

Good Records - Basic Tool for Effective Management Decisions

by
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Introduction

Effective and efficient farm management decision making requires extensive information concerning past costs, returns, production levels, the usage of inputs, the present financial and physical condition of the operator and anticipated future costs, returns and production. This information can be best acquired from an individual's own farm records.

Approximate or general information can, however, be acquired from the records of firms with which the manager deals and from other public and private agencies. Two of the more common sources of off-farm information are university extension service and experiment station meetings and publications. The farm manager may use university cost studies for making production decisions, for making decisions about how to organize his farm operation, for determining whether to buy more land or lease more land or continue to operate the same size of farm. However, when it comes to providing an accurate estimate of future costs and returns in order to determine the most profitable combination of enterprises, or for providing accurate data as to the actual performance of the farm organization in order to report income to the Internal Revenue Service, make a required report to Social Security Administrators, apply for a loan or settle an estate, it is quite often necessary to have accurate and detailed information from one's own farm.

A.E. Extension Series 301: Paper presented at Canyon County Farm Management School, Caldwell, Idaho, January 14, 1976.

Record Keeping Systems

Farmers frequently ask, "Just how much information should I attempt to accumulate? How much information should I keep on my own farm operation?" This question can be answered by using one of the principles of economics. That principle is - additional money and time should be invested in record keeping (or any other activity or input) up to the point where the value of the last unit of information obtained is equal to the cost of obtaining that unit of information (point where added cost = added value). To spend any less time and information would be losing potential for increased net income. To spend more time on information gathering would cost more than it is worth.

Good farm record books or farm record systems are available from numerous agri-business firms, commercial bookstores and from several different agricultural agencies such as the U.S. Department of Agriculture and some of the state agricultural agencies. The Department of Agricultural Economics at the University of Idaho is presently evaluating a farm record book system which has recently been prepared for use by Idaho farmers and ranchers. It will be available for wide distribution during the fall of 1976. A limited number of copies are presently available upon request for people who are willing to cooperate in evaluating the usefulness of this system, and willing to point out deficiencies in order that it might be improved. This particular system being developed for the State of Idaho is quite closely keyed to the reporting requirements for the Internal Revenue Service and thus should prove very useful in terms of expediting the preparation and submission of Federal Income Tax forms.

Basically, all record systems attempt to provide two main items. The first category is a complete listing of all receipts obtained by

the farm. Basically, an entry is made showing the date, the buyer, the quantity sold, the price per unit and the total value for each transaction. The second category is expenses, usually divided into the three main categories of production expenses, fixed or overhead expenses and capital expenditures with the depreciation schedules associated with those expenditures.

A question may rise at this point as to whether net receipts or gross receipts should be recorded. Given the relationship between receipts and expenses and the producers interest in obtaining information to improve the management of farm operations, it becomes obvious that what is needed is to record all gross receipts and record all deductions such as marketing commissions or brand inspections or cleaning charges, transportation and so forth. All of these should be deducted as farm expenses. Thus, a better indication of the purpose and location of the expenditures will be obtained.

Additional records are also very useful to the farmer. Records covering such things as the cropping rotations, data regarding dates of seeding, of tillage and of harvesting operations, can be indispensable in preparing a calander of operations or plan of work for coming years. Additionally, there is need for improved systems of livestock records that can be used to monitor the performance of livestock enterprises. Records are needed that will provide the mechanism for measuring the progress of breeding programs towards predetermined goals which have been set i.e., higher livestock weaning weights, higher cutability and less fat.

Farm managers must decide each year which crops to grow, and which livestock enterprises to expand or decrease in size. Determining the cost and income for various crop and livestock enterprises is not always an easy matter. Every farm operation is different; even neigh-

