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**FARM AND HOME
ADVISORS' NOTES ON**

LIVESTOCK AND RANGE NEWSLETTER
-Special Forage Issue-

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ABOUT THIS SPECIAL FORAGE PRODUCTION ISSUE

How to increase forage production has been a much-discussed subject this year due to the drought. The shortage of range grass and the high price of hay have sparked interest in raising more forage with irrigation. Meanwhile, ranchers without irrigation are reevaluating their "marginal" dry land for hay production.

Although no forage crop can do its job without adequate rain or irrigation, the accompanying information can help you make the best use of available moisture. Only a small amount of available information about forage production in California is reported here, however. So, call the farm advisors' office when you have questions about this subject and ask for Will Cawelti, field crops farm advisor, or me.

HOPLAND UC FIELD STATION -- 25 YEARS OF RESEARCH REPORTED

Twenty-five years of research on sheep, cattle, deer, predators, water use, range fertility and range seeding at the University of California's Hopland Field Station is the subject of the entire July issue of the publication, "California Agriculture". The 5,358-acre station in Mendocino County was purchased by the university in 1951 to investigate problems pertaining to the conservation and use of the natural resources represented in some 30 million acres of rangeland in the state.

Much of the significant range-related research that has been conducted by the University of California is summarized in this illustrated report. Call us for a copy.

The University of California's Agricultural Extension Programs are available to all, without regard to race, color, or national origin.

INFLUENCE OF VARIETY AND CUTTING STAGE ON OAT HAY YIELDS

A report on ten years of oat hay variety trials by the University of California is available at our office. Nine trials were conducted in dry-farmed areas near Dunnigan in the Sacramento Valley and two under irrigated conditions at the Davis campus of the University of California. Authors of the report are C. Schoner and T.E. Kearney, U.C. Farm Advisors, Yolo County and J.D. Prato, Extension Agronomist, U.C. Davis.

Observations were made on yield per acre and on the factors that influence hay quality: grain yield, disease resistance, early maturity, leafiness and stem diameter. The influence of cutting stage on yield was evaluated over a two-year period.

In the 10-year testing period, four varieties were found most suitable for producing high-quality hay -- California Red, Montezuma, Sierra, and Curt. Kanota, which was evaluated only early in the testing period, was found to produce acceptable quality and yield of hay but no data is included in this report. Each of these varieties has a particular set of qualities that may be of importance to a given farm operation.

Hay Yields

California Red oats had the highest average yield, approximately 3.5 tons per acre, over nine years of testing under dry-farmed conditions, but the other varieties all averaged slightly over three tons per acre (table 1). The yield ranking of varieties changed from year to year according to rainfall patterns and the occurrence of the virus disease, barley yellow dwarf. Mild winters and late spring rains were beneficial to all varieties, especially the late-maturing California Red. Barley yellow dwarf virus can cause severe stunting with accompanying low forage and grain yields in susceptible plants. California Red, more than the others, is extremely susceptible to barley yellow dwarf which caused it to have low production during 1974.

In the two irrigated trials, Sierra oats produced the highest yields and California Red was second followed by Montezuma and Curt (table 2). Under irrigation, all varieties yielded more dry matter per acre, averaging double the yields of dry-farmed plantings.

Phone us if you would like to receive the complete report which also compares grain yields, maturity dates, quality characteristics and time of cutting.

TABLE 1. HAY YIELD OF FOUR OAT VARIETIES,
DRYLAND TRIALS.

Harvest year	Planting date	Yield -- Tons dry matter per acre				LSD .05
		Calif. Red	Montezuma	Sierra	Curt	
1965	12/ 1/64	4.75	—	4.15	3.72	.40
1966	12/17/65	2.24	—	1.72	2.09	.14
1967	1/ 2/67	4.58	—	3.36	3.57	.54
1968	12/18/67	4.29	4.14	3.82	3.69	.44
1969	12/ 6/68	3.91	3.06	3.16	2.92	.49
1970	11/18/69	2.58	1.63	2.04	1.53	.42
1972	11/30/71	3.30	3.41	3.08	3.37	.18
1974	1/28/74	.99	1.82	1.59	1.43	.48
1975	11/26/74	4.81	5.18	4.68	4.84	.41
Avg. yield, all years		3.49	3.21	3.07	3.02	3.19
Avg. yield, 1968-75		3.31	3.21	3.06	2.96	3.13

TABLE 2. HAY YIELD OF FOUR OAT VARIETIES,
IRRIGATED AREA TRIALS.

Harvest year	Planting date	Yield -- Tons dry matter per acre				LSD .05
		Calif. Red	Montezuma	Sierra	Curt	
1970	12/ 1/69	6.87	7.03	8.61	5.14	1.05
1975	11/27/74	7.59	6.26	7.51	5.66	.59
Avg. yield		7.23	6.65	8.06	5.40	6.83

ANNUAL RYEGRASS - EARLY WINTER FEED

by Charles E. Wilson
Farm Advisor, Yuba-Sutter Counties

For the past two years (1973-74 and 1974-75), annual ryegrass has been evaluated on the Sierra Range Field Station for winter grazing. The management of this ryegrass has been unique as there is a source of water with which we have irrigated up the grass in the fall and then extended the grazing season by irrigating in the late spring.

Results from this year's grazing trial (1974-75) showed ryegrass yielding 348.2 lbs. of beef per acre. Cleared range land resulted in 56.5 lbs. of beef per acre and on unimproved range we obtained 15.3 lbs. per acre. Last year, our results were 396.9 lbs. of beef per acre on ryegrass and 41.8 lbs. of beef per acre on the cleared range.

