

IRM Has Arrived In North Dakota

FINPACK

CHAPS

IRM-FARMS



PASTURE

IRM-TEAMS

Harlan Hughes
NDSU Extension Service

Nebraska Sandhills Study

“The most striking conclusion from the 1990 survey is the lack of homogeneity in characterizing managerial practices.”

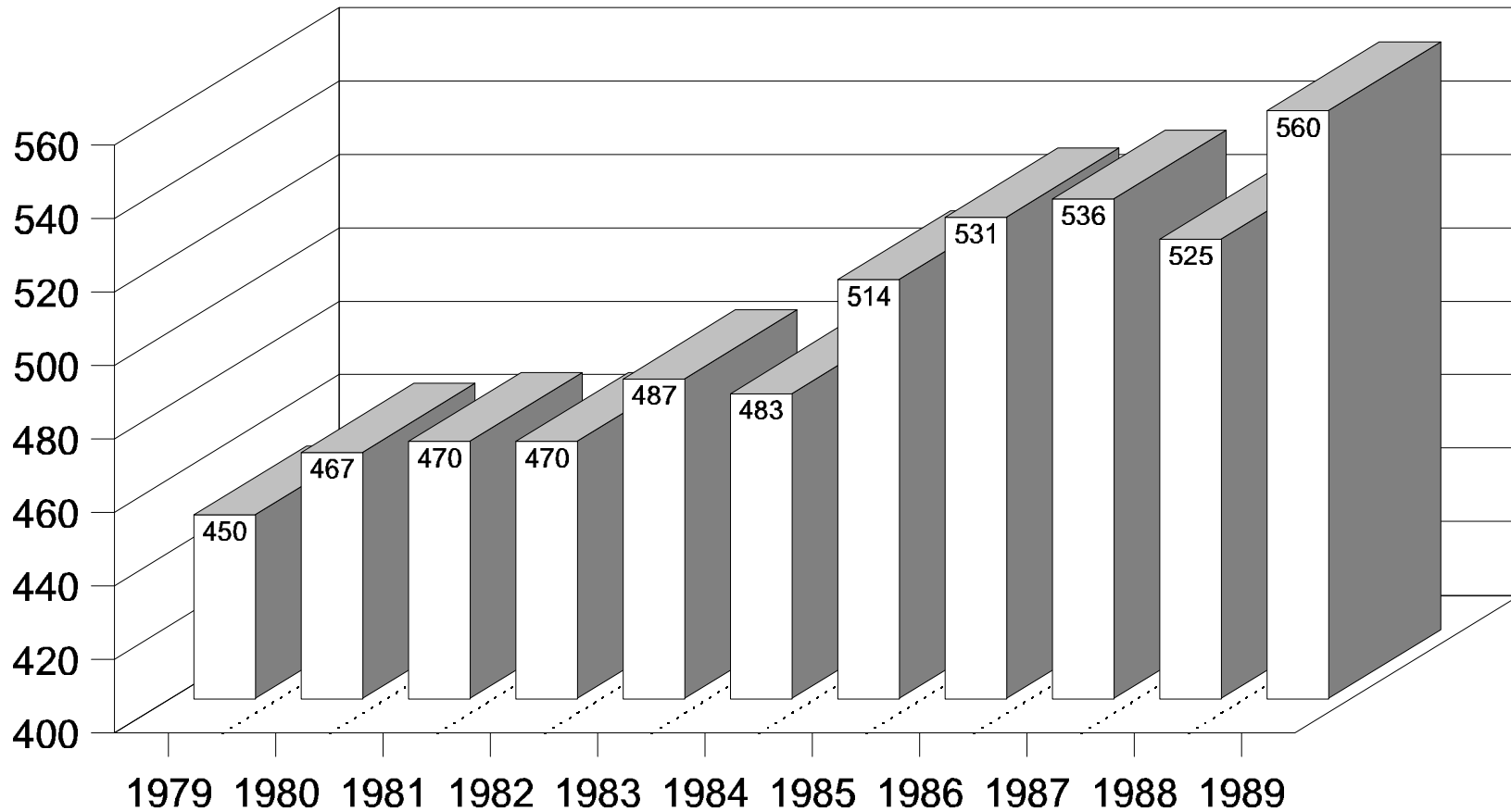
“Sandhill ranchers are diverse even though many operate similar resource bases.”

