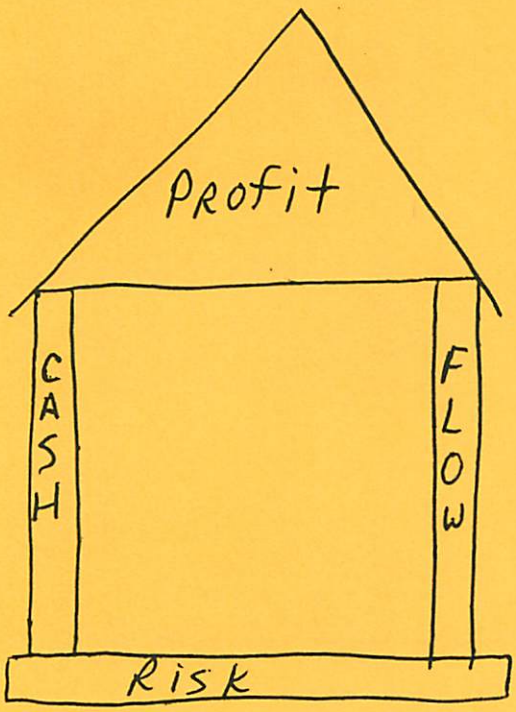
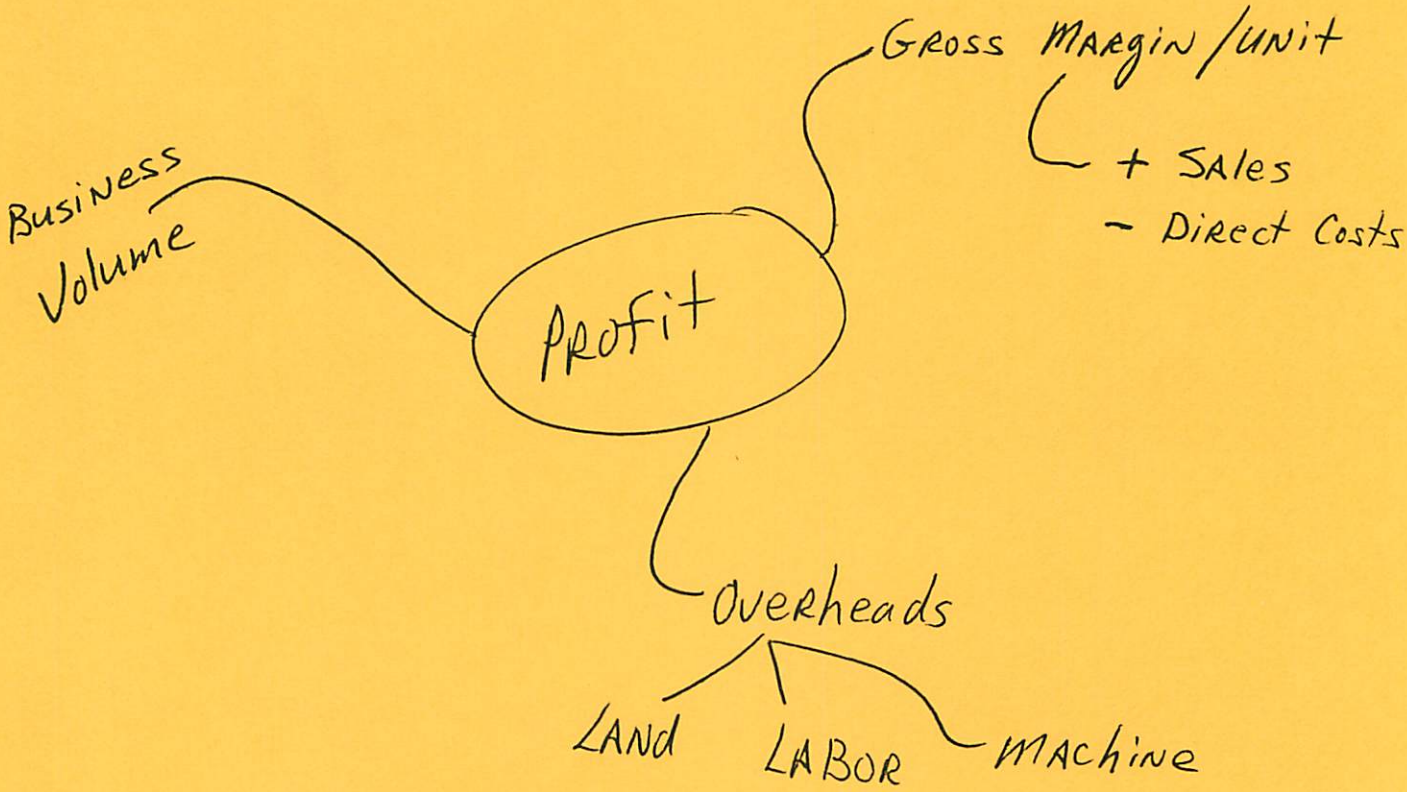
Money


Profit
CASH
FLOW
Risk


Financial
Structure


Gross Margin/Unit
+ Sales
- Direct Costs
Business
Volume
Profit
Overheads
Land
Labor
Machine

MONEY

TABLE OF CONTENTS

MONEY

OBJECTIVES

1. You will understand the difference between cash flows and profit.

2. You will understand true profit and how to manage for it.

3. You will be able to analyze the profitability of each ranch enterprise and the overall business structure of the ranch.

4. You will be able to use the tools of money management, including:

Gross Margin
Cash Flow
Balance Sheet
Income Statement

WILL YOU SURVIVE?

by Lee Pitts

Are you a marginally skilled, undercapitalized and undercommitted beef cattle producer? If that sounds like you, then this may be the last year you are entitled to wear a cowboy hat and boots. 1992 may be your last year as a cattleman, according to a recent analysis by FEEDSTUFFS magazine.

