October 15, 1962

Mr. Jay Cravens, Supervisor
Coconino National Forest
Post Office Building
Flagstaff, Arizona

Dear Mr. Cravens:

If you have seen our rancher-Forest Service story about the Coconino National Forest as it appears in the current FARM JOURNAL, you are no doubt wondering where the author—me—got his information. Or should I say 'mis-information.'

Me too!

In order to prove to you that I am not as bad a reporter as the story might indicate, I enclose a reproduced copy of my manuscript as I sent it to our publishing headquarters in Philadelphia. As a factual account of what took place during the two-day meeting, I am willing to stand on it.

The problem as related to facts, emphasis and interpretation in the published account, resulted from the copy fitting which was done at headquarters. As you see, the space given to the story is considerably shorter than the way I wrote it and this necessitated considerable rewrite.

In instances of this kind, an originating author in our organization is customarily given a chance to see the re-do in order that he may put 'focus' back into the story, if it needs any. For one reason and another, I didn't see the re-done story until it appeared in print. Thus, considering the way it appears, I feel as embarrassed as you folks have no doubt do.

What to do about it? I can say that I'm sorry this happened, but that doesn't do anything about the "image" of all concerned as it appears in the magazine. So, I suggest this: Why don't you sit down and compose a letter to the editor in which you point out the inaccuracies. Send it via me and while I can't promise to get it into print, I'll put up a strong case for it, and I think you'll find that our folks are well intentioned even though there is sometimes 'many a slip betwixt the cup and the lip.'

Sincerely,

RGF:

cc: Mr. C. E. McDuff
    Mr. Lee Athmer
    Mr. A. L. Hornsby
    Mr. Ernest Chilson
Rest rotation grazing, a management system which the U.S. Forest Service claims will bring back range, got a raking over the coals last month in Flagstaff, Arizona. It was a set-to where the shots were called by a group of about 30 cattlemen. All of them are permittees on the Coconino National Forest and members of the Tall Pines Farm Bureau.

They locked horns with the government over a grazing system which they figure is:

* Too frequently force-fed down the threats of grazing permittees using veiled threats as a club.

* Costly, both for the tax paying public as well as for stockmen.

* Not suited for application everywhere—it may not avert further cuts in grazing allotments.

* An infringement on a basic management "freedom" previously held solely by livestock owners, but now shared with the government under rest rotation plans.

In setting the stage for the two-day meeting, Ernest Chilton, Tall Pines president,
announced: "The core of this entire issue
is: Will there be a fair return for the
investment regardless of who makes it?

The controversy is over the 17 months
of annual rent for pastures within both
seven month winter allotments as well as
5 month summer allotments."

On the other side of the fence, Coconino
forest supervisor Jay Cravens was backed
by almost 20 forest employees.

The group included S. L. Normany,
the originator of the grazing system in dispute.

"The matter of more intensive range
management is with us today due to changing
times. There's increased pressure for
other uses, and we've got to be recognized
in our range management program," Cravens
said, pointing out that "premium" on public
land has doubled in the past 13 years.

You bet, arguments fanned hot at times,
and ranchers Milt Sechler spoke for cattle-
men everywhere who graze on public lands
when he said: "Let's not get the idea
that the Coconino National Forest is the
only one concerned. Permits are all over.
The West face the same problems we do.

The problems—what are they? A rough one is the economic squeeze on ranchers brought on by reduced numbers of animals permitted on the forests—"cuts" in grazing allotments.

From this standpoint, the Coconino is typical. Including the nation's largest stand of ponderosa pine, the Coconino National Forest with 2 million acres has 69 grazing allotments; 80 permittees. Of this number, 25 have gone along with the rangers and have adopted rest rotation management systems. "Six of them received increases totalling about 500 head this year," Cravens points out.

While the forest provides grazing for 16,000 sheep and 18,000 head of cattle this year, permitted numbers are slipping.

"The trend is downward," Cravens says.

Not do all the ranchers who have shifted over to rest rotation grazing oppose it. For example, Mrs. Hilda Sullivan, working foreman on the K-T ranch, spoke in favor of the plan which changed her 20,000 acre
alotment from two pastures to four. "With
our yearling operation, the fences were
badly needed," she said, adding: "It has
been easier to cover the smaller pastures
to move and scatter the cattle."