Source: Ranch Management Practices in The Sandhills of Nebraska,” by Clark And Coady, RB 316, 1993.

CHAPS Weaning Weights

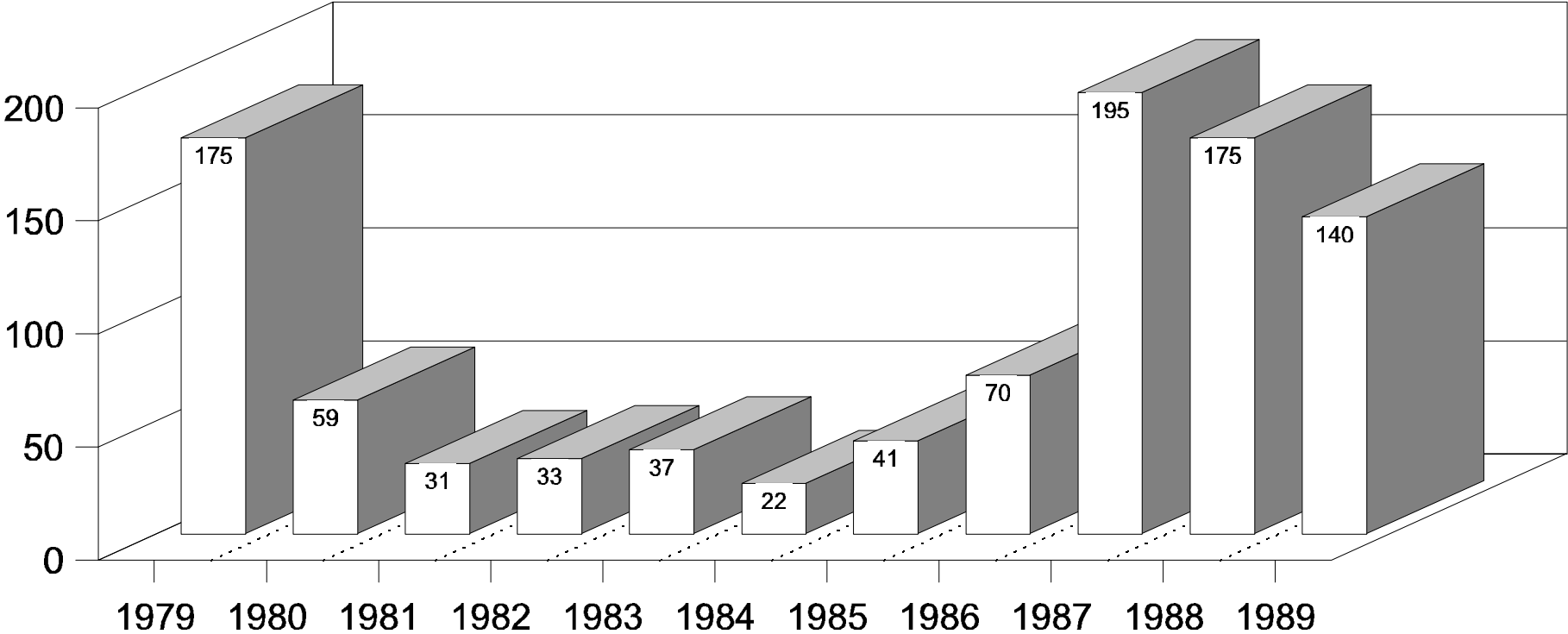
Trend = 10 lbs/calf/year!