The handwriting is scribbled on the barn door. According to USDA reports, our nation's beef cow herd will expand 2 percent in 1992 at the same time that total meat supplies and a sluggish economy will be reducing cow/calf producer margins. In 1992 there will be more livestock and poultry produced in this country that there ever has been.

According to the FEEDSTUFFS survey, "There will be overproduction and under-demand. Excess consumer debt, a recession and unemployment will continue to force consumers to reduce spending for all goods, including food." Increasing meat supplies will lead to competition among all meats. There will be casualties. Will they include you?

AVERAGE ISN'T GOOD ENOUGH

Those of us in the beef cattle business have always considered poultry our toughest competition. But if you really want to see what your toughest competitor looks like, just look to your left or to your right. He is the cattleman sitting next to you at the auction. He is your friend you run into down at the feed store. He is your fellow officer in the cattleman's association. At the end of this decade, the odds are good that one of you will not be in the business of beef any longer.

In 1991, beef cattle numbers in this country were 11 percent smaller than 10 years ago, and yet we produced 6 percent more beef. We produced more beef in 1990 that we did in 1978, with 20 million fewer cows. How was this possible? Efficiency! In 1980, the average weaning weight per calf in this country was 449 pounds. In 1990, it had grown to 522 pounds.

A Cattle Fax survey recently revealed the cost differences involved in different types of cattle operations. These yearly costs ranged from a low of $239 to $386 per head. If you are weaning 522 pound calves right now and your annual cow costs are somewhere between $239 and $386 per cow, you might feel pretty smug about your ability to survive the '90s. After all, you are an average producer. Not great...but not that bad either.

Maybe you had better rethink your position.

"If you are just an average producer," says Randy Blanch of Cattle Fax, "it won't be long till you are out of business. In a commodity business, average will not make money over the long haul," says Blanch.

EXCESS CAPACITY

As a cattleman of the '90s you will not only be competing against your neighbor to be a low cost producer, but against cattlemen in other regions of the country. Recent Cattle Fax data reveals a wide range of production costs from one part of the country to another.

The dubious honor of having the highest costs associated with running a cow were established in the Northwest, where it was calculated that it required $321 per year to run a cow. The survey indicated that the average cost to maintain a cow in the Southwest was $295 and $288 in the Midwest. The cheapest cow to maintain was found in the Central Plains states, at $287. So if you are an average rancher in Oregon you are already at a $34 disadvantage to a rancher in Kansas. It doesn't require a great memory to recall those days when $34 was the difference between a profit and a loss. We will no doubt be visited once again by those days during the '90s.

There are also big differences in efficiency of operation. A 10 percent difference in weaning weight, feed and interest costs and cull cow weights can amount to a $143.41 difference in return per cow. And there is far more than a 10 percent difference in efficiency between our poorest producers and our very best.

Why isn't average good enough anymore? Because economists tell us that we have excess production in the beef business. There are simply too many of us.

Some producers will attempt to stay in the beef business no matter how much money they lose. In fact, many do not even realize they are losing money! In 1990, the average beef producer in this country owned only 36 head. Obviously that person is not a full time cattleman. Much of our excess production comes from the part-timers. A much higher percentage of casualties will come from that group of cattlemen who own 46.5 percent of our total beef cow herd, the 7 percent of our total number of beef operators who own more than 100 cows.

Value based marketing, if it ever arrives, may curtail the operations of some hobbyist cattlemen. According to economist Wayne Purcell, the split personality between small part-time operators and very large commercial operations will become even more pronounced during this decade, along with a widening rift in genetic quality of the cattle they produce.

> "Sometime in the latter '90s those cattlemen who haven't made the genetic progress that packers want will find their offerings sharply discounted," he says, forcing even the hobby farmer to find other uses for his resources.

THE NEW REALITY

There is one group of beef producers who wouldn't be considered a good bet to survive the 1990s. They would be the leveraged businessmen looking for short-term profits who are entering the business for the first time.

> "Although a well managed beef herd will turn a modest profit in the long run" says Dwight Aakre of North Dakota State Extension Service,"the short run looks strenuous for those who buy beef cows now. If, for instance, cows are purchased now at $800 and financed for five years at 10 percent interest, the carrying cost alone on the cow would be $211 per cow! Even the carrying charge on a $600 cow at 12 percent for five years is $156. That's more than many cows have netted during the very best of times. And $600 today doesn't buy you a beast capable of weaning above the average calves."

But those figures don't mean that a lot of beef won't be produced by people jumping in with both boots into our business for the first time. "Because of good profits in cow/calf operations in the last four or five years, people are now interested in getting beef cattle," says Aarke. "But the problem is we are now at the top of the cycle. This cycle is entirely predictable, but people have short memories. The fact is, people who buy beef cows now are guaranteed to be high cost producers."

"Cattle prices have already begun to trend down," says Aarke, "and will continue down through the first half of the decade. This is the same time period when money borrowed to purchase the cows will have to be repaid. And this means that each year it will get harder for a new producer to make payments of the loan that paid for these high priced cows. A person will need to be more bold than sensible to assume that beef prices will suddenly flatten out and stay high after 60 years of traveling predictably up and down in 10 year cycles. The price cycles are linked to the cycles in the size of the nation's cow herd. Cattle herd numbers hit low spots in or about 1929, 1939, 1949, 1959, 1968, 1979 and 1989.

