IRRIGATED PASTURE MANAGEMENT

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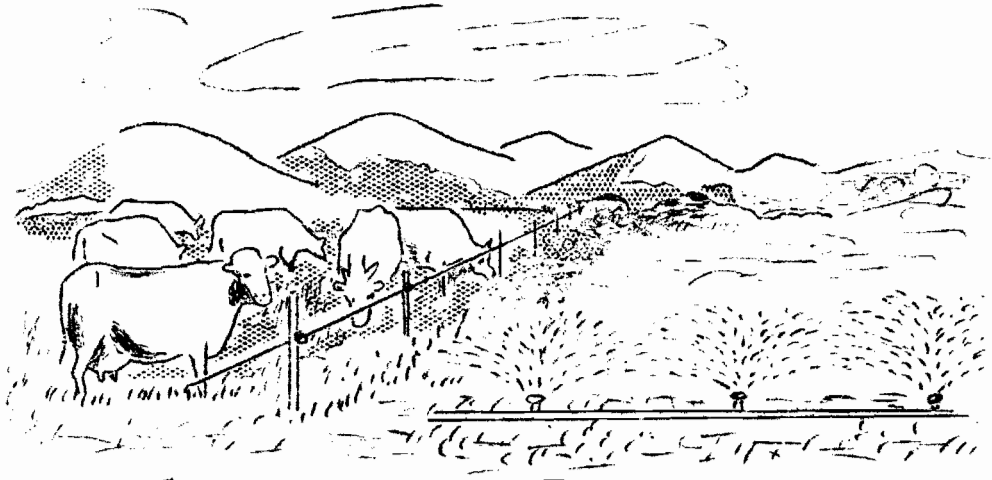

IN LAKE COUNTY

UNIVERSITY OF CALIFORNIA

AGRICULTURAL EXTENSION SERVICE

UC Cooperative Extension

IRRIGATED PASTURES IN LAKE COUNTY

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Irrigated pasture acreage in Lake County has increased rapidly during the past few years and is being utilized by all types of livestock. This leaflet has been prepared to assist producers in obtaining maximum yields through good management practices.

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1. Land Preparation

Proper land preparation is the first step necessary in obtaining an irrigated pasture. Where flood irrigation is to be used, just do the necessary earth moving, plow or disk the whole field, and then smooth with a float or land plane before border levees are built. With both sprinkler and flood systems of irrigation, a well worked seed bed should be prepared and firmed down prior to seeding with a ring roller. The best time to plant an irrigated pasture in Lake County is October 1 - 31 and March 1 - May 1. Earlier or later planting can be successful, but weather conditions may make it difficult.

2. Seed Mixtures

The following seed mixtures are recommended as general irrigated pasture mixtures where no unusual conditions prevail:

For Dairy and Beef Cattle

Ladino clover	2 lbs. per acre
Birdsfoot trefoil (narrow leaf)	1 " " "
Birdsfoot trefoil (erect)	1 " " "
Alta fescue	4 " " "
Perennial rye	2 " " "
Orchard grass	1 " " "
Harding grass	2 " " "

For Sheep

Ladino clover	1 lb. per acre
Birdsfoot trefoil (narrow leaf)	3 lbs. " "
Perennial rye	2 " " "
Alta fescue	2 " " "
Orchard grass	2 " " "
Harding grass	2 " " "

For Swine

Ladino clover	2 lbs. per acre
Birdsfoot trefoil	2 " " "
Alfalfa (California Common)	5 " " "

The ideal mixture for cattle and sheep is where 45 to 50 per cent of the pasture growth is legumes and the rest grasses - a mixture which provides enough roughage to avoid bloating. This mixture will provide for a top yield throughout the growing season. Four to five pounds of alfalfa seed per acre can be added to the cattle mixture where the grower desires, but this may increase the possibility of bloat in cattle and is not recommended.

3. Planting

Methods of satisfactory planting are varied and include use of grain drills, Brillion grass seeders, tail-gate seeders and breast broadcasters. When using a grain drill remove drill discs and tubes, as otherwise the firm seed bed will be broken up and the seed covered too deep. Let the seed fall on the firm seed bed. When possible, a cultipacker or roller can be pulled behind drill and seed covered in one operation.

A breast broadcaster is best for small acreage. Use stakes and do not cover more than 16 feet per swath. Some overlapping is necessary to get good distribution of the light seeds. Roll or firm seed into ground after broadcasting.

4. Irrigation

Water is applied by both flooding and sprinkling in Lake County, with intervals between irrigations varying from 7 to 15 days depending upon soil type, depth, and management. The amount of water applied per irrigation is 2 to 4 inches, depending primarily upon system used. Irrigation normally starts in May and continues through the summer months into October. Irrigated pasture should be watered frequently enough so that it does not wilt between irrigations.