Average Weaning Weight



Beef Cow Enterprise Profits

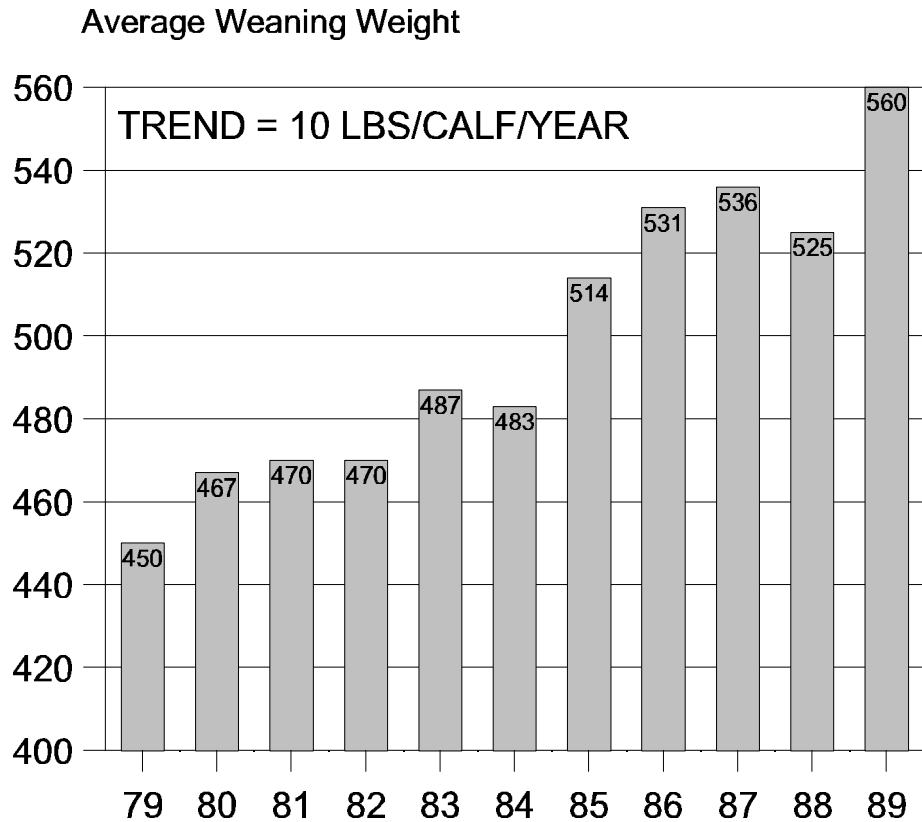
Farm Business Management Record Summaries



□ Profits/Cow

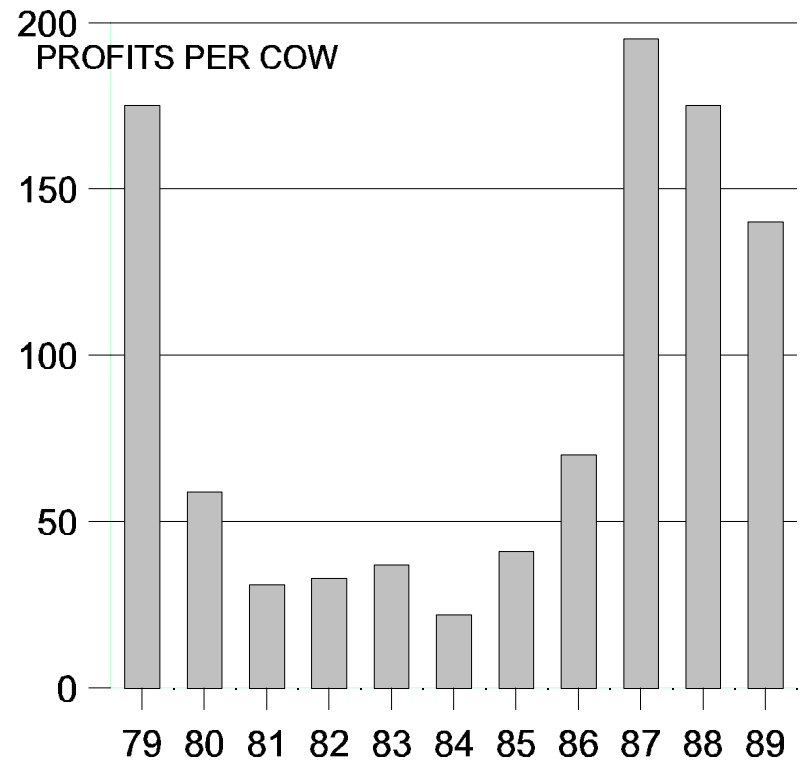
Weaning Weights Vs Beef Cow Profits

CHAPS Weaning Weights



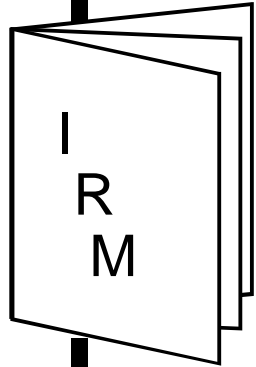
Beef Cow Enterprise Profits

Farm Bus Mgt Record Summaries



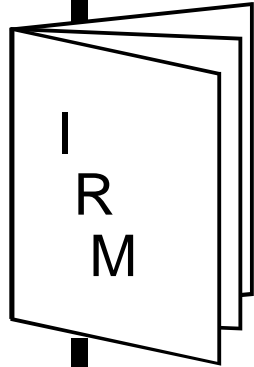
Last Cattle Cycle (1979-1989)

What Is North Dakota's IRM Program?