"The one exception," says Aarke,"may be people who would like to get into beef for the very long term, in order to add value to the crops they raise, and who also have cash with no better place to invest it. Such people may decide to go ahead and get into

the game. Many people, though, will find it hard to keep cash flowing in a beef operation if they start up today. People will have better investment opportunities than this one in the next two to four years."

LIVESTOCK MARKET DIGEST
Volume 32, NO. 5
Week of February 5 through 9, 1992

GROSS MARGIN ANALYSIS

The gross margin or contribution enterprise analysis provides the rancher with information to make good management decisions. The gross margin analysis examines each ranch enterprise or potential enterprise as a profit center. An enterprise is one segment of the ranch business which can be separated from others by its direct costs. For example, typical enterprises would be cow/calf, hay, hunting, yearlings or sheep. The gross margin encourages you to separate each segment of your business to determine the real profit of each. If replacement heifers are raised on the ranch, it would be wise to separate their costs into an enterprise. When this is done, the true cost of raising versus buying replacements can be identified. The same applies if bulls are sold from the ranch. This segment of the business might have its own costs, like supplement or breeding exams. If the bull business is lumped together with the cow/calf enterprise, the profit of one enterprise may conceal the loss of another.

The goal of the Colorado Ranch Management School is to empower you to make decisions to reach your goals. The power of the gross margin is that it gives you the right information to make good decisions. The prework notebook introduced managerial accounting. The value of managerial accounting, of which the gross margin is a part, is to put you, the manager, in charge. The information kept, and numbers generated, are for <u>your</u> benefit. The gross margin analysis should be approached with an open mind, remembering that the more you put into it, the more meaningful the results. Many people, ourselves included, cringe at the thought of number crunching. The negative attitude comes from the fact that we're usually keeping records to meet government requirements. Relax and open your thoughts to see what the gross margins can do for you.

Ranch expenses or costs are designated as either direct or overhead costs based on their behavior. (Did you know that costs behave?) Costs that increase or decrease directly with the units of production are called direct costs. Units of production, for example, might be the number of cows in a cow/calf enterprise or the number of acres (or tons) in a hay enterprise. As the number of cows increase or decrease, the number of vaccinations will vary proportionally. The same is true for the amount of baling twine in a hay operation. These are direct costs. Other direct costs might include feed, freight, veterinary and breeding expenses, fertilizer, herbicide, machine hire and interest on an operating loan.

Overhead costs refer to expenses that are incurred regardless of the number of livestock or other enterprises. Typical overhead costs include insurance, legal fees, accounting fees, utilities, interest on land payments, taxes, etc. These expenses exist whether you have one animal or a thousand.

Overhead costs often remain constant regardless of changes in production. Overhead cost may change as production changes, but not in direct proportion. For example, consider cowboy wages:

ANNUAL COWBOY WAGES	NUMBER OF COWS	AVERAGE COST PER COW
$35,000	100	$350
$35,000	500	$ 70

If you employ one cowboy to care for 100 cows, that same cowboy can care for more than 100 cows. Therefore, as the number of cows increases, this overhead cost remains constant. Likewise, if you drop to 95 cows, are you going to pay the cowboy 5% less? Probably not. However, at some point, if production continues to increase, an extra cowboy will have to be hired. Nonetheless, you can see that labor wages don't vary directly with production.

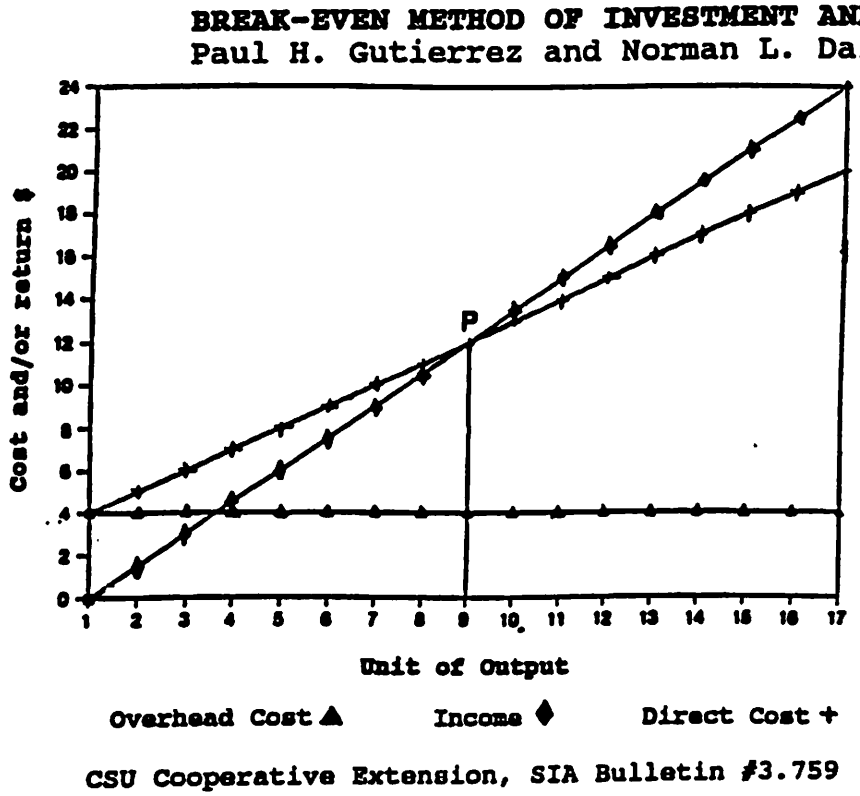
One learning aid to keep in mind is don't worry if you don't agree with the costs presented here. Grasp the concept and don't fight yourself over the dollar amounts.