boiling farms will differ with regard to such factors as size, shape, soil, topography, inherent yield potential and so forth. Furthermore, no two crop or livestock enterprises are exactly alike. Each requires a particular set of field equipment, of production practices, of farm supplies and of management ability. These enterprises also differ because of crop and livestock yields and changing market situations. All of these factors have important effects on the operation of a farm, on the costs of production and ultimately upon the annual income of the owner or operator. In order to be able to determine the kind of information that is necessary to make a wise decision as to which enterprises on the farm to expand, decrease or eliminate, it is necessary to have a system of records which will enable the owner to apply the principles of enterprise analysis to his particular operation. Using enterprise analysis, the farmer is able to examine each crop or livestock enterprise separately. He can then examine the contribution to total revenue minus the cost of production for each crop and livestock enterprise being considered. The farmer can then determine that combination of enterprises which will provide the maximum levels of income for his farm operation. Due to frequent changes both in the cost of production and in prices received for the products produced, it is probably necessary for a farmer to complete an enterprise analysis for each of his major crop and livestock enterprises each year. Failure to examine in detail the relationships between the enterprises that can or may be produced is likely to deny the owner or operator the return on his investment that he could normally otherwise achieve. Therefore, the remainder of this paper will be directed toward the presentation of simple methods of examining the costs and returns of various crop and livestock enterprises.

The Partial Budget

The partial budget is a useful tool for estimating the effects on income resulting from changes in management. The partial budget is particularly useful in measuring the impact of a moderate change in overall management - a change which does not usually require the calculation of a new complete farm budget. An example of such a moderate change would be the shifting of some barley acreage to wheat or of potatoes to sugar-beets (see Form 1).

The Enterprise Budget

Enterprise budgets are very useful for evaluating in detail the cost and income relationships for individual crop and livestock enterprises. Areas of strength and efficiency as well as areas of weakness and inefficiency can usually be determined by careful analysis of each enterprise. A copy of the worksheets used at the University for preparing livestock budgets and a copy of a completed cow-calf enterprise budget is included for use as a guide to livestock budgeting or enterprise analysis (see Form 2). With minor modification, these forms can also be used for crop enterprise analysis. Form 3 provides a briefer format for evaluating crop enterprises.

Partial budget outline

Adjustment: _____

A. Additional Receipts:

_____	\$ _____	
_____	_____	
Total additional receipts		\$ _____

B. Reduced Costs:

	Annual Ownership ¹	Operating
_____	\$ _____	\$ _____
_____	_____	_____
_____	_____	_____
Subtotal.....	\$ _____	\$ _____
Total reduced costs.....		\$ _____
Total of additional receipts and reduced costs.....		\$ _____

C. Additional Costs:

	Annual Ownership ¹	Operating
_____	\$ _____	\$ _____
_____	_____	_____
_____	_____	_____
Subtotal.....	\$ _____	\$ _____
Total additional costs		\$ _____

D. Reduced Receipts:

_____	\$ _____
_____	_____
Total reduced receipts.....	\$ _____
Total of additional costs and reduced receipts.....	\$ _____

E. Net Change in Farm Income:

(Total of additional costs and reduced receipts subtracted from total of additional receipts and reduced costs.)

\$ _____

¹Annual ownership costs are taxes, insurance, interest, depreciation, and possible storage.

FORM 2

HEAD SUPPLEMENTARY COW-CALF ENTERPRISE
TREASURE VALLEY, IDAHO
JANUARY 1976

TABLE 1
ESTIMATED COSTS AND RETURNS
DEBT FREE¹

IRS FORM 1040 F CODES	COSTS AND RETURNS ITEMS	TOTAL	PER COW (HEAD)	YOUR ESTIMATE	
				TOTAL	PER COW
	<u>INCOME (Table 3)</u>	\$	\$		
	TOTAL CASH INCOME (Table 3)	\$	\$		
	<u>CASH OPERATING COSTS</u>	\$	\$		
	TOTAL CASH OPERATING COSTS	\$	\$		
	<u>NON-CASH OPERATING COSTS</u>	\$	\$		
	TOTAL NON-CASH OPERATING COSTS	\$	\$		
	TOTAL OPERATING COSTS (CASH + NON-CASH)				
	RETURN ABOVE OPERATING COSTS (LOSS)				
	Less Depreciation (Table 5)				
	RETURN TO TOTAL CAPITAL INVESTMENT & MGMT (LOSS)				
	% RETURN TO TOTAL CAPITAL INVESTMENT & MGMT (LOSS)				

¹Interest on investment capital is not charged as a direct cost. The enterprise is assumed to be debt free - allowing the calculation of a "Return to Total Capital & Investment" (last line of Table 1).