Integrated Resource Management

A New Management Approach



Integrated Resource Management

“A Goal Setting Process That Gives Ordinary Producers Information To Become Competitive, Efficient, International Businessmen”

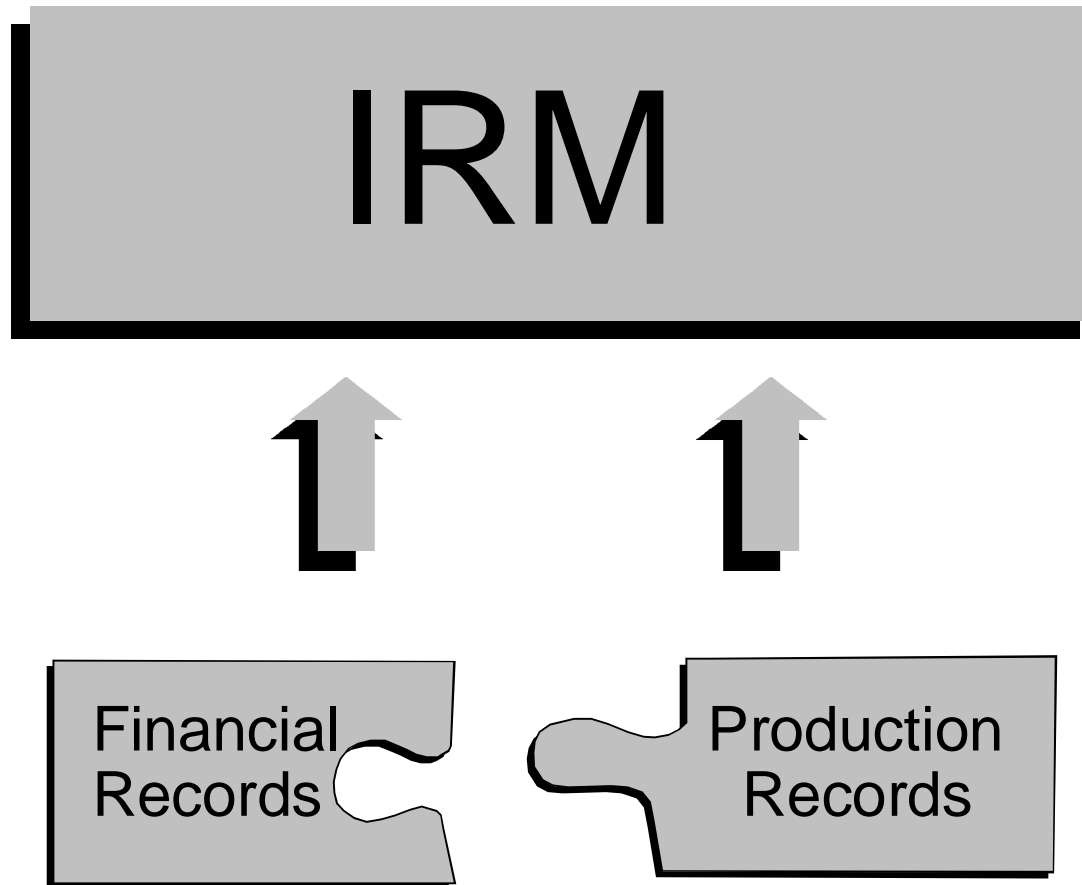
Martin Jorgensen, S.D. Rancher
Feedstuffs, May 14, 1990

Critical Aspects of North Dakota's IRM Educational Program

- # Integrated
 - < Beef cow production
 - < Range management
 - < Animal health
 - < Financial Management

Designed to take herd managers into year 2000

Integrated Resource Management



Progressive Seven-Step, Multi-Year Educational Program

- 1. Enroll your herd in Chaps**
- 2. Conduct comprehensive Herd Review**
- 3. Conduct a range inventory**
- 4. Prepare an economic analysis**
- 5. Form a “Learning Team” to look for bottlenecks to profitability**
- 6. Design and execute a “Herd Action Plan”**
- 7. Measure progress in 12 months.**