Now you may be in shock at the cost of cowboy wages listed here. It may not be out of line, however, when insurance, housing, vehicle, donated beef, and other employee costs are considered.

The important point is to differentiate between those costs that vary directly with the units of production (direct costs) and those that do not (overhead costs). Once you learn to make this distinction, your gross margin analysis will become a powerful tool.

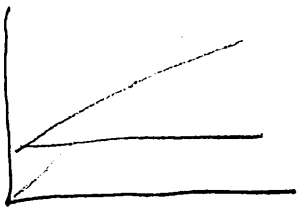
To cover the overhead costs on the ranch, the decision must be made to raise cattle, sheep, buffalo, llamas, or whatever the resources can support. If cattle are the choice, for each cow that is added to the herd, the direct costs will rise proportionately (feed, vet, marketing, etc.). The direct costs would cease if the cattle enterprise were eliminated.

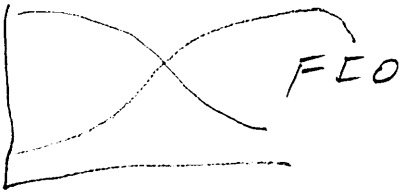
The graph below illustrates overhead and direct costs and profit. The axis across the bottom is labeled "Unit of Output". Think of this as the number of animals raised or the amount of hay produced. The axis on the left side of the graph is labeled "Cost and/or return, $". The left axis refers to either costs or income. The flat line across the bottom (with triangle markers) represents overhead costs. The line (or cost) remains the same if animal or production numbers are increased or decreased. The diagonal line with the star markers represents direct costs. As animal numbers rise, so do direct costs, in proportion. The other diagonal line (with diamond markers) is the income line. Income rises as more units of production are added. However, a profit is not obtained until income exceeds both direct and overhead costs (shown on the graph with the vertical line and letter P).



This graph is the key to understanding the profit principles. There are three ways to increase profits:

(1) Reduce overhead costs
(2) Increase the number of production units
(3) Increase the gross margin (the dollar return for each enterprise after direct costs are subtracted)





Gross Margin

Number of Animals or Enterprises

PROFITS

Overhead Cost

Performance a function of Nutrition

Ranch

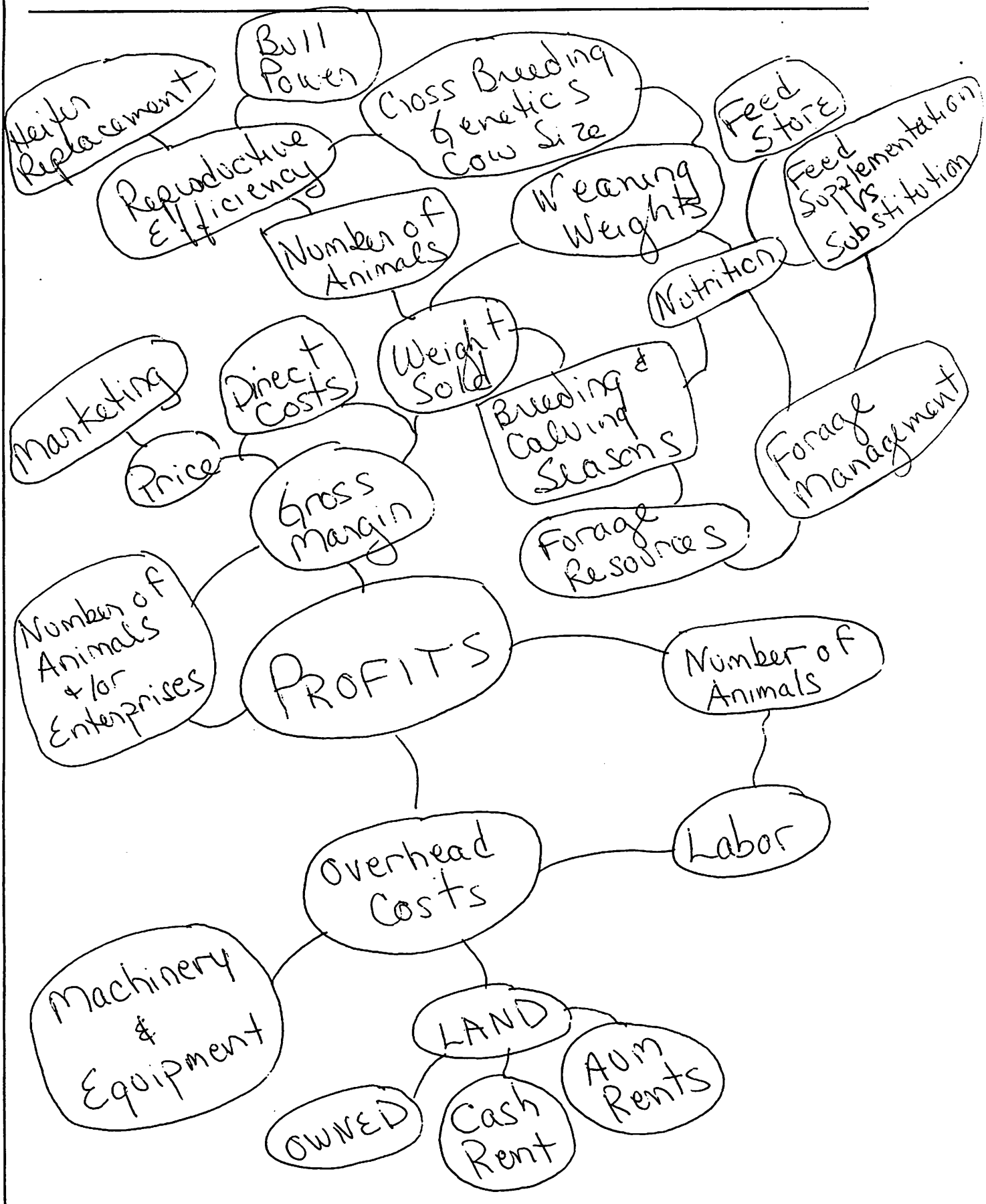
Balance Animal Unit / Land / People.

