

CO-OPERATIVE EXTENSION WORK  
IN  
AGRICULTURE AND HOME ECONOMICS  
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University of California  
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of Agriculture and County  
of Trinity, cooperating

*Ag. Ext. Serv.  
Trinity Co.*

University of California  
Agricultural Extension Service  
County Office Building  
P.O. Box 397  
Weaverville, California  
Telephone: 623-2361

COST OF IRRIGATED PASTURE

by

Philip S. Parsons, Extension Economist  
and Joe C. Borden, Farm Advisor

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Introduction

Irrigated pasture is the main crop produced on cropland in Trinity County. For the last two years meetings have been held to help local farmers with some of their management problems and to gather some basic cost information of irrigated pasture in the Hayfork and Hyampson area. Due to the lack of fencing and controlled grazing in the area it was decided the best way to measure yield was on the hay basis.

The figures used in this study were based on a typical operation in these two areas and do not necessarily apply to any individual operation. It is intended that this report be used to review the costs and investment of other local operations. Our hopes are that this comparison may result in ideas on where local operators may cut some of their costs.

ESTIMATED COST OF TYPICAL YEAR IN 90 ACRES OF  
IRRIGATED PASTURE IN HYAMPOM AREA

Yield - 5 tons alfalfa hay equivalent

Operation	Hours Per Acre	Labor	Fuel and Repairs	Materials	Total
<b>Cultural</b>					
Irrigate 10x	20.0	30.00	.50	Power to pump 5.00	35.00
Fertilizer	.5	.75		Fertilizer 10.00	11.25
Taxes (25% x \$200 x .065 rate)			.80	3.25	3.25
Misc. - Ins., tele., repairs	1.0	1.50		1.08	3.38
<b>TOTAL CULTURAL COST</b>	<b>21.5</b>	<b>32.25</b>	<b>1.30</b>	<b>19.33</b>	<b>52.88</b>
<b>Harvest</b>					
Mow 3x .5	1.5	2.25	1.95		4.20
Rake 3x .5	1.5	2.25	1.95		4.20
Bale 5 tons				Custom \$3.50/ton = 17.50	17.50
Haul 5 tons				" 2.50/ton = 12.50	12.50
<b>TOTAL HARVEST</b>	<b>3.0</b>	<b>4.50</b>	<b>3.90</b>	<b>30.00</b>	<b>38.40</b>
<b>TOTAL CASH &amp; LABOR COST</b>	<b>24.5</b>	<b>36.75</b>	<b>5.20</b>	<b>49.33</b>	<b>91.28</b>

90 acre operation

INVESTMENT	Per Acre	Annual Cost	
Land	\$200	Depreciation	Interest
Sprinkler irrigation	130	- -	12.00
Fence	15	13.00	3.90
Equipment	55	.75	.45
Buildings	10	3.96	1.65
		.50	.30
<b>Stand 73 7 year</b>		<b>10.42</b>	<b>2.19</b>
<b>TOTAL</b>		<b>28.63</b>	<b>20.49</b>
		<b>TOTAL COST PER ACRE</b>	<b>49.12</b>
		<b>COST PER TON</b>	<b>140.40</b>
		140.40/5 tons	<b>28.08</b>

ESTIMATED COST OF ESTABLISHING 90 ACRES OF IRRIGATED PASTURE IN THE HYAMPOM AREA

Labor valued at \$1.50/hr. - 20 H.P. Tractor @ \$.80/hr.  
Yield - 2½ tons alfalfa hay equivalent