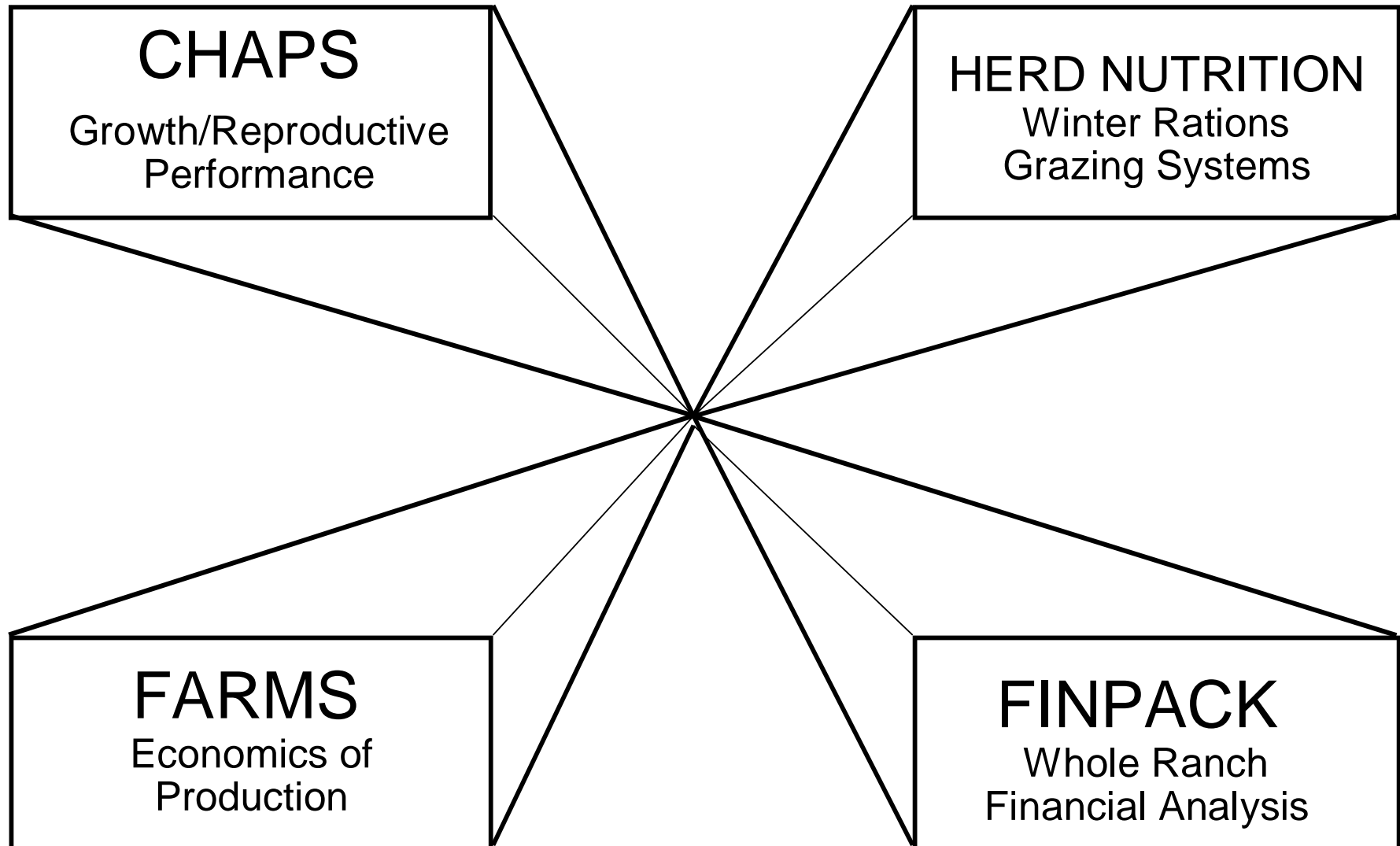
“On-Farm-Facts”

- # A technical assistance program is available to help cattlemen gather and analyze their herd
- # Software Built:
 - < Herd Performance (CHAPS)
 - < Range Inventory (Pasture)
 - < Economic Analysis (IRM-FARMS)
- # 12-Month Management Action Plans
 - < Are being developed

“Economic Development”

- # Training “local agricultural professionals**
 - < Through learning teams**
 - Integrated Problem Identification**
 - And Integrated Problem Solving**
- # IRM is designed to stimulate rural economic development through**
 - < Value Added Enterprises**