Otherwise, a pay-off on Uncle Sam's
investment of $11,000 for materials, reseeding,
and water development plus an outlay of
$3,000 by the permittee isn't in sight yet.

With two years of experience under
past rotation, average weaning weights for
the June 1 to October 15 season were 190
pounds. For the two prior years, gain
averaged 215 pounds per animal.

In reply to a questioner, ranger Bob
Williamson replied: "I think it is a little
too early yet to determine benefits."

When rangers and ranchers bounced up
a road built for 4-wheel drive vehicles
on the allotment, nobody argued over
the benefits from reseeding. At the site
of a 118 acre reseeded burn on Jones Mountain,
Bob Lockett exclaimed: "I heard Hilda say
she'd like to start another fire. I'd like
to know what she did to get this one started."
With a 340 head permit on two allotments, C. E. "Hi" Kennedy is sorry he said "yes" when rotation grazing was proposed to him—even in the face of a plan which calls for the government to spend $42,100 ($120 per animal unit) in improvements. "I wonder from the dollars and cents standpoint if it'll be worth the money," Kennedy said.

He added: "We're likely to be short 30 pounds per animal for the grazing season—that hurts."

There's also a principle involved which Kennedy finds hard to swallow. "For the first time," he said, "the forest ranger can regulate me in the cattle business. He can break me. He can make me do real well—it's that simple."

One year under rest rotation was enough for Kenny Wingfield, a cow-calf operator. After his 1961 experience, he demanded that the system which called for added fencing be simplified this year.

"Results were very disappointing," he reported. "I never felt you could handle cows and calves so much and come up with
any kind of a gain."

He figured added moves brought on by partitioning his allotment resulted in at least two daggied calves per move. Comparing steer and heifer calf gains against his previous three-year average, he noted:

"Gains were 53 pounds less for my heifers;

37 pounds less on the steers."

"I've been on that Turkey Mountain allotment since 1959 and 1961 was the best pasture year I've seen," Altogether, Wingfield figures his 1961 experience cost him $8,083 or $11.70 per head.

"It would take one-third more fence per cow unit and double my labor bill to go along with it," he protested.

Kel Fox, Arizona's range man of the year in 1961, seconded Wingfield. "When you concentrate cattle on an area where grama grass is in a life and death struggle with brome (a weed), you help the brome," he said.

"None of these plans is going to put any extra money in my pocket," Fox concluded.

What rest rotation grazing calls for
includes: First, your allotment is divided
into several pastures as many as you 
on some plans. Thus, after use, it is
possible to rest specific pastures for a
full season in order to restore plant vigor.

Then, pastures are rotated on a schedule,
with the system geared to both restoring
and maintaining range plants.

When Frank Gyberg, a do-it-yourself
old timer who hails from Yavapai County,
learned of the money it costs Uncle Sam
to put some rest rotation grazing plans
into effect, he brought a laugh with: "Gee,
I wonder how I can get 'em (the Forest
Service) down on my outfit."

Where rest rotation pinches most cattle-
men is seeing a portion of their range
padlocked for a full year. It's something
they believe will put them in a bind, because
they don't see how it can be accomplished
without a cut in numbers.

Argues Herman: "Under proper stocking,
you'd never concentrate enough animals to
gain ahead of existing feed."

Yes, the Forest Service plans to push
rest rotation grazing throughout the West—on a pilot-plan basis," Hornay says.

That drew a few shakes of the head but settlers were pleased to hear him add:

"No one is trying to force this grazing system on anyone."

Afterwards, Herb Metzger, one of the local ranchers who sparked-plugged the meeting said: "We were afraid that we were hit with an inflexible plan some hell or high water."

If the Forest Service has money to spend on range, what the Coconino Forest permittees want instead of rest rotation grazing is: Range reseeding after removal of weeds, brush and weed trees (junipers). They'd like to see fire used as a tool to clean up debris on the forest floor. They want additional water development.

"Before we get into any big scale new fence building program, let's rebuild some of the old boundary and cross fences," summed up Chilson.

