

RANGE and WILDLANDS

County Agricultural Center
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HOPLAND FIELD STATION RANGE TOUR

Range weed control, range fertilization, selenium deficiency, and grazing management will be featured at the 85 Field Tour at the Hopland Field Station on Friday, April 19th. The tour will start at 1:30 PM at the Field Station Headquarters four miles east of Hopland.

- Dr. Jim Bartolome, range professor at UC Berkeley, will demonstrate deferred grazing to increase feed for critical periods.
- Dr. Milton Jones, Agronomist at Hopland Field Station, has demonstrations of increasing range feed and managing selenium deficiency.
- Al Murphy, Station Superintendent, will tour grazing intensity trials with yield and weed control results.

Everyone interested in range improvement demonstrations and research at the Hopland Field Station is encouraged to attend.

GRAZING CAN CONTROL MEDUSA

Grazing intensity experiments at the Hopland Field Station demonstrate Medusahead control under moderate, heavy, and very heavy grazing pressure. These experiments will be a part of the range tour on the Hopland Field Station Friday, April 19th.

Medusahead is an unpalatable weedy grass of Mediterranean origin. It spread rapidly in Mendocino County since introduction from Oregon. Grazing capacity on some ranges has been reduced as much as 75 percent when heavily infested by this weedy foxtail-type grass. Medusa is most abundant on dryland soils that are high in clay throughout, or soils with a developed clay layer. These soils have a high water holding capacity. It grows on soils of low fertility and often on soils with natural levels of nitrogen and phosphorus too low for good growth of other resident species or introduced range species. When many range plants are maturing, medusa is still green and it can use moisture unused or moisture from late

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Cooperative extension Work in Agriculture and Home Economics, U.S. Department of Agriculture, University of California, and Mendocino County cooperating.

spring rains. It can produce up to 6,000 seeds per square foot. When competing with desirable forage plants, such as soft chess, it has a great advantage. Soft chess seed is heavily utilized by livestock and Medusa seed is very unpalatable and offensive to livestock.

Medusahead can be controlled by intensive grazing, burning to reduce seed production, and by competitive improved forage plants such as sub clover. Rarely is there effective control with just one of these methods. Coordinated control techniques are essential for good control.

Over 90 percent of mature Medusahead seed germinates with the first fall rains. Using fire at the milk stage can prevent production of viable seed and can drastically reduce a stand of Medusa for three to four years. This can provide the time necessary to establish sub clover on the range to compete with Medusa and prevent it from establishing solid stands again. The soils with better moisture holding capacity which favor Medusa are also good soils for sub clover production. The fertilizers which favor sub clover do not directly favor Medusa.

The combination of burning to destroy Medusa seed and introduction of sub clover plus fertilizer can significantly increase production, soil fertility, quality of forage, and reduce stands of Medusa.

SUDAN GRASS

Sudan grass is our most productive summer annual grass crop for irrigated or dryland crop or pastureland. It can produce high quality and high yields of pasture, hay, or green chop. Sudan is well adapted

to all sections of the county with the exception of the coastal bench.

Under irrigation on good soils sudan can be expected to produce 4 to 6 tons of hay or pasture equivalent. Dryland production of sudan can vary widely in yield based upon soil moisture conditions.

For best results with a sudan grass planting:

- Plant early but after danger of frost
- Sudan should be drilled into moist soil 1 1/2 to 2 inches deep
- Piper sudan is an excellent variety for pasture and can be used as hay
- Sudan grass hybrids can be very productive when grown for hay
- A fine, firm seedbed is recommended
- To conserve moisture do heavy cultural operations in March or April

Further information on sudan grass is available upon request at the Farm Advisors Office.

DEFERRED GRAZING

A deferred grazing experiment at the Hopland Field Station shows how to provide good feed for livestock at times of the year when feed is needed most. This grazing experiment will be demonstrated at the Hopland Field Station on Friday, April 19th, on a tour open to the public.

A steep, rolling range was seeded to sub clover with a range drill, and has been periodically fertilized with phosphate and sulfur. The seeded sub clover has produced 6000 pounds/acre air dry forage and the unseeded checks produced 2400

pounds/acre air dry forage, an increase of 3600 pounds air dry forage per acre.

The range is divided into three grazing periods fall and winter, spring and summer. Deferring range use and allowing feed to grow through the fall until February gives that part of the range the opportunity to have good feed for the early spring when range feed is often the shortest. The range grazed until February has until May to produce feed for the summer period and in this case, with sub clover, allows the sub to not only produce feed that cures well on the stem for summer and fall use, but gives the sub a good opportunity to produce a heavy seed crop. The heavy seed crop provides seed for fall germination plus some concentrate feed. Seed and pods, which are relished by all classes of livestock, are excellent quality feed.

Sub clover can increase total feed production, improve soil fertility, and improve quality of range feed. Mature sub clover can be used as a standing hay crop when deferred grazing is practiced. The seed and pods can be a valuable feed resource for livestock, and under deferred grazing can be increased and saved for summer use when other range feed resources have matured and are of very poor quality.

Anyone interested in range management and improvement is encouraged to attend the range tour at the Hopland Field Station on Friday, April 19, starting at 1:30.

RANGE FERTILIZATION

Range improvement with sulfur fertilization plus selenium has significantly increased pounds of lamb produced per acre. Research

by Dr. Milton Jones has used sheep to measure fertilizer returns at the UC Hopland Field Station on April 19 at 1:30 PM.

Sulfur and phosphate are the two most important soil deficiencies on clover ranges in Mendocino County. Sulfur on deficient soils increases yield of clovers, increases quality of feed produced, and improves palatability. On some soils very low in selenium, sulfur alone can intensify selenium deficiency symptoms in livestock. Providing selenium for sheep and sulfurizing fertilized ranges has increased yields of range feed as well as pounds of meat produced per acre.

Recently there has been much publicity on selenium excesses in soil in arid areas. Excess selenium can cause problems with livestock and wildlife. Mendocino County has selenium deficient soils so we have selenium deficiency symptoms in livestock under certain situations. In acid soils the ferric iron-selenium complex can be formed. Selenium in this form is only slightly available to plants. The more acid the soil the greater likelihood of very low selenium concentration in plants.

This research on range fertilization demonstrates how to get maximum production from range and manage selenium deficiencies to get maximum pounds of meat per acre.

BRUSH COMMITTEE

The Mendocino Fuel Control and Brush Management County Committee will meet on Monday, April 29, 1985 at the Farm Advisors Office in Ukiah at 10 AM. The agenda will feature brush management projects planned for this season and information on new programs on improving wildlife habitat in brushlands. A

State Department of Fish and Game consultant will discuss new legislation to encourage growers to improve wildlife habitat as well as have better opportunities for financial returns from wildlife.

Sincerely,

William H. Brooks III
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WHB:acb

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