IRM TOOLS



CHAPS Herd Comparison

CRITICAL SUCCESS FACTORS

	YOUR HERD PERFORMANCE	TYPICAL HERD PERFORMANCE
Calf Production Time (nursing period)	187 days	196 days
Weight Per Day of Age	3.03 lbs.	2.83 lbs.
Birth Weight	80 lbs.	87 lbs.
Average Daily Gain	2.6 lbs.	2.40 lbs.
Reproductive Traits:		
Percent of heifers calving early	23%	28%
Percentage of heifers calving within 21 days	54%	71%
Percentage of heifers calving within 42 days	66%	89%
Percentage of mature cows calving within 21 days	39%	57%
Percentage of mature cows calving within 42 days	66%	86%
Average cow age	5.1 yrs.	5.4 yrs.
Optimal cow age is 6-7 years		
Replacement rate	14.4%	14.9%
Cow weight at weaning	n/a	n/a
Cow condition score at weaning	n/a	n/a
Market Specification Indicators:		
Adjusted 205 day weight	605 lbs.	604 lbs.
Actual weaning weights:		
Steers	579	566
Heifers	548	538
Bulls		584
Frame score	n/a	5.6

Calving Distribution Table

DAMAGE	#CALVES EACH AGE	EARLY	21 1 ST	21 2 ND	21 3 RD	21 4 TH	LATE	OPEN COWS	AVG DATE FOR EACH	AVG WWT
2	31	8	11	4	4	4			4/13/94	543
3	24		8	8	4	4			4/15/94	552
4	35	2	19	4		2	8		4/18/94	598
5	12			4	4	4		1	5/9/94	579
6	8			4	4				4/22/94	611
7	14		4	4	6				4/4/94	578
8	18		2	8	4	4		1	5/3/94	543
9	12		8		4				4/16/94	530
10	6		4	2					3/30/94	518
11	4				4				4/20/94	528
12+	0									0
TOTAL	164	10	56	38	34	18	8	2	4/18/94	567