While the cowmen trained their best guns on the forest officials, an unexpected
1. truly turned up on their side. It was the
2. Salt River Valley Water Users Association
3. who pointed out that Arizona law requires
4. state land office approval before new water
5. tanks may be constructed. The water users
6. also filed a formal "protest" against appli-
7. cation of rest rotation grazing, feeling that
8. a more intensive plan isn't in the best interest
9. of water users in the Phoenix area.
10. Shot back Cliff McGuff from the regional
11. forester's office, Albuquerque: "We have
12. not received any instruction that we must
13. apply for a water right for every stock
14. tank we're going to construct on forest
15. service land." Yet it is Forest Service
16. policy to abide by state laws.
17. While the meeting did give stockmen
18. a chance to air their views it "cleared the
19. air" on other points; left some unanswered
20. Said Chilson: "They still haven't
21. shown us that rest rotation grazing is a
22. substitute for 'carts.'
23. "Nor have they told us who's going
24. to manage the cattle—the government or us?"
A H. Would you like to draft a reply for my signature?

Thanks

NEW SOUTH WALES

AIR MAIL

DEPARTMENT OF AGRICULTURE
(FARRER PLACE),
BOX 36, G.P.O., SYDNEY.

Dr. E.J. Woolfolk,
Pacific Southwest Forest and
Range Experiment Station,
BERKELEY, CALIFORNIA, U.S.A.

18th October, 1962.

Dear Dr. Woolfolk,

A copy of leaflet No.179, "Grazing management pays on perennial grass range during drought" by Lynn Rader of your Station has come to my notice.

In this leaflet the author refers to an earlier publication by himself on a similar subject.

If available, I would appreciate a copy of your publication.

I have a little knowledge of the Harvey Valley project, as I discussed it briefly with Dr. A.L. Hormay when I visited California, but unfortunately my time was limited and I was unable to visit the area. However I am very interested in following developments there, particularly as I hope to get some work started here in the early future on native range management which has been a neglected field in this country.

There are one or two points in Rader's article on which I would appreciate a little more information.

I gather that the country in which the Harvey Valley project is located is used for summer grazing only, and that the number of stock which can be grazed on any allotment and the duration of the grazing period is fixed, possibly by the U.S.D.A. Forest and Range Service.

A comparison is made between results on the Harvey Valley project and adjacent allotments where no rotational grazing is practised. I would appreciate your advice as to the validity of this comparison on the basis of the numbers of stock carried.

At Harvey Valley it appears that the total amount of grazing which takes place on any area is equivalent to two full seasons out of five. I assume from this that in the early stages of the project it would have been necessary to reduce stock numbers temporarily, possibly below those carried on adjacent allotments. Is this so and if so, are stock numbers now carried equivalent to those carried on adjacent allotments?

As you are no doubt aware, somewhat similar results to those at Harvey Valley have been obtained at the Texas A. & M. College Ranch Research Station, Sonora.

At this Station the grazing system incorporates rest periods during spring-early summer, late summer-autumn and winter during successive years. The system adopted there is very similar to those adopted in South Africa where a considerable volume of work, dating back to the 30's, has been carried out on Rest-Rotation grazing.

However at Sonora, Harvey Valley and in South Africa, the initial objective of the work has been the improvement of
deteriorated range. Critics of the rest-rotation system claim that while it is beneficial in this regard, there is no evidence that the system has any advantages on range which is in good condition. Some Australian work in both summer rainfall and winter rainfall environments in fact support this view.

I would be glad of your comments on this aspect, and would particularly appreciate references to any work in U.S.A., or other work of which you have knowledge, where the rest-rotation system has shown advantages over set stocking on ranges in good condition.

Because of our very mild winters -- on U.S. standards -- stock are carried on range country for the full year, in contrast to the Harvey Valley situation where the range is grazed during the summer only. Occupants of range country do not have ready access to areas where fodder crops or off-season pastures can be grown, so that the number of stock carried is conditioned by the number which can be carried during the period of greatest feed scarcity, i.e. winter-early spring. As a result of this utilization during the summer growing period is, except in drought periods, comparatively light, and the excess growth provides forage during autumn and winter.

The degree of utilization could therefore conform with the U.S. range management recommendation of "eat half and leave half".

In addition, the rainfall in the area in which I am interested is very variable from year to year. The average is 17", but it is rare for the actual rainfall to approximate the average, and in most years it is around 12-14 inches or 22-24 inches.

Because of this in quite a few years there is a considerable excess of forage and the range has a natural rest.

These two factors may explain why the limited Australian work has not shown advantages from the rest-rotation system.

I would appreciate any comments you care to make.

