

UNIVERSITY OF CALIFORNIA

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To Gary Markgard From Al Murphy
Subject Rod's grazing study

For: ☐ initial ☐ signature ☐ approval ☐ comments ☐ discussion
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Message When I returned yesterday Rod's
Newsletter had some info about
the Potter Valley grazing study that
should interest you. The copy of the
article will give you more info
than I could.

MOB STOCKING AND BREAK GRAZING WORKLIVER FLUKEMENDOCINO WOOL PROJECT HAS ITS FIRST WEAVINGRATE OF GAIN PROJECT IS 18 YEARS OLD THIS YEAR

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MOB STOCKING AND BREAK GRAZING WORK

Break grazing and mob stocking are working wonders on irrigated pastures in Potter Valley. To test some of the New Zealanders' ideas, we began mob stocking some irrigated pastures last year. Mob means just that. You turn in a "Mob" of livestock and make them go to work grazing. Heavy concentrations for very short intervals - 3 to 6 days per "Break". A break is just a very small strip of forage allotted to the animals. With this short rotation, the cattle and sheep lose their selectivity and graze everything in front of them. This loss of selectivity makes a poisonous weed eradication program imperative. The regular weeds really aren't a problem because they are eaten right along with the grasses and clover. Our 1979 test was done by using two identical 10 acre pastures. Bill Brooks analyzed the two fields for composition of grasses and clovers at the start to see if there would be any change in the percentages of plants due to the increased grazing pressures.

The break grazed pasture was divided into four small breaks so that the cattle would return to each break in 18

to 22 days. The other pasture was stocked with 15 head of 800 pound heifers and they were allowed to graze without any rotation. A portable single wire electric fence was used and it was energized by a 12 volt automotive battery. The energizer was a New Zealand make and proved 100% effective in keeping the cattle in their break. We set the wire at 29 inches which really seemed too low. It was just right. A bit high to step over, but with a bit of care, a low spot could be found and safe passage was made.

These new fence energizers are powerful and hit so hard that they jar the folks in the old country. This is worth remembering when you work around them. Any untrained livestock should get a short course in the care and feeding of this new experience. It is wise to put them into an enclosed training pen for a day.

The calculations for the numbers of livestock are easy. Clip 25 areas, one foot square, weigh the total clippings, dry them in a 200 degree oven for 24 hours, weigh again, and you have the amount of dry matter for 25 square feet. Multiply the dry weight by 43,560 divided by 25 and you have the pounds of dry feed being produced per acre. Grazing animals eat

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3% of their body weight per day, so this will let you know how many head to load up with to eat that break out in 5 days.

Having done all this, we began the test in July 1979. The test worked like clock work.

It looked like a golf course in the breaks. All the forages were clipped evenly with the previously grazed breaks growing in stair steps. The clovers were not grazed down to the runners, rather they were defoliated and ready to put out new leaves. The runners were extending out into the bare spots and put down roots to help support the newly sprouting leaves. In six weeks, the break grazed side appeared to be higher in clover than the side where the cattle could graze at will.

The end of the test showed no difference in the gains in either group of cattle. Each heifer had been individually identified with an ear tag and weight. Our 1980 test is being done on the same pastures except that we are mob stocking the other pasture to see if the grazing scheme will work two years in a row.

Both pastures were analyzed again and the results were encouraging. The 1979 break grazed pasture has increased from 44% clover to 68%. The old standard grazed pasture increased 2%.

In mob stocking, the cattle work harder. Grazing everything means that the over-shadowing grasses, sourdock, yellow umbrella grass, and buck plantain are taken away which lets the sun in for the clovers. The secret is to get the cattle onto the fresh pasture before they eat the clover runners and wreck the next crop of leaves that are ready to pop out.

We suspected that the numbers of cattle were not high enough this year when the feed started to get away from the 27 head of 520 pound calves in each of the two pastures. The two groups of calves were moved together on one break and 125 mature cows were put onto last year's high clover patch. They stayed for 4 days, just long enough to crop the

clover down for the next set of 50 calves that were weaned and were wearing their bawl out before going onto the pasture.

We are excited about what's happening because of the increased utilization of Potter Valley irrigated pasture. I'm holding a meeting September 11th to show you what is happening and how the progress is going. 10:00 a.m. at 9900 Westside Road, Jack Brown's ranch, and there will be a sign or three to guide you.

This break grazing idea will be tested this coming year on annual range, so we should be looking at the idea for hill land in 1981.

NEW HOPE FOR LIVER FLUKE CONTROL

Liver fluke has been with us and sneaking up fast since the banning of carbon tetrachloride as a mature fluke eradicator. The new drug called Albendazol is not only a fluke killer, but it gets round worms in cattle and sheep. Sort of a windfall. Albendazol is available at your veterinary and is reasonable in price.

Just to refresh my memory, I did a bit of research into the life cycle of flukes.

The mature fluke (*Fasciola hepatica*) lives in the bile ducts of ruminants. It attaches to the duct wall and causes the wall to thicken. In some cases, the fluke will end up in lung tissue. The real damage is done when animals graze in low wet areas where the fluke cyst has stuck itself on blades of grass and clovers. Necessary to the fluke's whole cycle is a snail that emerges when the ponding or slowly moving water wets the soil enough for these snails to come out of the ground. As the previously lain fluke eggs hatch, they form a free swimming form which bores into the snail where it matures into the free swimming form which encysts on the wet grass areas. As ruminants graze these cysts by the hundreds, the shell is digested off of the immature fluke and this new fluke dives into the animal's system and heads for the liver. Finding the liver, the immature fluke plunges into the liver carrying with it a bacteria called *Clostridium novyi*. This Clostri-