These results show that we can obtain greater yields per acre on land that can be cultivated and where we can irrigate. In addition, we obtain earlier feed. Our data showed that from January 16 to March 19 the ryegrass steers gained 103.3 lbs. apiece whereas the cleared range steers gained 42.4 lbs. apiece and the unimproved range steers gained 34.6 lbs. each. After March 19, the gains were about equal for each test group.

The seed cost for ryegrass would be \$9.12 per acre. We used 16 lbs. of seed per acre. Four hundred pounds of ammonium sulfate were applied which cost about \$28.00 per acre. There were additional costs for land preparation and water.

OCTOBER 6-7, 1976

Sheraton Inn
Fresno

Throw your loop around these dates and attend the CBCIA (California Beef Cattle Improvement Association) BEEF "CHOW"-FERENCE - lectures and in-depth discussions on crop residues and by-products will be featured! Contact Wayne Jensen or Marion Stanley for details.

William H. Weitkamp, Jr.

William H. Weitkamp, Jr.
Farm Advisor

SABBATICAL LEAVE

I am leaving the sunny shores of California in August for a nine-month sabbatical leave at Colorado State University, Fort Collins. Classes in range science and wildlife management along with some visits to field stations and ranches are on my program.

Covering the bases while I am gone will be Wyane Jensen, livestock and range farm advisor in Santa Barbara County; Marion Stanley, livestock and range farm advisor in Monterey County and Will Cawelti, field crops farm advisor in San Luis Obispo County. Wayne can be contacted at P. O. Box 697 (Memorial Building, 311 W. Tunnel Street), Santa Maria 93454, tel. (805) 922-7831, Ext. 241. Marion's address is P. O. Box 815 (Salinas Valley Fairgrounds, 625 Division Street), King City 93930, tel. (408) 385-3618.

Here's wishing all of you a good year. I will see you next June!

FACT SHEETS ON IRRIGATED SUDANGRASS & PASTURE

Two new Farm Advisor Fact Sheets explain the most important steps in acquiring maximum production from these summer forage crops. A fact sheet about sudangrass is enclosed and a pasture fact sheet will be mailed later. For more details, four other University of California bulletins are available at our office:

Sudangrass for Hay - Pasture - Seed
Irrigated Pastures in California
Salina Strawberry Clover
Irrigated Pasture for Steers and Lambs

4-H AND FFA BEEF HEIFER REPLACEMENT SALE -- AUGUST 11

The third annual 4-H and FFA beef heifer replacement sale of the San Luis Obispo County Fair will be held on Wednesday, August 11 at 6:00 p.m. Following is a list of entries for the judging class on Tuesday, August 10 at 1:00 p.m. Both the judging and the sale are held in the livestock arena at the fairgrounds in Paso Robles.

Some of these heifers may not be in the sale since the members have the option of keeping them for their own future breeding projects. But there promises to be an excellent offering of replacement heifers for commercial cattlemen to purchase. All sale heifers are bred to calve this fall.

This project was designed to teach 4-H and FFA members to raise animals which are in demand by today's commercial cattle business. The judging is even done by local cattlemen to promote this goal. A strong sale will assure that this practical project continues.

<u>MEMBER'S NAME</u>	<u>CLUB OR CHAPTER</u>	<u>BREED OF HEIFER</u>
Ron Story	Paso Robles FFA	Charolais-Hereford
Marty Avila	Edna 4-H	Simmental-Shorthorn- Red Angus-Hereford
Peter Quaglino	Edna 4-H	Limousin-Hereford
B.J. Delwiche	Estrella 4-H	Simmental-Angus-Hereford
Barbara Delwiche	Estrella 4-H	Simmental-Angus
Kelly Miller	Estrella 4-H	Hereford-Maine Anjou
Nancy Sutcliffe	Edna 4-H	Polled Hereford cross
Cindy Twisselman	Atascadero FFA	Simmental cross
Eddy Hartzell	Morro Bay 4-H	Simmental
Jan Hartzell	Morro Bay 4-H	Simmental
Cynthia Fischbeck	Rio Rancheros 4-H	Hereford
Kristin Fischbeck	Rio Rancheros 4-H	Hereford
Kim Humphrey	Rio Rancheros 4-H	Hereford-Shorthorn
Christa Rodman	Bishop's Peak 4-H	Angus-Charolais
Pam Rodman	Bishop's Peak 4-H	Charolais-Hereford
Debbie Kalin	Morro Bay FFA	Hereford-Angus
Richard Ashley	Templeton FFA	Simmental-Angus
Debbie Paver	Templeton FFA	Angus
Nolan Twisselman	Carrisa Plains 4-H	Simmental-Angus-Hereford
Terry Ritchie	Atascadero FFA	Simmental-Holstein-Hereford
Ann Kalar	Atascadero FFA	Simmental-Hereford
Harriett Baysdorfer	Atascadero FFA	Simmental-Angus-Hereford
Ken Goodwin	Atascadero FFA	Angus-Hereford
Linda Warren	Atascadero FFA	Angus-Hereford
Craig Pritchard	Atascadero FFA	Angus-Hereford-Charolais
Bronc Pryor	Atascadero FFA	Simmental-Shorthorn
Marie Martin	Templeton FFA	Registered Polled Hereford
Kristi Swett	Bishop's Peak 4-H	Angus
Susan Kingsley	Bishop's Peak 4-H	Angus
Sandi Kingsley	Bishop's Peak 4-H	Angus
Richard Lambert	Morro Bay FFA	Hereford
Mike Beach	Morro Bay FFA	Registered Angus
Paula Pritchard	Carrisa Plains 4-H	Hereford-Angus
Jeff Pritchard	Carrisa Plains 4-H	Angus
Dave Domenghini	Morro Bay 4-H	Red Angus
Shari Kingsley	Bishop's Peak 4-H	Angus
Ken Classen	Morro Bay FFA	Red Angus