Yours faithfully,

(C.K. VEARS)
Principal Agronomist
(Pastures)
Mr. A.L. Hormay
United States Forest Service
Department of Agriculture
12 & Independence Avenue, SW
Washington 25, D.D.

Dear Mr. Hormay:

The Tall Pines Farm Bureau and its Program Committee certainly want to express their appreciation for your participation and excellent presentation on the program September 19th and 20th.

Your contribution to the program is beneficial and was very helpful in developing the complete facts relative to the problems.

We feel that the program will be of value in the future management and rehabilitation of our wildlands. The good cooperation between the various interests certainly illustrates the value of a Democracy. Most important of all the Tall Pines Farm Bureau hopes that this type of cooperation may continue in the future.

We sincerely regret the delay in thanking you and we hope that you can understand that at this busy time of the year our livelihood depends upon being cowboys.

Sincerely,

Tall Pines Farm Bureau

By [Signature]
Ernest W. Chilson, President

By [Signature]
Milton Sechrist, Program Chairman
Memorandum

TO: Director, Pacific Southwest Station  
FROM: EDWARD P. CLIFF, Chief  
DATE:  
NUMBER:  

SUBJECT: Management

Attached is copy of letter received from Regional Forester Kennedy concerning Gus Hormay's recent trip to Region 3.

Please express to Gus our appreciation for a job well done.

Enclosure

[Signature]

Let me add mine too.

ED: I mean to follow up with this one more.
Office Memorandum • UNITED STATES GOVERNMENT

TO: E. J. Woolfolk, R-W, Berkeley
FROM: Jack N. Reppert and Raymond D. Ratliff, R-W, Susanville

DATE: October 30, 1962

SUBJECT: Research Programs - Bunchgrass Project

A review of the bunchgrass project (work centered on the Harvey Valley Allotment, Lassen National Forest) was made in Susanville by those in charge of conducting research there (Reppert and Ratliff). The aim was to:

1. Appraise how well current studies are answering questions concerning the system of rest rotation grazing as applied in Harvey Valley on a demonstrational basis.

2. Determine what new or additional questions are now important concerning the bunchgrass type especially pertaining to rest rotation grazing.

3. Propose several paths of action that will provide an increased amount of answers to the ever growing quantity of questions concerning management of bunchgrass ranges.

4. To select the path of future study that will gather the most knowledge and answer the most questions consistent with the importance and urgency of the matter.

The report that follows outlines the subjects and recommendations of this review. They are thought by us to answer the questions "what have we shown to date?" and "how can we build on this knowledge and go on from here?". These recommendations are made with full understanding that certain agreements (August, 1960 statement of understanding by E. J. Woolfolk) and plans (December 8, 1960 analysis and plans by E. R. Doman) indicate that Harvey Valley is to be operated as a demonstration allotment until 1969. Some of these alternatives throw this point open to question.

What We Know and Don't Know

Studies, to date, of rest rotation grazing conducted on the Harvey Valley allotment have been fruitful in many ways. The system works even under the special stress of continuous drought years. In all years it has been possible to graze the permitted number of cattle and still have range units unused or lightly used at the end of the grazing season. Cultural improvement practices such as reseeding have been worked into the system without requiring non-use on the allotment. Observation indicates that reseeded areas have been maintained under rest rotation. Logging and timber stand improvement have proceeded without any difficulty. Rest rotation has been shown to offer no final answer to the distribution problem—it is still a nasty problem. Cattle data indicate that satisfactory weight response occurs but there is no evidence that individual animal performance is much better due to rest rotation. There is some evidence that breed may be a factor in ability to gain on
these ranges. There is no evidence that capacity has been greatly increased. Some vegetation data will soon be worked up to give indications of whether increases in basal cover of herbage has taken place under rest rotation. Observations at this point indicate that if range condition has improved under rest rotation it has been a minor change.

It is unfortunate but true that under the present demonstration-type study (without any effective control allotment) many important questions concerning rest rotation must remain forever unanswered. Many of the general statements that are favorable to rest rotation cannot be compared to the common practice of season long use to fully determine whether benefits actually exist and whether rest rotation pays for the cost of applying the system. What at first might be considered increased capacity because of rest rotation may in reality be increased capacity due to improvement (e.g. reseeding). Because of design it is difficult to state specifically what practice (management or improvement) is the cause for increased or decreased capacity. The effect of the system on either native or improved rangeland is not clear because of various mixtures of the two in each range unit. This apparently has an influence on distribution of grazing cattle, thereby making herbage utilization very difficult to control within a particular range unit. To evaluate rest rotation on native range, units without reseeding are needed and conversely to evaluate rest rotation under improved conditions all or a large part of the range units should be improved. Study beyond that presently being conducted at Harvey Valley will have to be started in order to explore these and other unanswered questions. To fill this need for additional knowledge several alternatives are possible. They involve minor changes to major reorganization and even abandonment of the present demonstration of rest rotation in Harvey Valley.