5. Fertilizers

Most irrigated pastures in Lake County will show a good response to animal fertilizer and a varied response from single superphosphate and nitrogen commercial fertilizers. If animal or poultry manures are available, they should be utilized - applying during the late fall months of October and November. When single superphosphate gives a response, apply 400 pounds per acre every two years.

Where nitrogen gives a response, an early spring application of 40 pounds of available nitrogen per acre will greatly increase the crop of pasture hay removed in May or early June. A June application of 40 pounds of available nitrogen per acre will keep the pasture producing well throughout the summer. In most areas of Lake County this June application of nitrogen has increased production 100 per cent.

6. Grazing

Rotational grazing is important to high yields. The pastures should be cross-fenced so that they can be rotated and should be divided into at least four fields (more would be better). Many dairymen in California are practicing what is called rationed grazing, where the irrigated pasture is divided into long narrow fields with electric fences. Then by using movable cross fences a section of one of these long fields is fenced off each day for a one-day pasture allowance for the herd. Some beef cattle are being grazed on small fields two days per field. Allowing for a 20- to 30-day recovery after grazing has greatly increased the carrying capacity of irrigated pastures.

7. Clipping

Clipping ungrazed portions of the irrigated pasture several times a year is important. Clumps of grass which have headed out are unpalatable, and if not clipped these spots are unproductive and thereafter cut the pasture yield downward.

8. Weeds

Weeds can be controlled by clipping, proper grazing and irrigation, to some extent. It is possible to eliminate some broadleaf weeds such as dock, plantain, and yellow star thistle with 2,4-D, if properly applied at the right time, without harming Ladino clover and grasses. The Farm Advisors office would be glad to help you on your weed problems in pastures.

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IRRIGATED PASTURE YIELDS AND PRODUCTION COSTS WITH SPRINKLER IRRIGATION

The amount of feed obtained and water required will vary rather widely from farm to farm. The schedule at the right is about average or typical.

Month	Yield A.U.Mo. per A.	Irrig. A.in. per A.
Jan.		
Feb.		
Mar.	1.0	
Apr.	1.5	2
May	1.9	4
June	1.8	6
July	1.7	6
Aug.	1.5	6
Sept.	1.3	6
Oct.	1.0	2
Nov.	.3	
Dec.		
Total	12.0	32

SAMPLE COSTS WITH ABOVE YIELDS AND IRRIGATION

	Hours or Quantity per acre	Aver. Price	Costs Per acre	Costs Per A.U. Month
Man labor - applying fertilizer, fence work, dragging, mowing, etc.	3	1.25	3.75	
Irrigation labor - moving pipe, etc. 14 times	14	1.25	17.50	
Tractor use for mowing & fertilizing, etc.	1.5	1.50	2.25	
Total labor and field power			23.50	1.95
Power to pump and sprinkle 32 acre inches per acre with 15 h.p. motor, 225 gal. pump, total head 190 ft. including lift & pressure	866 KW hr.	1.32¢	11.50	
Fertilizer com'l to apply 40 lb. nitrogen and 36 lbs. of P_2O_5 per acre per year			9.00	
Total material cost			20.50	1.71
Total labor and material			44.00	
General expense, 5% of above			2.20	
County taxes, $100 value at $4 rate			4.00	
Repairs - average per acre for pump, pipe and other equipment			2.00	
Total cash overhead.			8.20	.68
Total cash costs			52.20	4.34

	Original cost 40 acres	Av. investment	5% int.	Depreciation		
		Dollars per acre				
Pasture stand seed & planting	$1,200	15.00	.75	3.00		
Fencing	2,000	25.00	1.25	2.50		
Irrigation system	5,000	62.50	3.13	8.00		
Miscellaneous other equipment	400	5.00	.25	1.00		
Land	12,000	300.00	15.00	----		
Total investment	$20,600	407.50				
Depreciation				14.50	14.50	1.21
Total cash costs & depreciation					66.70	5.56
Interest on investment			20.38		20.38	1.70
Total all costs					87.08	7.26

SUMMARY OF IMPORTANT PRACTICES

1. PLANT PROPER MIXTURE FROM OCTOBER 1 TO 31 OR FROM MARCH 1 TO MAY 1.
2. BETWEEN 25 TO 40 INCHES OF WATER MUST BE APPLIED BY 10 TO 20 IRRIGATIONS. (DO NOT LET PASTURE WILT.)
3. FERTILIZE TWICE A YEAR WITH ANIMAL OR CHICKEN MANURE OR COMMERCIAL FERTILIZERS (OCTOBER OR NOVEMBER AND JUNE).
4. CROSS FENCE INTO AT LEAST FOUR FIELDS (MORE DESIRABLE).
5. DO NOT OVER-GRAZE.
6. CLIP AT LEAST TWICE A YEAR.
7. SPREAD CATTLE DROPPINGS WITH A HARROW.
8. CONTROL WEEDS.

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Kelseyville, California
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