F  A  B
E  F  A  B  C
F  A  B  C  D
A  B  C  D  E
Chief, Forest Service
Attention: R. M. DeNio

Keith Arnold, Director

Range and Wildlife Habitat Programs

On September 11 we transmitted a report of Normay's work in Regions 1, 2, and 4 and on September 21 sent you a report of his trip to R-9.

Transmitted herewith are two copies of a report on his October trip to the Ochoco Forest in R-6 and to a B.L.M. allotment in Oregon.

Normay has met all requests for extension help and counsel received this fiscal year and with this letter is submitting the last report requested by DeNio on January 20, 1961.

E. J. Woolfolk

Attach.
EJWoolfolk:dn