TABLE 2
CAPITAL INVESTMENT SUMMARY

ASSETS	TOTAL	PER COW (75 HEAD)	YOUR ESTIMATE	
			TOTAL	PER COW
Cash (Average Reserve)	\$	\$		
Land (Table 5)				
Livestock (Table 3)				
Buildings & Improvements (Table 5)				
Machinery & Equipment (Table 5)	_____	_____		
TOTAL INVESTMENT DUE TO COW-CALF ENTERPRISE	\$	\$		

TABLE 3
LIVESTOCK INVENTORY, PRODUCTION AND SALES

Kind of Livestock	Beginning of Year			To Be Purchased		Number of Head Born	Number of Head Died	Sales			
	Head	Value per Head	Total Value	Head	Value			Head	Weight per Head (Pounds)	Price (\$/cwt)	Total Receipts
TOTAL		xxx	\$		\$				xxx	xxx	\$

TABLE 4
FEED REQUIREMENTS AND COSTS

FEEDS	LIVESTOCK		REQUIREMENTS				SOURCE					
	Kind of ANIMAL	No. of HEAD	Length of Feeding Period	Amount PER HEAD	Amount PER HEAD for Feed Period	TOTAL (Quantity)	HOME GROWN			PURCHASED		TOTAL COST
							Quantity	Value per Unit	TOTAL VALUE	Quantity	Price per Unit	
							TOTAL VALUE OF HOME GROWN FEEDS					\$
							TOTAL COST OF PURCHASED FEEDS (Salt & Minerals)				\$	

TABLE 5
CAPITAL INVESTMENT
Land; Buildings & Improvements; Machinery & Equipment

Column #	1	2	3	4	5	6	7	8	9
ITEM	Replacement Cost	Salvage Value	Average Value ¹	Percent Due to Cow-Calf Enterprise	Average Investment Due to Enterprise ²	Useful Life (years)	Annual Cost		Interest on Investment ⁴
							Depreciation Straight Line ³		
<u>Machinery & Equipment:</u>									
Sub-Total									
<u>Buildings & Improvements:</u>									
Sub-Total									
<u>Land:</u>									
Sub-Total									
TOTAL									
PER COW (HEAD)									

¹(Col 2 + Col 3)/2

²Col 4 x Col 5

³[(Col 2 - Col 3) x Col 5]/Col 7

⁴.09 x Col 6

TABLE 6
REAL ESTATE AND PERSONAL PROPERTY TAXES

ITEM	Number of Units (acres)	Appraised Value		Assessed Value		Mill Levy	TAXES	
		per Unit (acre)	Total	Percent	Total		per Unit (acre)	Total
LAND, in buildings, corrals, etc.								
BUILDINGS & IMPROVEMENTS								
MACHINERY & EQUIPMENT								
TOTAL TAXES CHARGED TO COW-CALF ENTERPRISE								\$

TABLE 7
INCOME SUMMARY

COSTS AND RETURNS ITEMS	TOTAL	PER COW (HEAD)	YOUR ESTIMATE	
			TOTAL	PER COW
TOTAL CASH INCOME (Table 1)	\$	\$		
TOTAL CASH OPERATING COSTS (Table 1)	\$	\$		
NON-CASH COSTS				
	\$	\$		
Operator's Labor	\$	\$		
SUB-TOTAL NON-CASH OPERATING COSTS (Table 1)	\$	\$		
Depreciation				
Machinery & Equipment (Table 5)	\$	\$		
Buildings & Improvements (Table 5)	\$	\$		
Sub-Total Depreciation	\$	\$		
Interest on Investment at %				
Machinery & Equipment (Table 5)	\$	\$		
Buildings & Improvements (Table 5)	\$	\$		
Livestock (Table 3)	\$	\$		
Land (Table 5)	\$	\$		
Sub-Total Interest on Investment	\$	\$		
SUB-TOTAL NON-CASH OWNERSHIP COSTS	\$	\$		
TOTAL NON-CASH COSTS (OPERATING & OWNERSHIP)	\$	\$		
TOTAL COSTS	\$	\$		
RETURN TO MANAGEMENT	\$	\$		
Plus Interest on Capital Investment at 9%	\$	\$		
RETURN TO CAPITAL INVESTMENT & MANAGEMENT	\$	\$		
Plus Operator's Labor	\$	\$		
RETURN TO CAPITAL INVESTMENT, OPERATOR'S LABOR AND MANAGEMENT	\$	\$		

Estimated Costs and Returns for a 75-Head
Supplementary Cow-Calf Enterprise
Treasure Valley, Idaho, January 1976

by

G. Ray Prigge, Virgil Kennedy and John Henry*

Introduction

The Treasure Valley is one of the most important agricultural areas in the State of Idaho. It is characterized by the production of numerous high value irrigated crops: potatoes, sugar beets, small grains, seed crops and numerous specialty crops. Beef herds in the area are small, relative to Idaho range operations, and typically are associated with the production of high value crops. This study attempts to estimate the costs and returns of a typical cow-calf operation of this size and located in this area.