Family Individual

Landscape Vision Values. quality of life goals

Production Products

Review of structure for management.


Bull Power
Heifer Replacement
Cross Breeding Genetics Cow Size
Feed Store
Reproductive Efficiency
Weaning Weights
Feed Supplementation vs Substitution
Number of Animals
Nutrition
Weight Sold
Marketing
Direct Costs
Breeding & Calving Seasons
Forage Management
Price
Gross Margin
Forage Resources
Number of Animals &/or Enterprises
PROFITS
Number of Animals
Overhead Costs
Labor
Machinery & Equipment
LAND
OWNED
Cash Rent
AUM Rents

CRAZY CREEK RANCH

INVENTORY VALUATION -- LIVESTOCK

PERIOD: January 1992 TO December 1992

DATE COMPLETED: March 1, 1993

CLASS OF INVENTORY	VALUE $/HEAD	OPENING NUMBER	OPENING VALUE ($)	CLOSING NUMBER	CLOSING VALUE ($)	INVENTORY CHANGE
Bulls	850	15	12,750	18	15,300	2550
Cows	650	435	282,750	455	295,750	13,000
Heifers	475	60	28,500	60	28,500	0
TOTAL		510	324,000	533	339,550	15,550

EXERCISE

ENTERPRISE COST COMPARISON

	Low - Cost COW/CALF # HEAD 100	High - Cost COW/CALF # HEAD 100
DIRECT COST		
Pasture	7213	10800
Freight	1466	1071
Feed-bought	3841	10125
Feed-raised	0	0
Med/Vet	1007	985
Minerals	254	265
Brand insp.	0	0
Selling exp.	1129	1100
Fecal exam	66	0
Insurance-Animal	737	740
Other		
Other		
TOTAL D.C.	15713	25086
D. C. Per Head	157.13	250.86
OVERHEAD (FIX) COST		
Horse cost	315	500
Labor	705	3600
Fuel,oil,lube.	1344	1660
Equipment repairs	485	675
Facility repairs	0	0
Dues/subscriptions	39	68
Ranch Insurance	185	269
Interest	4248	4732
Other	0	0
Other	0	0
TOTAL O. C.	7321	11504
O.C. Per Head	73.21	115.04
Total Unit Cost	230.34	365.9

EXERCISE

In this exercise, you are given the actual cost of two ranches in the same area, a relatively low-cost ranch and a relatively high-cost ranch. The forage base on both ranches will easily handle an additional fifty (50) to one hundred (100) pairs.

What would be the total unit cost of production if we added fifty head to each ranch with all other cost remaining the same?

HC 388

	Low-Cost Ranch 150 Head	High-Cost Ranch 150 Head
Total Unit D.C.	157.13	250.86
Total Unit O.C.	48.80	76.69
	=======	=======
Total Unit Cost	205.93	327.55

To reduce loss in current trend

	Low-Cost Ranch 75 Head	High-Cost Ranch 75 Head
Total Unit D.C.	157.13	250.86
Total Unit O.C.	97.61	153.38
	=======	=======
Total Unit Cost	254.74	404.24

guies elicity to ask questions
show weak link

Gross Margin
Gross Rev - Direct Cost = Gross Margin

Gross Revenue
Sales of product ± change of inventory
- purchases = Gross Revenue

⊕ Theat - direct cost = Gross Margin

⊕ that — Overhead = Profit or Loss

RANCH DATA SHEET

PERIOD: January, 1992 **TO:** December, 1992

DATE COMPLETED: March 1, 1993

RANCH: Crazy Creek

• ENTERPRISES •

Units	495 Commercial Cow/Calf	330 Stocker	425A Hay
Sales			
Cull Bulls	2,222		93,750
Cull Cows	18,343		
Calves	166,270		
Stocker		214,576	
Inventory Change +/(-)	15,550	0	
Purchases (-)	(9,399)	(166,270)	
GROSS PRODUCT	192,986	48,306	93,750
DIRECT COST			
Feed, Salt, Minerals	5,570	1,220	
Purchased Hay	7,000		
Raised Hay	63,750	30,000	
Vet, Medicines	3,126	782	
Freight & Marketing	210	210	
Fertilizer			5,765
Hay Bailing Supplies			1,560
TOTAL DIRECT COST	79,656	32,212	7,325
GROSS MARGIN (GM)	113,330	16,094	86,425
GM/Per Unit	228/h	49/h	203/A

• RANCH OVERHEAD COST •

TOTAL GROSS MARGINS	224,849
Hired Labor	34,063
Tax Withholdings	23,197
Repairs, Machinery and Equipment	7,634
Repairs, Buildings, Fencing, Etc.	437
Fuel, Oil, Lube	10,950
Ranch Supplies	2,258
Ranch Utilities	2,217
Office Supplies, Phone, Postage, Etc.	1,906
Advertising	518
Dues, Subscriptions	726
Rents and Leases	3,981
Real Estate/Property Taxes	5,303
Ranch Insurance (including Life Insurance)	28,309
Professional Services	4,997
Miscellaneous Expenses	50
Equipment Replacement	15,000
Management Draw	11,500
TOTAL RANCH OVERHEAD	153,046
Profit/(Loss)	71,803