Alternatives

I. Continue at Harvey Valley but improve outside control:
   With this approach we would continue our efforts at Harvey Valley. However we would improve our measurement techniques; start needed studies on seedling establishment, seed production, and plant vigor; and attempt to obtain the cooperation of the permittee on the Poison Lake allotment in order to have some control on cattle studies.

II. Move out of Harvey Valley:
   We would discontinue all effort at Harvey Valley and establish a controlled study at some other location. We feel that such an establishment should be in the East side Pine-bunchgrass type and involve cattle. However, a small scale sheep study would be a valuable addition to the major effort with cattle.

III. Move out of Harvey Valley but continue minimum effort there:
   We would establish a controlled study at a new location but continue to do a minimum amount of work at Harvey Valley. This minimum work would be for the purpose of aiding the demonstration of rest rotation at Harvey Valley.
IV. Stay at Harvey Valley on a demonstration basis:
With this approach we would forget about a control and concentrate on
finding out what is happening in Harvey Valley as presently set up.

V. Reorganize the Harvey Valley allotment:
   a. Develop a small scale study on native range:
      We would establish a small scale controlled study on part of the
      allotment. The remainder of the allotment would be either reorganized
to continue rest rotation management or grazed under some other
management system.
   b. Divide the allotment into two controlled studies:
      We would divide two of the present units into 5 pastures each.
      Two other units would serve as control units. The fifth unit would
      serve as a place for additional studies and reserve feed for animals
      in season-long units if additional feed were needed. One controlled
      study would involve native range and the other improved range.

The Favored Approach

After careful consideration of factors for and against each of these six possible
approaches we decided that the one which would provide the maximum benefits to
research with a reasonable expenditure of financial and man power resources is
approach V-b.

Our reasons may be summarized as follows:
If we were to follow approach I we would be faced with the present problem
of trying to evaluate the effects of rest-rotation management on native range
where small areas have been improved.

We have not been able to obtain the cooperation of the permittee on the Poison
Lake allotment, which was originally planned for a control. Even if we should
be able to obtain this cooperation in the future, we would be dealing with cattle
from two different operations and could thus not be sure whether any differences
in cattle response were due to the grazing system or to differences in operation
or inherent qualities of the cattle.

Moving out of Harvey Valley, while perhaps good from the stand point of getting
a fresh start, would involve the expense of a completely new establishment,
including fencing, water development, and type mapping. With the proposed approach
some fencing and water development would be needed, but our present type map is
quite good. Also, by moving out of Harvey Valley we lose any possible value of
our previous efforts on transect work. By staying at Harvey Valley we will be
able to utilize in some manner most of the present transects and much of the
original data collected on them.

Moving out of Harvey Valley but continuing minimum effort there, while providing
for the use of previous data, limits the amount of effort we could put into a
new establishment.
By staying at Harvey Valley on a demonstration basis only, we fail to obtain any information to prove or disprove that rest-rotation management will do a better job of improving range condition and producing beef than season-long management. From the standpoint of research we feel that this approach has little merit.

Developing a small scale test of rest-rotation management within Harvey Valley has the advantages of permitting all cattle to come from one source, allowing us to get away from the problem of reseeded areas, allowing us to use the present type maps, and providing the needed control. However, here the problem of how to manage the rest of the allotment becomes a factor of consideration. We may not be able to utilize present data, additional fencing and water development may be required. Also, if we considered only native range we would be neglecting the question of improved range. Certainly cultural methods of range improvement are becoming increasingly important, and we need to know how rest-rotation management affects these cultural improvements.

From the approach we propose we expect to gain:

1. Effectively controlled studies of rest-rotation management on both native and improved rangelands;

2. an end to the problem of trying to evaluate the effects of rest-rotation management on native range when small areas have been reseeded or otherwise improved;

3. comparable data on cattle response,

4. a controlled study of the economics of rest-rotation management on native and improved ranges;

5. an area where additional studies can be undertaken without involving the areas where rest-rotation is being studied,

6. some information on breed differences and response to season-long and rest-rotation management,

7. from having all of our cattle come from a single source.