Objectives of the Study

1. To gather and analyze data for cow-calf beef production enterprises on irrigated farms in the Treasure Valley.
2. To provide reliable estimates of investment requirements, production inputs, costs and returns that occurred in 1976 under the conditions assumed to be representative for cow-calf enterprises in the area.

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3. To provide current and prospective beef producers with a procedure for analyzing the profitability of a cow-calf enterprise so they can better evaluate production alternatives available to them. Space is provided in the tables so those interested can insert their own cost and return figures.

Source of Data

The data were compiled from information provided by a selected group of experienced Treasure Valley cattlemen operating supplementary cow-calf enterprises of approximately 75 head.

Because of the procedure used and the widely variable conditions under which feeder calves are produced in the Treasure Valley, the data in the budget do not reflect a mathematical average of costs and returns of all cow-calf operations in the Valley. The participating farmers reported the estimated investment required and the usual production practices associated with the typical Treasure Valley cow-calf enterprise.

Results

Data summarized in the tables below are not "averages". Instead, they illustrate production and cost estimates for a typical supplemental cow-calf operation in the Treasure Valley and represent the considered judgement of a select committee of Southwestern Idaho cattlemen.

TABLE 1. ESTIMATED COSTS AND RETURNS.

TABLE 2. CAPITAL INVESTMENT SUMMARY.

TABLE 3. LIVESTOCK INVENTORY, PRODUCTION, AND SALES

TABLE 4. FEED REQUIREMENTS AND COSTS.

TABLE 5. CAPITAL INVESTMENT.

TABLE 6. REAL ESTATE AND PERSONAL PROPERTY TAXES.

TABLE 7. INCOME SUMMARY

TABLE 8. COST PER 100 POUNDS OF CALF PRODUCED BY COST PER COW, PERCENT CALF CROP, AND SELLING WEIGHT OF CALVES.