224
153
71

NATURE OF COSTS

DIRECT COSTS	1 COW	2 COWS	10 COWS	20 COWS
Winter Hay 2 ton @ $65	$130	260	1300	___
Supplement	20	40	200	___
Mineral	15	30	___	___
Vaccine	5	10	___	___
Preg Test and Vet	10	20	___	200
Freight	5	10	___	800
Interest 10% on $650	65	130	___	1300
TOTAL	$250	500	2500	5000
PER COW	$250	250	2500	250

OVERHEAD COSTS	1 COW	2 COWS	10 COWS	20 COWS
Hired Labor $500 per month for 6 months	$ 3,000	___	___	___
Fuel	3,000	___	___	___
Repairs	3,000	___	___	___
Insurance	1,000	___	___	___
Equip Replacement	2,000	___	___	___
Land & Equip Interest	3,000	___	___	___
TOTAL	$15,000	___	___	15,000
PER COW	$15,000	___	1500	750

1000.

750 20 15000

750

750

7500 7500

NATURE OF COSTS

QUESTIONS:

1. As numbers increase (increased volume):

   A. How does total direct cost change? directly proportional & increase by number of cows

   B. How does total overhead cost change? ~~[illegible]~~ by number. Same

   C. How does direct cost per cow change? ~~[illegible]~~ Same

   D. How does overhead cost per cow change? reduces directly proportional per cow

2.

   A. At 20 cows, what is the total cost of production per cow? ~~250~~ 1000 250 250 1000 500

   B. If you sold 20 calves from the 20 cows, how much would you need per calf to break even? 1000 2500

3.

   A. If your gross income per cow was $500, how many cows would you need to run to break even? ~~500~~ 250 / 250 60

   B. If you ran 10 additional cows, what would your profit be? 2500 214 36 x 10

MOUNTAIN RANCH

The Mountain Ranch represents a typical (if there is such a thing) Colorado mountain ranch. Use the information below to complete a gross margin analysis on this ranch. When you're done, make recommendations on how this ranch might improve profits.

This ranch has four enterprises: cow/calf, sheep, hay, and hunting.

COW/CALF ENTERPRISE:

At the beginning of 1993, the inventory was as follows:
82 cows worth $700 each
20 second-calf heifers worth $650 each
22 first-calf heifers worth $600 each
25 replacement heifers worth $550 each
5 bulls worth $800 each

Throughout the year, 1 bull died, 1 was sold and 1 was bought, leaving 4 bulls at the end of the year.
Thirty new replacement heifers were kept in the fall, these heifers make up the closing inventory for replacement heifers.
The 25 replacement heifers at the beginning of the year were exposed to the bull during the summer, and 22 were bred by the fall and put into the first-calf heifer category (2 were open and 1 died).
The 22 first-calf heifers that started the year were calved and rebred. By the end of the year, 2 were open and 1 died, leaving the closing inventory of second-calf heifers at 19.
The 20 second-calf heifers at the beginning of the year were also calved and rebred, and added to the ending inventory for the cow herd. Of the 20 head, 2 were open and 1 died, leaving 17 head. Only 67 of the 82 cows were left at the end of the year (13 were culled and 2 died). The total ending inventory for cows was 84 head.

Sales for the year for the cow herd were:	
70 calves @ $500	35,000
19 cull cows and heifers	9,004
1 cull bull	675
Total sales	44,679

Purchases for the cow herd included only 1 bull at $1500.

The direct costs for the cow herd were as follows:	
Raised feed (purchased from the hay enterprise)	16,170
(231 ton @ $70 per ton; 1.5 ton/head)	
Purchased feed and mineral	3,750
Vet. and medicine	1,848
Marketing and freight	2,650
Interest on an operating loan for the cattle operation only (10%)	2,441
Total direct costs	26,859

Pasture is leased for the cow herd, costing $1660.

SHEEP ENTERPRISE:

Beginning Inventory:
100 ewes worth $100 each
10 bred ewe lambs valued at $80 each
4 rams at $200 each

Ending Inventory:
105 ewes (5 of the mature ewes died and the 10 ewe lambs were added to the ewe category)
10 bred ewe lambs were retained
3 rams (1 died during breeding season)

Sales for the sheep enterprise:

125 lambs @ $54	6750
20 freezer lambs @ $100	2000
5 club lambs @ $60	300
wool	240
Total sales	9290

There were no purchases for the sheep enterprise

Direct costs:

Raised feed (hay purchased from the hay enterprise)	1995
Purchased feed (corn and mineral)	480
Vet & medicine	246
Freight	63
Shearing	256
Total direct costs	3040

HAY ENTERPRISE:

The ranch raises grass hay on 300 acres to feed the sheep and cows.

At the beginning of the year, there was 250 ton valued at $70 in inventory, at the end of the year, 240 ton made up the inventory.

Sales:

231 ton sold to cow herd and 28.5 ton sold to sheep @ $70/ton	18165

There were no purchased for this enterprise.

Direct costs:

Baling supplies	900
Herbicide	500
Total direct costs	1400

Labor was hired just for the haying season; it cost $4000.

HUNTING ENTERPRISE: $5000 income for a hunting lease with no costs involved.

MOUNTAIN RANCH

INVENTORY VALUATION -- LIVESTOCK

PERIOD: Jan 1 TO Dec 31

CLASS OF INVENTORY	VALUE $/HEAD	OPENING NUMBER	OPENING VALUE ($)	CLOSING NUMBER	CLOSING VALUE ($)	INVENTORY CHANGE $
Cows	$700	82	57400	84	58,800.	$1400,
Second Calf	$650	20	13,000	19	12,350	- 650.
First Calf H	$600	22	13,200	22	11,400	- 0
Replacements	$550	25	13750	30	16,500	+ 2750
Bulls	$800	5	4000	4	3,200	-800
TOTAL			101,350			2700

Valuation Recommendations
Don't inflate values.
Keep numbers for year
Changes are $ numbers - not value
Tracking physical production of ranch.