Operation	Hours Per Acre	Labor	Fuel and Repairs	Materials	Total
<b>Cultural Cost</b>					
Plow	1	1.50	1.00		2.50
Harrow 3x	1.5	2.25	1.43		3.68
Seeding	.5	.75	.40	Seed 15 lbs. @ 60¢ = 9.00	10.15
				Rent of drill = .20	.20
				Fertilizer 200 lbs. of 16.20 = 8.00	8.00
Irrigate 10x	20.0	30.00		Power to pump = 5.00	35.00
Taxes (25% of \$200 x .065 rate)					3.25
Misc. - ins., tele., repairs, etc.	.75	1.13	.87		3.21
<b>TOTAL CULTURAL COSTS</b>	<b>23.75</b>	<b>35.63</b>	<b>3.70</b>	<b>26.66</b>	<b>\$65.99</b>
<b>Harvest</b>					
Mow 2x .5	1.0	1.50	1.30		2.80
Rake 2x .5	1.0	1.50	1.30		2.80
Bale 2½ tons				Custom \$3.50/tons = 8.75	8.75
Haul 2½ tons				" 2.50/tons = 6.25	6.25
<b>TOTAL HARVEST</b>	<b>2.0</b>	<b>3.00</b>	<b>2.60</b>	<b>15.00</b>	<b>20.60</b>
<b>TOTAL CASH &amp; LABOR COST</b>	<b>25.75</b>	<b>38.63</b>	<b>6.30</b>	<b>41.66</b>	<b>\$86.59</b>
<b>90 acre operation</b>					
<u>INVESTMENT</u>	<u>Per Acre</u>	<u>Annual Cost</u>			
Land	\$200	<u>Depreciation</u>	<u>Interest</u>		
Sprinkler Irrigation	130	10 year	13.00	12.00	
Fence	15		.75	3.90	
Equipment	55		3.96	.45	
Buildings	10		.50	1.65	
<b>TOTAL</b>			<b>18.21</b>	<b>18.30</b>	<b>36.51</b>
<b>TOTAL COST PER ACRE</b>					<b>123.10</b>
					Credit 2½ tons @ \$20
					<b>-50.00</b>
<b>COST TO ESTABLISH ONE ACRE</b>					<b>\$ 73.10</b>

REVISED FIGURES OF ESTIMATED COST OF ESTABLISHING  
30 ACRES OF IRRIGATED PASTURE IN HAYFORK AREA

Labor valued at \$1.50/hr. - 30 H.P. Tractor @ \$1.00/hr.

Yield - 1½ tons alfalfa hay equivalent

Operation	Hours Per Acre	Labor	Fuel and Repairs	Materials	Total
<b>Cultural Cost</b>					
Flow	1x	1.50	1.15		2.65
Harrow	3x	2.25	1.73		3.98
Irrigate	10x	30.00	1.60	Power to pump \$10.00	41.60
Seeding	.5	.75	.70	Seed 15 lb. @ 60¢ = 9.00	10.45
				Rent of drill = .20	.20
				Fertilize 200 lbs. of 16.20 = 8.00	8.00
Taxes (25% of \$200 x .065 rate)					3.25
Misc. - ins., tele., repairs, etc.					3.00
<b>TOTAL CULTURAL COST</b>					<b>\$73.13</b>
<b>Harvest</b>					
Mow	1x	.75	.75		1.50
Rake	1x	.75	.75		1.50
Bale	1½ tons			Custom \$3.50/ton = \$5.25	5.25
Haul	1½ tons			Custom 2.50/ton = 3.75	3.75
<b>TOTAL HARVEST COST</b>					<b>\$12.00</b>
<b>TOTAL CASH &amp; LABOR COST</b>					<b>\$85.13</b>
<b>30 acre operation</b>					
			<b>Annual Cost</b>		
<u>INVESTMENT</u>	<u>Per Acre</u>	<u>Depreciation</u>	<u>Interest .06%</u>		
Land	\$200	- -	12.00		
Sprinkler irrigation	160	16.00	4.80		
Fences	15	.75	.45		
Equipment	184	13.17	5.55		
Buildings	10	.50	.30		
<b>TOTAL</b>		<b>30.42</b>	<b>23.10</b>		<b>\$53.52</b>
<b>TOTAL COST PER ACRE</b>					<b>138.65</b>
			Credit 1½ tons hay @ \$20.00		30.00
<b>COST TO ESTABLISH ONE ACRE</b>					<b>\$108.65</b>

REVISED FIGURES OF ESTIMATED COST OF TYPICAL YEAR  
ON 30 ACRES OF IRRIGATED PASTURE IN HALTORK AREA

Yield - 3 tons alfalfa hay equivalent

Operation	Hours Per Acre	Labor	Fuel and Repairs	Materials	Total
<b>Cultural Cost</b>					
Irrigate	10x 20.0	30.00	1.60	Power to pump \$10.00	41.60
Fertilize	.5	.75	.50	Fertilize 10.00	10.00
Taxes (25% of \$200 x .065 rate)				3.25	3.25
Misc.					3.00
<b>Total Cultural Cost</b>					<b>\$57.85</b>
<b>Harvest Cost</b>					
Mow	3 x .5 1.5	2.25	1.50		3.75
Rake	3 x .5 1.5	2.25	1.50		3.75
Bale 3 tons				Custom \$3.50/ton = \$10.50	10.50
Haul 3 tons				Custom 2.50/ton = 7.50	7.50
<b>Total Harvest Cost</b>					<b>\$25.50</b>
<b>TOTAL CASH &amp; LABOR COST</b>					<b>\$83.35</b>