Weaning Wt

566

550

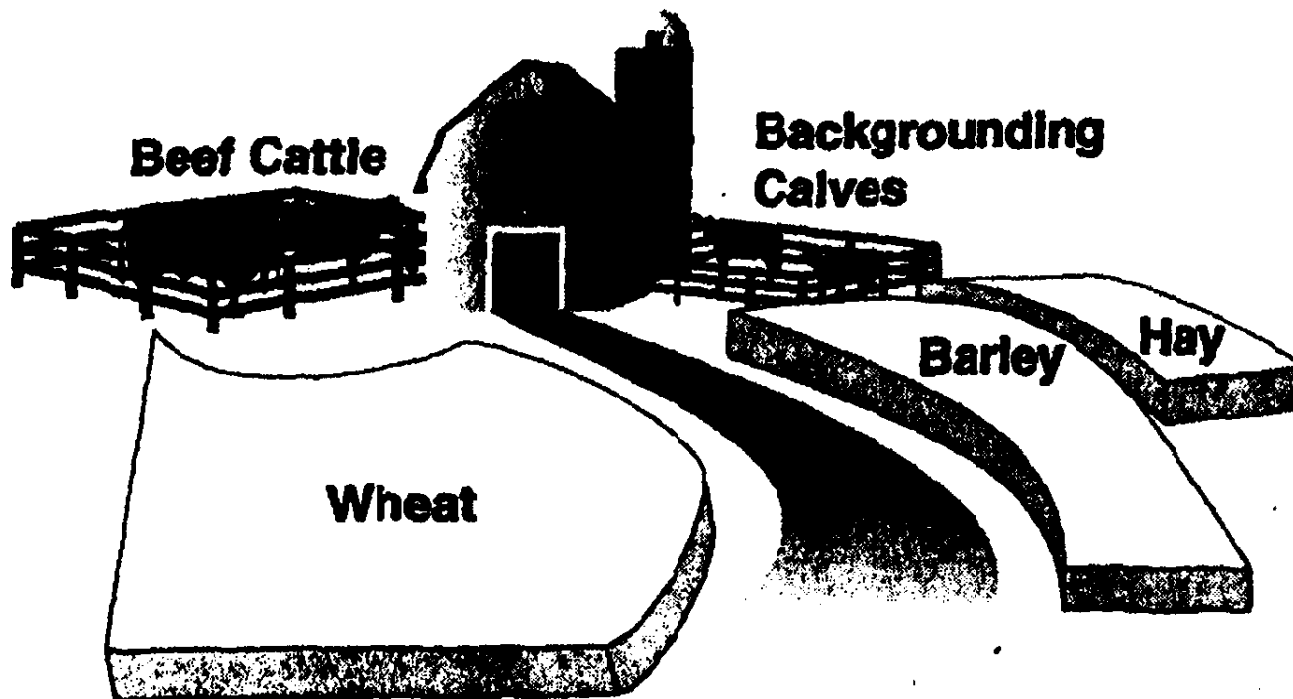
527

485

455

437

If You Want To Know Where Your Money Is Earned,



Divide your farm into profit centers such as these, and analyze each one as a separate business.

Economic Analysis

Analyze Beef Cow Herd As A Stand Alone Profit Center

- # Farm raised feeds valued at fair market value.
- # Gross income based on accrual adjusted income.
- # Used to measure profitability of the beef cow herd as a profit center.
- # Analysis based on “Market Value” balance sheet.
- # Bottom line based on returns to:
 - < Unpaid family and operator labor
 - < Management
 - < Equity Capital