MOUNTAIN RANCH

INVENTORY VALUATION -- LIVESTOCK

PERIOD: _____ TO _____

EWE / LAMB

CLASS OF INVENTORY	VALUE $/HEAD	OPENING NUMBER	OPENING VALUE ($)	CLOSING NUMBER	CLOSING VALUE ($)	INVENTORY CHANGE
Ewe	$100	100	10000	105	10,500	500
10 Buck E	$80	10	800	10	800	- 0
Ram	$200	4	800	3	600	200
TOTAL						+700

MOUNTAIN RANCH

INVENTORY VALUATION -- HAY

PERIOD: _____ TO _____

DATE COMPLETED: _____

CLASS OF INVENTORY	VALUE $/TON	OPENING TONS	OPENING VALUE ($)	CLOSING TONS	CLOSING VALUE ($)	INVENTORY CHANGE
Hay	70	250	17,500	240	16,800	-700
TOTAL						

MOUNTAIN RANCH
GROSS MARGIN ANALYSIS

• ENTERPRISES •

	COW/CALF # HEAD	STOCKER # HEAD	EWE/LAMB # HEAD	HAY # ACRES	OTHER
Sales	44,679		9280	18,163	5,000
Purchases (-)	1,500				
Inventory Change (+/-)	+2,700		+300	-700	
GROSS REVENUE (GR)	48,879		9580	17,465	
DIRECT COST					
Feed	19,920 16,170 3,750		2,475		
Vet/Med/AI	1,848		246		
Freight	2,650		63		
Marketing					
Registrations			256		
Shearing				900	
Baling Cost				500	
Fertilizer	2441				
Interest					
TOTAL DIRECT COST (DC)	26,859		3040	1400	
GROSS MARGIN (GM) (GR - DC = GM)	19,020		6550	16,065	
Cost all animals					
GM/UNIT (GM ÷ # UNITS)	1235		57.45	64.26 / 53.	
ENTERPRISE OVERHEAD COST (EOH)					
Pasture Rents per Acre	1660				
Pasture Rents per Animal Unit	$10.77				
Labor (full-time)					
Labor (part-time)				-4000	
TOTAL EOH COST	1660.		0	4000	
ENTERPRISE PROFIT (LOSS) (GM - EOH = ENTERPRISE PROFIT (LOSS)	17360		6550	12,065	5000
				$40,975	

THE U∩ RANCH

"Bill, everyone says that you are a good ranch consultant and I asked you to come out to the ranch today to help me find out why the ranch just doesn't seem to be making money like it once did. We are still able to pay our bills but another year like this last one and we may not be able to pay them."

"As you know, we run both registered and commercial cows, and we hay the 90 acre meadow to provide the feed we need for the cows in the winter, and then sell the rest to horse people in town. While our cows are not making us a lot of money, especially our registered herd, our new hunting enterprise is really making good money, and it really doesn't take a lot of effort. My neighbor does not like to fool around with the hunters since his wife passed away and has told me I could lease his ranch for hunting, but I don't know what to do. If things don't change pretty quick, I might have to let Jake go and do all the work myself."

"Bill, I have all my figures from last year. Could you help me figure out what I need to do to get this ranch profitable again?"

"Yes, Bud, I can help, but I'm going to need an inventory of all your livestock also."

"No problem, Bill, I can get that information for you."

EXERCISE:

Using the inventory information, sales, purchases, and expenses provided, locate possible problem areas in Bud's operation and make recommendations to improve profits.

Note: The three secrets of profits are:
1. Reduce overheads
2. Improve gross margins
3. Increase numbers (within an enterprise, or add an additional enterprise)

This exercise will demonstrate the simplicity and usefulness of the Gross Margin Analysis.

UNRANCH

INVENTORY VALUATION -- LIVESTOCK

PERIOD: _____ TO _____

DATE COMPLETED: _____

CLASS OF INVENTORY	VALUE $/HEAD	OPENING NUMBER	OPENING VALUE ($)	CLOSING NUMBER	CLOSING VALUE ($)	INVENTORY CHANGE
Commercial Cows:						
Cows	550	93	51,150	80	44,000	-7,150
Registered Cows:						
Yrl bulls	1000	6	6,000	2	2000	-4000
Bull calves	750	4	3000	0	0	-3000
Cows	550	39	21,450	28	15,400	-6,050
2nd calf heifers	500	0	0	11	5500	+5500
1st calf heifers	450	8	3600	5	2250	-1350
TOTAL			85,200		69,150	16,050

add the sold cows

THE UN RANCH
GROSS MARGIN ANALYSIS

add cows

	Commercial Cow/calf #93	Registered Cow/calf #39	Hay Acres #90	Hunting
Sales	$49,329	$31,259	$11,700	$14,000
- Purchases	475	0	0	0
+/- Inventory change	- 7,150	- 8900	0	0
GROSS REVENUE	41,704	22,359	11,700	
Direct Cost				
Feed	6565	3315	0	0
Vet/Med/AI	1012	949	0	0
Freight	266	46	0	0
Registration	0	648	0	0
Custom Baling Cost	0	0	6536	0
Fertilizer	0	0	1800	0
TOTAL DIRECT COST	7843 · 33,861	4958 · 17,401	8336 · 3364	0 · 14,000
GROSS MARGIN (GM)	33,861	17,401	3364,	14,000
GM/Unit	364.09	305.28	37.37	68, 626

