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IRRIGATED PASTURES FOR SAN LUIS OBISPO COUNTY

By
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Over the last ten years irrigated pasture acreages in San Luis Obispo County have averaged 4,180 acres per year. It has ranged from a low of 3,700 acres to a high of 4,800 acres. With proper planning and management, irrigated pasture can be an economical source of feed for many classes of livestock.

Irrigated pasture should not be considered permanent. If possible, it should be part of a crop rotation program planned to provide a year round feed supply with the most efficient use of farm lands.

MANAGEMENT FACTORS

Land Preparation - For flood irrigation, land must be properly leveled with suitable check widths and the right amount of fall for the soil type involved. Sprinklers should be considered on land that does not lend itself to leveling.

Seedbed Preparation - A firm, sound weed free seedbed is essential in pasture establishment. Cropping to sudan will help eliminate competitive weeds. Pasture mix may be planted directly into the stubble with little or no additional seedbed preparation. With conventional seedbed preparation a light cultivation following first rains will also help control germinating weeds. Grass and legume seeds are small. This means they should be planted somewhere between 1/4 to 1/2 inches in depth. Since the seeds may tend to separate during the planting process, it may be a good idea to plant the grasses and legumes separately. Seed in the

fall, if possible, to let the rain start the seed. If weeds are a problem, spring seeding may be advisable to allow clipping at the proper time. Plants should be well established with adequate top and root growth before the hot weather hits.

The Mixture - In selecting the pasture mix, it is not so important to get just exactly the right amount of each variety, because the eventual mixture will pretty well be determined by the fertilizing and grazing practices. A simple mix is often the best mix. In this area consider Orchardgrass, perennial and annual ryegrass and Ladino clover. If you have deep soils you may use alfalfa instead of Ladino. Add narrow leaf trefoil to the Ladino if you wish to add variety, or on sites that are unusually wet part of the year, use trefoil instead of Ladino.

Twelve to fourteen pounds of seed per acre is plenty and it is a waste of money to use more.

The mixture below is intended to be used for dairy and beef cattle:

Suggested Mixture

	*(1)	*(2)	*(3)	**(4)
Orchardgrass	6	4	3	4
Annual ryegrass		2		2
Perennial ryegrass	2	2	3	2
Tall fescue			2	
Ladino	4	3	3	
Trefoil, narrowleaf		1	2	1
Alfalfa				3
	12#/ac	12#/ac	13#/ac	12#/ac

*for shallower soils with more frequent irrigations
**for deep soils with less frequent irrigations

Pasture mixes for horses should contain a high percentage of grasses. For horse pasture you may wish to substitute tall fescue for one of the grasses or add it to the mixture. This is a heavy producer, but is so aggressive it will

take over to the exclusion of everything else in a short while. In some cases this is not desirable since it becomes hard to manage and unpalatable. The higher percentage of grasses will necessitate additional applications of nitrogen fertilizers to obtain maximum yields.

The following recommendation is suggested for a horse pasture on shallow soil:

Suggested Mixture

Tall fescue	4 pounds per acre
Orchardgrass	4 pounds per acre
Perennial ryegrass . . .	4 pounds per acre
Ladino clover	1 pound per acre
Trefoil, narrowleaf . . .	1 pound per acre
	14 pounds per acre

Alfalfa can be substituted for trefoil and Ladino clover on a deep soil

Irrigation Interval - Pasture plants have about 90 percent of their roots in the top foot of soil, thus frequent irrigations are necessary to maintain lush growth. Irrigate often to satisfy the shallow rooted clover, less frequently with alfalfa. In the north county area, during hot weather, plan to irrigate every 10 days. On the coast and south county areas, this irrigation can be stretched to 15 or 16 days.

Grazing Management - Rotate grazing to get full use of your pasture. Permanent or electric fences may be used. Cows grazing too soon after an irrigation and while the ground is still partly wet increases compaction.

CONCLUSION

Good yields of high quality forage can be produced by irrigated pastures in San Luis Obispo County. Land selected for this use must be chosen with care since land values, water costs and taxes are now of such proportion that feed produced from irrigated pasture is usually more expensive than other sources of roughage.

Shallow soils not suited to deep rooted crops are the best for irrigated pastures. Certain advantages accrue which partially compensate for the high cost forage. For example, it is more convenient to take care of young stock at home rather than truck animals to rented pasture. Also, the milking herd is usually cleaner when bedded down on irrigated pastures rather than in corrals.

In evaluated pasture land, the yields are often expressed in Animal Unit Months (AUM). One AUM is the amount of forage needed for good growth and production by one mature head of cattle for one month. It is further defined as 400 pounds of total digestible nutrients (TDN) or 0.4 of a ton of alfalfa hay.

SAMPLE INPUTS AND COSTS FOR IRRIGATED PASTURE IN SAN LUIS OBISPO COUNTY

Sprinkle irrigated with a yield of 12 Animal Unit Months per acre

	Hours per Acre			Cost per Acre	Cost per AUM
	Man Labor	20 hp Tractor	Pickup		
Clip, drag and maintenance work	3	1	1	6.25	
Irrigate, 15 times	15			18.75	
Total labor and field power	18	1	1	25.00	2.08
Irrigation water, power to pump 4 ac 125 ft. lift				12.50	
Fertilizer 12#, misc. and other materials 2#				14.00	
Total materials				26.50	2.21
Total labor and materials				51.50	4.29
General expenses, 5% of above				2.58	
County taxes, assessed value 300 x 25 x .08				6.00	
Repairs to equipment, irrigation system and misc.				2.00	
Total cash overhead				10.58	.88
Total cash costs				62.08	5.17

Investment overhead based on a farm unit of 100 acres, any part of which is irrigated pasture	Original Cost 100 ac.	Av Value	6% Int.	Depreciation		
		Dollars per Acre				
Stand cost $36 acre 6 years	3,600	18.00	1.08	6.00		
Irrigation system	20,000	100.00	6.00	20.00		
Fences, gates, etc.	3,000	15.00	.90	1.50		
Tractor, pickup, misc. equip.	8,000	40.00	2.40	8.00		
Land at agricultural value 600/ac	60,000	600.00	36.00	-		
Total investment & depreciation		773.00	46.38	35.50	35.50	2.96
Total cash & depreciation costs					97.58	8.13
Interest on investment					46.38	3.87
TOTAL ALL COSTS OF PRODUCTION					143.96	12.00

Labor Rates: Man labor $1.25; 20-30 hp tractor $1; Pickup truck $1.50

COST PER ANIMAL UNIT MONTHS WITH VARYING YIELDS

Yields-animal unit per acre	8	10	12	14	16	18
Cash and depreciation cost	12.20	9.76	8.13	6.97	6.10	5.42
Total cost	18.00	14.40	12.00	10.28	9.00	8.00
Cost per ton hay equivalent	45.00	36.00	30.00	25.70	22.50	20.00

2.5 AUM = 1 ton hay