TABLE 1. FINANCIAL STATEMENTS AND RATIOS

TABLE 2. CAPITAL INVESTMENT SUMMARY

TABLE 3. INVESTOR INTERESTS, FINANCIAL STATEMENTS

TABLE 4. FUND PERFORMANCE AND COSTS

TABLE 5. CAPITAL INVESTMENT

TABLE 6. FUND PERFORMANCE TO RISK-ADJUSTED RETURNS

TABLE 7. FUND SUMMARY

TABLE 8. LIST THE FUND NAMES OF THE FUNDS IN THE

OF THE FUND AND THE FUND'S FUND OF FUNDS

75 HEAD SUPPLEMENTARY COW-CALF ENTERPRISE
TREASURE VALLEY, IDAHO
JANUARY 1976

TABLE 1
ESTIMATED COSTS AND RETURNS
DEBT FREE¹

IRS FORM 1040 F CODES	COSTS AND RETURNS ITEMS	TOTAL	PER COW (75 HEAD)	YOUR ESTIMATE	
				TOTAL	PER COW
	<u>INCOME</u> (Table 3)				
6	Steer Calves (34 x 500# x \$.38)	\$ 6,460	\$ 86.13		
6	Heifer Calves (14 x 450# x \$.30)	1,890	25.20		
(Form 4797)	Replacement Heifers (5 x 700# x \$.32)	1,120	14.93		
(Form 4797)	Cull Cows (14 x 1050# x \$.20)	2,940	39.20		
(Form 4797)	Bull (1 x 1700# x \$.25)	425	5.67		
	TOTAL CASH INCOME (Table 3)	\$12,835	\$171.13		
	<u>CASH OPERATING COSTS</u>				
33	Purchased Feed-Salt & Minerals (Table 4)	\$ 249	\$ 3.32		
39	Medical Supplies & Veterinary Services	375	5.00		
30	Repairs & Maintenance (inventory listed Table 5)				
	Fencing	175	2.33		
	Buildings	100	1.33		
	Corrals, feeders	425	5.67		
	Machinery & Equipment	65	.87		
40	Fuel & Oil	225	3.00		
29	Hired Labor (none)	—	—		
42	Taxes (Table 6)	206	2.75		
43	Insurance (liability, wind & fire)	165	2.20		
45	License - Trucks	28	.37		
50	Marketing				
	Hauling (self)	—	—		
	Commission (68 head at \$4.50)	306	4.08		
	Brand Inspection	34	.45		
(Form 4797)	Bulls Purchased	650	8.67		
31	Interest on Investment Capital (Debt Free) ¹	—	—		
31	Interest on Operating Capital (\$3729 at 10%/6 mo)	186	2.48		
44, 50	Miscellaneous Overhead (Utilities, dues, subscrip- tions, business travel, accounting)	226	3.01		
	TOTAL CASH OPERATING COSTS	\$ 3,415	\$ 45.53		
	<u>NON-CASH OPERATING COSTS</u>				
	Feed - Home Grown (Table 4)				
	Alfalfa Grass Hay	\$ 7,138	\$ 95.17		
	Oats	432	5.76		
	Pasture	5,344	71.25		
	Operator's and Family's Labor 900 hours @ \$2.5/hr	2,250	30.00		
	TOTAL NON-CASH OPERATING COSTS . . .	\$15,164	\$202.18		
	TOTAL OPERATING COSTS (CASH + NON-CASH)	18,579	247.71		
	RETURN ABOVE OPERATING COSTS (LOSS)	(5,744)	(76.58)		
	Less Depreciation (Table 5)	968	12.90		
	RETURN TO TOTAL CAPITAL INVESTMENT & MGMT (LOSS)	(6,712)	(89.49)		
	% RETURN TO TOTAL CAPITAL INVESTMENT & MGMT (LOSS)		(17.09%)		

¹Interest on investment capital is not charged as a direct cost. The enterprise is assumed to be debt free - allowing the calculation of a "Return to Total Capital & Investment" (last line of Table 1).

TABLE 2
CAPITAL INVESTMENT SUMMARY

ASSETS	TOTAL	PER COW (75 HEAD)	YOUR ESTIMATE	
			TOTAL	PER COW
Cash (Average Reserve)	\$ 500	\$ 6.67		
Land ¹ (Table 5)	3,000	40.00		
Livestock (Table 3)	22,600	301.33		
Buildings & Improvements (Table 5)	7,875	105.00		
Machinery & Equipment (Table 5)	<u>2,078</u>	<u>27.71</u>		
TOTAL INVESTMENT DUE TO COW-CALF ENTERPRISE ²	\$36,053	\$480.71		

¹Three acres of land for corrals, buildings, etc. were charged to the Cow-Calf Enterprise. Other farm land was considered part of a pasture, hay or other crop enterprise.

²Had the value of hay, pasture and cropland been included, the total investment would have been (\$36,053 + \$105,000) \$141,053 or \$1,880.71 per head. Inclusion of the additional machinery, equipment and operating capital required for cropping activities (hay, pasture and oats production) would further increase these investment values.

TABLE 3
LIVESTOCK INVENTORY, PRODUCTION AND SALES

Kind of Livestock ¹	Beginning of Year			To Be Purchased		Number of Head Born	Number of Head Died	Sales			
	Head	Value per Head	Total Value	Head	Value			Head	Weight per Head (Pounds)	Price (\$/cwt)	Total Receipts
Cows	60	\$230	\$13,800				1	14	1,050	20.00	\$ 2,940
Replacement Heifers (yearling calving)	20	200	4,000					5	700	32.00	1,120
Open Heifers	20	160	3,200								
Heifer Calves						35	1	14	450	30.00	1,890
Steer Calves						35	1	34	500	38.00	6,460
Bull	2	650	1,300	1	\$650			1	1,700	25.00	425
Horse	1	300	300								
TOTAL	103	xxx	\$22,600	1	\$650	70	3	68	xxx	xxx	\$12,835

¹Seventy-five (60 mature cows and 15 replacement heifers) cows calve each year and 14 cows are culled following weaning of the calves. Twenty heifer calves are kept for herd replacements. Five replacement heifers will be culled before calving. Three bulls are used; each February the third bull is purchased and following breeding, one bull is sold.