In order to make a go of the proposed approach we would need:

1. additional fencing in two range units;

2. additional water developments;

3. the scales and corral set-up presently at Squaw Valley relocated;

4. cooperation of the region and Lassen National Forest in making any proposed improvements, (i.e., fencing, water developments, reseeding, etc.).
5. cooperation of the Extension Service of the University in grading cattle;

6. cooperation of Elwin and George Roney, permittees on Harvey Valley and our present cooperators;

7. cooperation of a range economist on the economic phase of the studies,

8. one additional full time scientist and summer range aids.

In addition we would like to have a green-house in Susanville to facilitate certain phases of research. Other projects at Susanville would also use the same green house.

Outline of the Proposed reorganization of Harvey Valley.

a. The allotment would be divided into two controlled tests of rest-rotation management.

1. Native range study in units 4 and 5.
2. Improved range study in units 1 and 3.

b. Unit 2 would be used season-long and as buffer against poor forage years for season-long study units. This unit would provide a place for animals from unit 1 when improvements were undertaken there; also, unit 2 would provide an area for additional research not directly related to the rest-rotation studies.

c. Units 1 and 3 would be improved to the maximum. The primary purpose of this test is to study the effects of rest-rotation management on improved range lands.

d. Units 4 and 5 would be left in their present states of improvement except that 33 of the 51 reseeded acres in unit 4 may be fenced into unit 3. Range unit 4 has about 3 per cent of its capacity in reseeded areas; there has been no reseeding in unit 5. The primary purpose of this test is to study the effects of rest-rotation management on native range lands.
Diagram of Proposed Reorganization of Harry Valley

Present
Harry Valley Demonstration
Range Allotment

Unit No. 1
Unit No. 2
Unit No. 3
Unit No. 4
Unit No. 5

Proposed Harry Valley Experimental
and Demonstration Range Allotment

Control
Season-long use, with max.
rang improvement

Divide into
a 5 pasture
rest-rotation
with max. range
improvements

Control
Season-long use on
native range

Divide into
5 pasture
rest-rotation
on native range

Season-long use
Buffer area for
units 1 and 4.
Area for other
seasons.
Questions that would be investigated under the proposed reorganization:

A. Questions on native range study:

1. Does rest-rotation management improve the condition of native range land more rapidly and to a greater degree than moderate use with season-long management?

   a. By use of the transect techniques presently being worked out we would determine:

      1. Herbage composition changes.
      2. Changes in soil surface conditions (litter, bare soil, plant ground cover, rock, wood, and moss) by point or intercept techniques.

   b. Erosion on selected sites: (techniques to be developed)

   c. Field and green house studies to determine:

      1. Whether vigor of established forage plants are improved under rest-rotation management in the season of rest after season-long use.
      2. Whether abundant viable seed is produced under rest-rotation management when a given unit is rested to mid-season for seed production.
      3. Whether seed is worked into the soil by cattle when a range unit is grazed the second half of the season after rest the first half for seed production.
      4. Whether we get seedling establishment in the season of rest following grazing the second half of the previous season.
      5. Whether resting a unit the second half after moderate use the first half of the season aids seedling establishment and survival.

   d. Comparative studies between season-long and rest-rotation management on:

      1. Vigor of forage plants.
      2. Seed production.
      3. Amount of seed gotten into the soil.
      4. Seedling establishment and survival

2. Does rest-rotation management increase forage production more rapidly and to a greater degree than season-long management with moderate use?

   We would plan to use a direct measurement of yield and develop a technique for this purpose.
3. Does rest-rotation management improve the distribution of grazing use over that by moderate season-long management?

Technique of determining grazing use to be developed.

a. Does logging and/or timber stand improvement work improve grazing pattern between open and timbered areas for both rest-rotation and season-long management?

4. Does rest-rotation management result in equal or greater beef production than moderate season-long use?

To obtain answers to this question we would study:

a. individual animal response using a weight and grade change technique.
   For these tests we would plan to use yearling heifers.

b. actual grazing use-animal months of grazing.

c. profit from each grazing system, based on weight, grade, and current market prices.