OVERHEAD COSTS	
Legal/Accounting	$ 945
Phone & Postage	1270
Ranch Insurance	2000
Pick-up Repairs	4400
Trailer Repairs	300
Fuel, Oil, Lube	3600
Utilities	1690
Horse Feed	150
Donations	245
Wages - Jake	~~23272~~
Family Living	39000 19,2
FICA & Withhold.	7650
Health Insurance	2125
Supplies	400
Business Promotion	750
Dues/Subscriptions	175
Ad Valorem Taxex	2900
General Repairs	1600
Vehicle/Equip. Depreciation	13500
TOTAL OVERHEAD COST	$ 802

TOTAL GM'S	$ 68,626
TOTAL OVERHEAD COST	$ 105,972
PROFIT/(LOSS)	$ -37,346

Jake 25,000

BALANCE SHEET

A profit or loss is ultimately determined by either a positive or negative change in the ranch balance sheet. The balance sheet changes with each business activity, but it is not practical to update the balance sheet every time you buy feed, buy or sell livestock, or every time a calf is born or an interest or land payment is made. Balance sheets are usually prepared at the beginning and end of each year, and all business transactions are summarized with an income statement or profit and loss statement. For tax purposes, this is usually sufficient, but all transactions are not cash transactions and must be accounted for in inventory changes to determine true profit. A cash flow account is also included in the exercise to demonstrate that cash flow has nothing to do with profitability. However, you must learn to manage both cash flow and profitability to reach your quality of life goals.

The following exercise will demonstrate how the profits (net worth) and cash flow of a ranch change with different business activities.

CHANGES IN THE RANCH BALANCE SHEET

Month 1. The beginning balance sheet shows $100,000 cash, $300,000 land value, and $200,000 land debt.

Month 2. Buy pickup for $10,000.

Month 3. Buy 100 bred cows @ $600 ($60,000).

Month 4. Rent pasture for $5,000 and turn cows in.

Month 5. The cows calve bringing 80 calves valued at $200 each ($16,000).

Month 6. Sell 20 cows @ $500 ($10,000).

Month 7. Buy 20 tons hay on credit to stockpile in inventory @ $100 / ton ($2,000).

Month 8. Pay for hay.

Month 9. Make land Payment: $10,000 principal; $20,000 interest.

Month 10. The 80 calves are revalued and increased $300 each ($24,000).

Month 11. Sell 40 calves @ $500 ($20,000).

Month 12. Depreciate the pickup value by 20%.

CASH FLOW

	1	2	3	4	5	6	7	8	9	10	11	12
INCOME												
Calves											20	
Cull Cows						10						
Bulls												
TOTAL												
EXPENSE												
Labor												
Feed							-	2				
Pasture				-5								
Fertilizer												
Vet												
PURCHASES												
Equipment		-10										
Livestock			-60									
PAYMENTS												
Land									30			
TOTAL												
SUMMARY												
Net Change		-10	-60	-5		10					+20	
Balance	100	90	30	25		35		33	3	3	23	23

RANCH BALANCE SHEET

	1	2	3	4	5	6	7	8	9	10	11	12
ASSETS												
Cash	100	90	70	25	25	35	35	33	-30 3	3	23	23
Pickup		10	10	10	10	10	10	10				
Livestock			60	60	76	66 -12.64	66	66				
Feed				Corrected 5	~~5~~	5	7	7				
Land	300		300	300	300	300	300					
Acct Rec.												
TOTAL	400	400	400	400 395	416 411	416	418					
LIABILITIES												
Land Note	200	200	200	200	200	200	200		+10			
Acct Pay.							2					
TOTAL	200	200	200	200	200	200	202					
NET WORTH	200	200	200	200	216	216	214	216	184			

YOUR RANCH

INVENTORY VALUATION -- LIVESTOCK

PERIOD: _____ TO _____

DATE COMPLETED: _____

CLASS OF INVENTORY	VALUE $/HEAD	OPENING NUMBER	OPENING VALUE ($)	CLOSING NUMBER	CLOSING VALUE ($)	INVENTORY CHANGE
TOTAL						

YOUR RANCH

INVENTORY VALUATION -- HAY

PERIOD: _____ TO _____

DATE COMPLETED: _____

CLASS OF INVENTORY	VALUE $/TON	OPENING TONS	OPENING VALUE ($)	CLOSING TONS	CLOSING VALUE ($)	INVENTORY CHANGE
TOTAL						

YOUR RANCH
GROSS MARGIN ANALYSIS

• ENTERPRISES •

	COW/CALF # HEAD___	STOCKER # HEAD__	EWE/LAMB # HEAD__	HAY # ACRES__	OTHER
Sales					
Purchases (-)					
Inventory Change (+/-)					
GROSS REVENUE (GR)	_____	_____	_____	_____	_____
DIRECT COST					
Feed					
Vet/Med/AI					
Freight					
Marketing					
Registrations					
Shearing					
Baling Cost					
Fertilizer					
_____					
_____					
_____					
TOTAL DIRECT COST (DC)	_____	_____	_____	_____	_____
GROSS MARGIN (GM) (GR - DC = GM)	_____	_____	_____	_____	_____
GM/UNIT (GM ÷ # UNITS)	_____	_____	_____	_____	_____
ENTERPRISE OVERHEAD COST (EOH)					
Pasture Rents per Acre					
Pasture Rents per Animal Unit					
Labor (full-time)					
Labor (part-time)					
TOTAL EOH COST	_____	_____	_____	_____	_____
ENTERPRISE PROFIT (LOSS) (GM - EOH = ENTERPRISE PROFIT (LOSS)	_____	_____	_____	_____	_____