TABLE 4
FEED REQUIREMENTS AND COSTS

FEEDS	LIVESTOCK		REQUIREMENTS				SOURCE					
	Kind of ANIMAL	No. of HEAD	Length of Feeding Period	Amount PER HEAD	Amount PER HEAD for Feed Period	TOTAL (Quantity)	HOME GROWN			PURCHASED		
							Quantity	Value per Unit	TOTAL VALUE	Quantity	Price per Unit	TOTAL COST
Alfalfa Grass Hay	Cows	60.0	<u>months</u> 4	<u>lbs/day</u> 25	<u>tons</u> 1.50	<u>tons</u> 90.00	<u>tons</u> 90.00	\$ 50	\$4,500			
	Replac. Heifers	15.0	4	25	1.50	22.50	22.50	50	1,125			
	Heifer Calves	20.0	6	14	1.25	25.00	25.00	50	1,250			
	Bulls	2.5 ¹	4	25	1.50	3.75	3.75	50	188			
	Horse	1.0	4	25	1.50	1.50	1.50	50	75			
Oats	Heifer Calves	20.0	6	2	.18	3.60	3.60	120	432			
Pasture (and meadow and stubble grazing)	Cows	60.0	8	<u>AUM²</u> 1	<u>AUM</u> 8	<u>AUM</u> 480	<u>AUM</u> 480	\$ 8	\$3,840			
	Replac. Heifers	20.0 ³	8	1	8	160	160	8	1,280			
	Bulls	2.5 ¹	8	1	8	20	20	8	160			
	Horse	1.0	8	1	8	8	8	8	64			
Salt & Minerals	Cows (and heifer calves to 1 yr)	60.0	12	<u>lbs / mo</u> 2.0	<u>lbs</u> 24	<u>lbs</u> 1,440				<u>lbs</u> 1,440	<u>lbs</u> \$.14	\$202
	Replac. Heifers	15.0	12	1.5	18	270				270	.14	38
	Bulls	2.5	12	1.5	18	45				45	.14	6
	Horse	1.0	12	1.5	18	18				18	.14	3
TOTAL VALUE OF HOME GROWN FEEDS								\$12,914				
										TOTAL COST OF PURCHASED FEEDS (Salt & Minerals)		\$249

¹The purchased bull will be fed hay for about 2 months. Bull numbers will average 2.5 for the year.

²Animal Unit Months

³Twenty bred replacement heifers are pastured. Five of the twenty are sold before going on winter feed.

TABLE 5
CAPITAL INVESTMENT
Land; Buildings & Improvements; Machinery & Equipment

Column #	1	2	3	4	5	6	7	8	9
ITEM	Replace- ment Cost	Salvage Value	Average Value ¹	Percent Due to Cow-Calf Enterprise	Average Investment Due to Enterprise ²	Useful Life (years)	Annual Cost		
							Depreciation Straight Line ³	Interest on Investment ⁴	
<u>Machinery & Equipment:</u>									
Tractor, Loader, Spreader (used) ⁵	\$3,000	\$1,000	—	0 %					
Scales	1,200	0	\$ 600	100%	\$ 600	20	\$ 60	\$ 54	
Truck 2-Ton (used, 6-8 yrs old)	3,500	600	2,050	30%	615	10	87	55	
Pick-up Truck (used, 2 yrs old)	3,500	400	1,950	25%	488	10	78	44	
Squeeze Chute	500	250	375	100%	375	20	13	34	
Sub-Total					\$ 2,078		\$238	\$ 187	
<u>Buildings & Improvements:</u>									
Corrals, Feeding & Watering Eqpt.	8,500	1,500	5,000	100%	5,000	15	467	450	
Small Calving Shed & Grain Stor.	2,000	300	1,150	100%	1,150	25	68	104	
Fencing									
Boundary (1½ mi, 5 barbed)	3,000	0	1,500	100%	1,500	20	150	135	
Cross (1½ mi, electric)	350	0	175	100%	175	10	35	16	
Chargers	100	0	50	100%	50	10	10	5	
Sub-Total					\$ 7,875		\$730	\$ 710	
<u>Land:</u>									
Irrigated Pasture 50 acres @ \$900/acre				0 % ⁶					
Irrigated Meadow & Cropland 40 acres @ \$1500/acre				0 %					
Corrals, Buildings, etc. 3 acres @ \$1000/acre			3,000	100%	3,000	—	—	270	
Sub-Total			\$3,000		\$ 3,000		—	\$ 270	
TOTAL					\$12,953		\$968	\$1,167	
PER COW (75 HEAD)					\$172.71		\$12.90	\$15.56	