30 acre operation

INVESTMENT	Per Acre	Annual Cost		Interest	Total
		Depreciation			
Land	\$200	- -		12.00	
Stand	109	21.80		3.27	
Sprinkler irrigation	160	61.00		4.80	
Fence	15	.75		.45	
Buildings	10	.50		.30	
Equipment	184	13.17		5.55	78.59
<b>TOTAL COST PER ACRE</b>		<b>52.22</b>		<b>26.37</b>	<b>\$161.94</b>
					<b>\$ 53.93</b>

COST PER TON

\$ 53.93

ESTIMATED COST OF ESTABLISHING 60 ACRES  
OF IRRIGATED PASTURE IN HAYFORK AREA

Labor \$1.50/hr. - 30 H.P. Tractor \$1.00/hr. cash

Yield - 1½ tons

Operation	Total
Cultural Cost	
Cultural Cost would be the same as 30 acres	\$73.13
Harvest Cost	
Harvest Cost would be the same as 30 acres	12.00

**TOTAL CASH AND LABOR COST** **\$85.13**

60 acre operation		Total Cost		
INVESTMENT	Per Acre	Depreciation	Interest	
Land	\$200	- -	12.00	
Sprinkler Irrigation	130	13.00	3.90	
Fences	15	.75	.45	
Equipment	92	7.59	2.76	
Buildings	10	.50	.30	
<b>TOTAL</b>		<b>21.84</b>	<b>19.41</b>	<b>41.25</b>
<b>TOTAL COST PER ACRE</b>				<b>\$131.73</b>
			Credit 1½ tons hay @ \$20.00	30.00
			<b>COST TO ESTABLISH ONE ACRE</b>	<b>\$101.73</b>

ESTIMATED COST OF TYPICAL YEAR ON 60 ACRES  
OF IRRIGATED PASTURE IN HAYFORK AREA

Yield - 3 tons

Operation	Total
Cultural Cost	
Cultural Cost would be the same as 60 acres	\$57.85
Harvest Cost	
Harvest Cost would be the same as 60 acres	25.50
<b>TOTAL CASH AND LABOR COST</b>	<b>\$83.35</b>

60 acre operation		Annual Cost		
INVESTMENT	Per Acre	Depreciation	Interest	
Land	\$200	- -	12.00	
Sprinkler Irrigation	130	13.00	3.90	
Fence	15	.75	.45	
Equipment	92	7.59	2.76	
Buildings	10	.50	.30	
Stand	102 5 years	20.40	3.06	
<b>TOTAL</b>		<b>42.24</b>	<b>22.47</b>	<b>64.71</b>
<b>TOTAL COST PER ACRE</b>				<b>155.46</b>
			<b>COST PER TON</b>	<b>\$ 51.82</b>

## SUMMARY OF HAY COST FIGURES

Our study indicated that the typical 30 acre pasture in Hayfork produced hay that cost \$54 per ton. A typical 90 acre pasture in Hyampom produces hay that cost \$28 per ton. Just to see what would happen we computed the Hayfork study on the basis of a 60 acre operation instead of 30 acres. You will note the cost per ton is only reduced slightly over \$2.00 to \$52 per ton.

In these figures interest on investment was shown as a cost. If you wish to disregard this the cost in Hyampom could be reduced by approximately \$4 a ton (20.49 divided by 5 tons). Twenty-four dollars then becomes the breakeven point. If interest were to be disregarded in Hayfork the cost could be reduced nearly \$9 per ton (26.37 divided by 3 tons.) or to \$45 per ton.

Perhaps the main difference between the Hayfork cost and the Hyampom cost is in the 3 ton and 5 ton yields. If somehow the yield in the Hayfork area could be increased to what it is in Hyampom, the cost per ton would look a great deal better. This sounds like a most interesting and worthwhile challenge.