In addition we would plan to test breed response to rest-rotation and season-long management. We would require about equal numbers of Hereford and Angus heifers for this test. To help answer the question (why) if a breed difference in response appeared we would plan and work out techniques to study the grazing habits of the two breeds.

B. Questions on improved range study:

1. Does rest-rotation management maintain or improve the condition attained by cultural methods of range improvement?

   We would plan to study the same things here as listed above for native ranges.

2. Does rest-rotation management maintain or increase the forage production at or from that resulting from range improvements?

   We would plan to use the same technique as developed for the native range study.

3. Does rest-rotation management improve the pattern of grazing use over that occurring with moderate season-long use?

   a. What changes are induced in the grazing pattern by range improvement?
b. What happens to use patterns on areas that are not improved but are within the improved range units?

c. Does logging and/or timber stand improvement work improve grazing pattern on improved ranges under rest-rotation and season-long management?

4. Does rest-rotation manangement result in equal or greater beef production than moderate season-long management when both areas are improved?

Here we would study the same things as in the native range study.

As indicated in our proposal, the present unit 2 would provide an area for additional research. Here if time etc. allowed we could pursue answers to such questions as:

1. Can we reseed in timber and if so would it pay?

2. Would it pay to fertilize timber areas for forage production?

3. Can we grow an economic crop of trees and one of grass together? Is there a timber density which will allow us to do this?

4. Would it pay to reseed and/or fertilize the native meadows?

(A.R.S. may be able to do much of this work.)

Provided that the final decision is in favor of the proposed approach we would plan to proceed as follows:

1963:
1. Develop the required techniques.
2. Build the required fences and water developments in the present unit 5. Relocate scales and corrals presently at Squaw Valley.
3. Keep to the present grazing plan.

1964:
1. Start study on native range.
2. Build required fences and water developments in the present unit 3.
3. Graze units 1 and 2 season-long with about 154 head each.

1965:
Start study on improved range.

1967:
Start range improvement work after observations have been made for two years on grazing patterns and improvements are decided upon and planned.
We know that this review with general recommendations is not the final word on the subject and does not represent all possible alternatives. If other practical alternatives are known or are thought of, they should be added for consideration. If you know of important ideas that we are unaware of or have overlooked we would like to know of these. We feel that a meeting in late November or early December would be in order to discuss and decide upon a practical plan of attack on this problem. We would like to hear your views on this sort of meeting. At early stages this meeting, in our opinion, should include E. J. Woolfolk, M. J. Reed, J. N. Reppert and R. D. Ratliff. C. E. Conrad and A. L. Homan and any others should be included after general discussion has channeled the talk into areas where they can be of assistance. The other cooperators would need to be consulted after an agreed on proposal can be presented to them.

Before this meeting we (Reppert and Ratliff) plan to review the measurement techniques in use at Harvey Valley and those that will be needed in the near future. A list of methods most in need of improvement will be made, along with general plans for accomplishment of this task. These plans would be available for discussion at this fall meeting.

We will be most interested to hear your comments concerning this analysis and the proposed plan for further discussions at an early date.

Jack N. Reppert
Memorandum

TO: Keith Arnold, Director
    Pacific SW Forest & Range Experiment Station

FROM: Fred H. Kennedy, Regional Forester, By

DATE: October 31, 1962

SUBJECT: Meetings
         Management

The annual meeting of the New Mexico Cattle Growers Association will be held in Albuquerque, New Mexico early in March. We have discussed with Will Orndorff, the President of the Association, and Roy Lilley, the Executive Secretary the desirability of having Mr. Hormay give an address to the Association on rest and rotation grazing. It will be appreciated if you will send us Mr. Hormay's proper title, and some of his background and experience for their use in preparing the agenda for the meeting. As soon as Mr. Hormay's title and proper address are received the New Mexico Cattle Growers Association will write to him and invite him to give such an address.

We sincerely hope that every effort will be made to comply with this invitation, if and when it is received, because we believe it will be of material benefit to us in our grazing work in this Region.

At the time of this proposed visit to New Mexico we would like to have Mr. Hormay scheduled for an additional week, either before or after the New Mexico Cattle Growers Convention, to visit some of the Forests in New Mexico, and give half day talks on rest and rotation grazing to the Rangers on the different Forests visited.

All of the Forest Officers involved were very favorably impressed with the job that Gus did during his visit to Arizona this year.