¹(Col 2 + Col 3)/2

²Col 4 x Col 5

³[(Col 2 - Col 3) x Col 5]/Col 7

⁴.09 x Col 6

⁵Tractor & manure handling equipment are charged against the crop enterprises and are assumed to be equal in value to the manure produced.

⁶Pasture and hay are considered to be other enterprises. The value of the pasture, hay and oats produced were charged to the Cow-Calf enterprise at market cost.

TABLE 6
REAL ESTATE AND PERSONAL PROPERTY TAXES

ITEM	Number of Units (acres)	Appraised Value		Assessed Value		Mill Levy	TAXES	
		per Unit (acre)	Total	Percent	Total		per Unit (acre)	Total
LAND, in buildings, corrals, etc.	3	\$1,000	\$3,000	17%	\$ 510	9.32	\$16	\$ 48
BUILDINGS & IMPROVEMENTS			7,875	17%	1339	9.32		125
MACHINERY & EQUIPMENT			2,078	17%	353	9.32		33
TOTAL TAXES CHARGED TO COW-CALF ENTERPRISE								\$206

TABLE 7
INCOME SUMMARY

COSTS AND RETURNS ITEMS	TOTAL	PER COW (75 HEAD)	YOUR ESTIMATE	
			TOTAL	PER COW
TOTAL CASH INCOME (Table 1)	\$12,835	\$171.13		
TOTAL CASH OPERATING COSTS (Table 1)	\$ 3,415	\$ 45.53		
NON-CASH COSTS				
Feed - home grown (Table 4)				
Alfalfa Grass Hay	\$ 7,138	\$ 95.17		
Oats	432	5.76		
Pasture	5,344	71.25		
Operator's Labor (900 hours @ 2.50/hr)	\$ 2,250	\$ 30.00		
SUB-TOTAL NON-CASH OPERATING COSTS (Table 1)	\$15,164	\$202.18		
Depreciation				
Machinery & Equipment (Table 5)	\$ 238	\$ 3.17		
Buildings & Improvements (Table 5)	730	9.73		
Sub-Total Depreciation	\$ 968	\$ 12.90		
Interest on Investment at 9%				
Machinery & Equipment (Table 5)	\$ 187	\$ 2.49		
Buildings & Improvements (Table 5)	710	9.47		
Livestock (Table 3)	2,034	27.12		
Land (Table 5)	270	3.60		
Sub-Total Interest on Investment	\$ 3,201	\$ 42.68		
SUB-TOTAL NON-CASH OWNERSHIP COSTS	\$ 4,169	\$ 55.59		
TOTAL NON-CASH COSTS (OPERATING & OWNERSHIP)	\$19,333	\$257.77		
TOTAL COSTS	\$22,748	\$303.30		
RETURN TO MANAGEMENT	-\$ 9,913	-\$132.17		
Plus Interest on Capital Investment at 9%	3,201	42.68		
RETURN TO CAPITAL INVESTMENT & MANAGEMENT	-\$ 6,712	-\$ 89.49		
Plus Operator's Labor	2,250	30.00		
RETURN TO CAPITAL INVESTMENT, OPERATOR'S LABOR AND MANAGEMENT	-\$ 4,462	-\$ 59.49		

TABLE 8
 COST PER 100 POUNDS OF CALF PRODUCED
 BY COST PER COW, PERCENT CALF CROP AND SELLING WEIGHT OF CALVES¹

Cost Per Cow and Percent Calf Crop	Average Selling Weight (Pounds)					
	300	350	400	450	500	550
	(Costs, dollars per 100 pounds) ¹					
<u>\$90 Cost Per Cow</u>						
90% calf crop	\$ 33.33	\$ 28.57	\$ 25.00	\$ 22.22	\$ 20.00	\$ 18.18
80	37.50	32.14	28.13	25.00	22.50	20.45
70	42.86	36.73	32.14	28.57	25.71	23.38
60	50.00	42.86	37.50	33.33	30.00	27.27
<u>\$120 Cost Per Cow</u>						
90% calf crop	\$ 44.44	\$ 38.10	\$ 33.33	\$ 29.63	\$ 26.67	\$ 24.24
80	50.00	42.86	37.50	33.33	30.00	27.27
70	57.14	48.98	42.86	38.10	34.29	31.17
60	66.67	57.14	50.00	44.44	40.00	36.36
<u>\$150 Cost Per Cow</u>						
90% calf crop	\$ 55.55	\$ 47.62	\$ 41.66	\$ 37.01	\$ 33.33	\$ 30.30
80	62.50	53.57	46.87	41.66	37.50	34.09
70	71.42	61.22	53.57	47.62	42.86	38.96
60	83.33	71.42	62.50	55.55	50.00	45.45
<u>\$180 Cost Per Cow</u>						
90% calf crop	\$ 66.67	\$ 57.14	\$ 50.00	\$ 44.44	\$ 40.00	\$ 36.36
80	75.00	64.29	56.25	50.00	45.00	40.91
70	85.71	73.47	64.29	57.14	51.43	46.75
60	100.00	85.71	75.00	66.67	60.00	54.55
<u>\$210 Cost Per Cow</u>						
90% calf crop	\$ 77.78	\$ 66.67	\$ 58.33	\$ 51.85	\$ 46.67	\$ 42.42
80	87.50	75.00	65.63	58.33	52.50	47.73
70	100.00	85.71	75.00	66.67	60.00	54.55
60	116.67	100.00	87.50	77.78	70.00	63.64
<u>\$240 Cost Per Cow</u>						
90% calf crop	\$ 88.89	\$ 76.19	\$ 66.67	\$ 59.26	\$ 53.33	\$ 48.48
80	100.00	85.71	75.00	66.67	60.00	54.55
70	114.29	97.96	85.71	76.19	68.57	62.34
60	133.33	114.29	100.00	88.89	80.00	72.73
<u>\$270 Cost Per Cow</u>						
90% calf crop	\$100.00	\$ 85.71	\$ 75.00	\$ 66.67	\$ 60.00	\$ 54.55
80	112.50	96.43	84.38	75.00	67.50	61.36
70	128.57	110.20	96.43	85.71	77.14	70.13
60	150.00	128.57	112.50	100.00	90.00	81.82

¹This is the price that must be received for calves to BREAK-EVEN, at various levels of annual cost per cow, percent calf crop and average sales weights.

ESTIMATING COST OF PRODUCING ONE ACRE OF _____

Item of expense	Amount used per acre	Price	Cost per acre
Growing costs			
1. Man labor	_____ hrs	at _____	\$ _____
2. Tractor use	_____ hrs	at _____	\$ _____
3. Equipment use	_____ hrs	at _____	\$ _____
4. Hauling	_____ hrs	at _____	\$ _____
5. Fertilizer, manure, lime	_____ cwt	at _____	\$ _____
6. Herbicides and insecticides	_____ lbs	at _____	\$ _____
7. Seed or plants	_____	at _____	\$ _____
8. Land charge	One acre	at _____	\$ _____
9. Other	_____	at _____	\$ _____
10. General overhead	_____	at _____	\$ _____
_____	_____	at _____	\$ _____
Total growing costs per acre			\$ _____
Harvesting costs			
11. Man labor	_____ hrs	at _____	\$ _____
12. Tractor use	_____ hrs	at _____	\$ _____
13. Hauling	_____ hrs	at _____	\$ _____
14. Harvesting equipment or hired harvesting	_____	at _____	\$ _____
15. Other _____	_____	at _____	\$ _____
_____	_____	at _____	\$ _____
Total harvesting costs per acre			\$ _____
Storing and selling costs			
16. Storage	_____	at _____	\$ _____
17. Handling	_____	at _____	\$ _____
18. Other _____	_____	at _____	\$ _____
_____	_____	at _____	\$ _____
Total storing and selling costs per acre			\$ _____
Total cost per acre			\$ _____

Income/acre	Yield/acre	Price	Total
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
TOTAL INC/ACRE			_____
Income/acre	_____		
-Total cost/acre	_____		
Net Return/Acre		_____	

STATE OF TEXAS

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