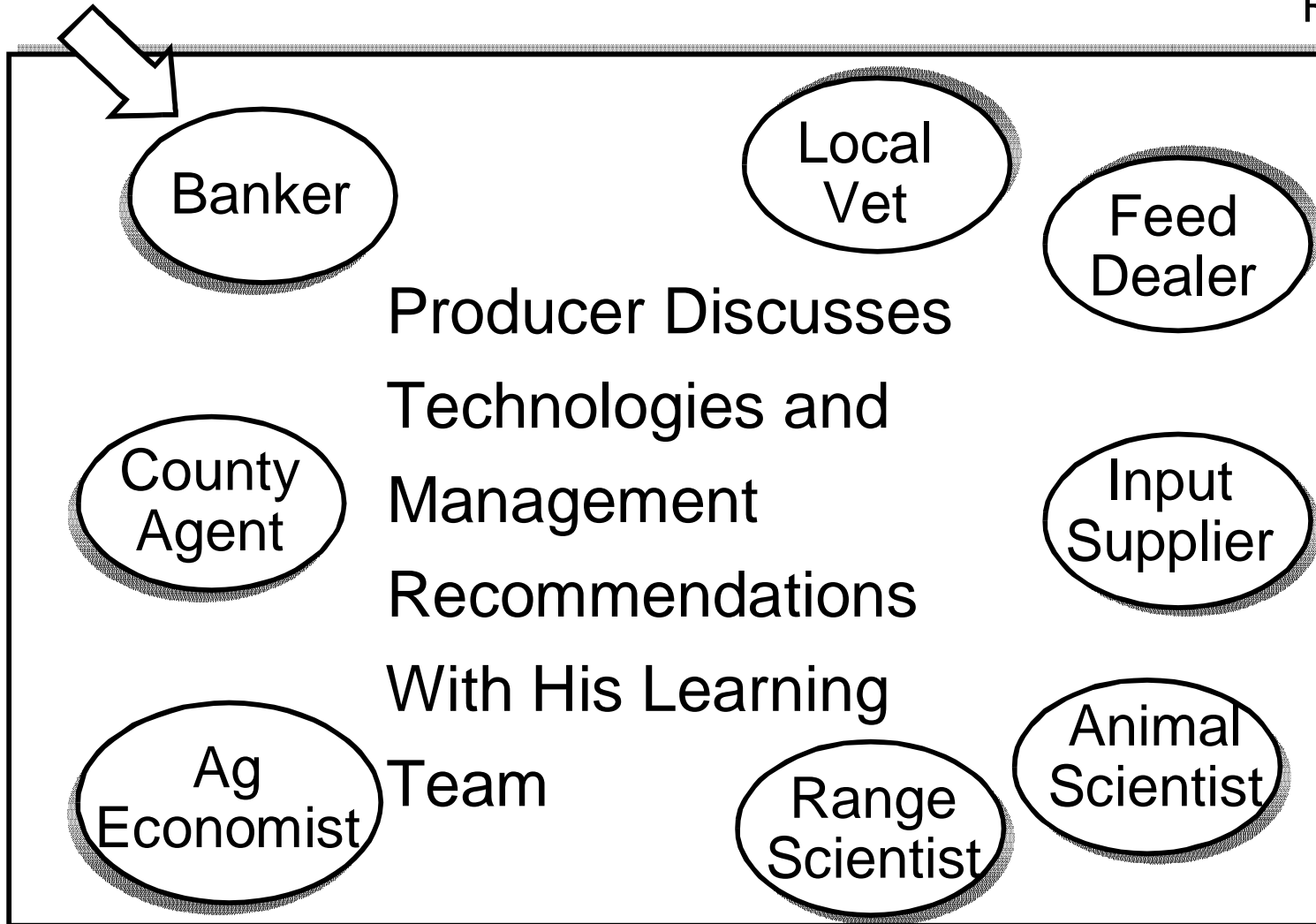
Cash Flow Analysis

- # Analyzes beef cow herd as a stand alone profit center.
- # Farm raised feeds valued at “cash cost” of production
- # Gross cash income based on cash income only.
- # Used to measure net cash flow of the beef cow herd as a stand alone profit center
- # Bottom line based on “net cash flow” of the beef cow profit center

Producer Learning Team

University
Research

Private
Company
Research



Producer Makes Decisions

IRM Workshops

PURPOSE: To integrate participants' Performance & Business Records Into A Single Integrated Beef Cow Herd Management Analysis.

AGENDA: Participants will complete an IRM-FARMS Input in Session 1 and receive an Interpreted Output in Session II.

Integrated Resource Management
FARMS Input Data Review
FARMS Preliminary Analysis
FARMS Final Analysis

Financial
and
Reproductive
Management
Systems
Demo Herd
1997 Calf Crop

RUN No. 1
Dec 2, 1997
ND-IRM FARMS

IRM Herd Analyzer

IRM Herd Analyzer

Input form for assisting cow-calf producers to evaluate cost of production, herd performance and beef herd profitability.

HERD ANALYZER ANALYSIS 1997 DATABANK (Average of 45 Herds)	
Cow on Hand Jan 1, 1997:	233
Females Exposed:	257
Total Investment Per Cow:	\$ 2031
Total Debt Per Cow:	\$ 416
Average Steer Price (#/CWT):	\$ 65
Average Weaning Weight:	525
Gross Income Per Cow:	\$ 313
Feed Costs:	
Summer	\$ 68
Aftermath	\$ 2
Winter	\$ 143
Total Feed Costs:	\$ 214
Livestock Expenses:	
Vet & Medicine	\$ 16
Trucking	\$ 2
Miscellaneous	\$ 0
Fuel	\$ 9
Utilities & Gen Farm Exp	\$ 6
AI Expense	\$ 6
L S Supp & Lease Print	\$ 20
Marketing	\$ 4
Breeding	\$ 12
Hired Labor & Mgt	\$ 8
Total Livestock Expense:	\$ 83
Interest on Feed & L S Expenses:	\$ 6
Fixed Expenses:	
BLD, FAC, Cows & Heifers	\$ 37
Debt Interest	\$ 10
Debt Principal	XXXX
Total Costs:	\$ 351
Value Added Per Cow (P&L)	\$ -37
Unit Cost of Prod (\$/CWT)(Mode)	\$ 73

Name Harlan Hughes
 Address Box 157C RR 2 County Cass
 City Moorhead State MN Zip 56560
 Phone (701) 231-7380 Date 12 / 1 / 1997

Is your herd enrolled in CHAPS? No Yes Herd # 999
 May we request a copy of your CHAPS summary? Yes No

Signature: _____

Can you compete? How do you compare?

The challenges of farming and ranching are great and constantly changing. Cow-calf production is characterized by significant over-heads and marginal returns with large differences between years and profitability among producers. Rather than continuing without knowledge of profitability, the challenge is to take positive steps on behalf of management to know your operation, direct where it is going and plan how to get there.

Records are a must...you can't manage what you can't measure

It takes information to accurately analyze and evaluate a beef cow enterprise including records of cash expenses, operation's debts, herd inventory and herd performance. Some of the financial inputs are readily available from tax records. Others are more difficult to obtain and may need to be initially approximated. This clearly identifies the need for future changes in farm record keeping and accounting. For herds not currently enrolled in CHAPS it is strongly encouraged they do so. Much of the necessary production information required in the Herd Analyzer can be easily retrieved from your CHAPS report.

Extension's IRM program...assisting with analysis and information

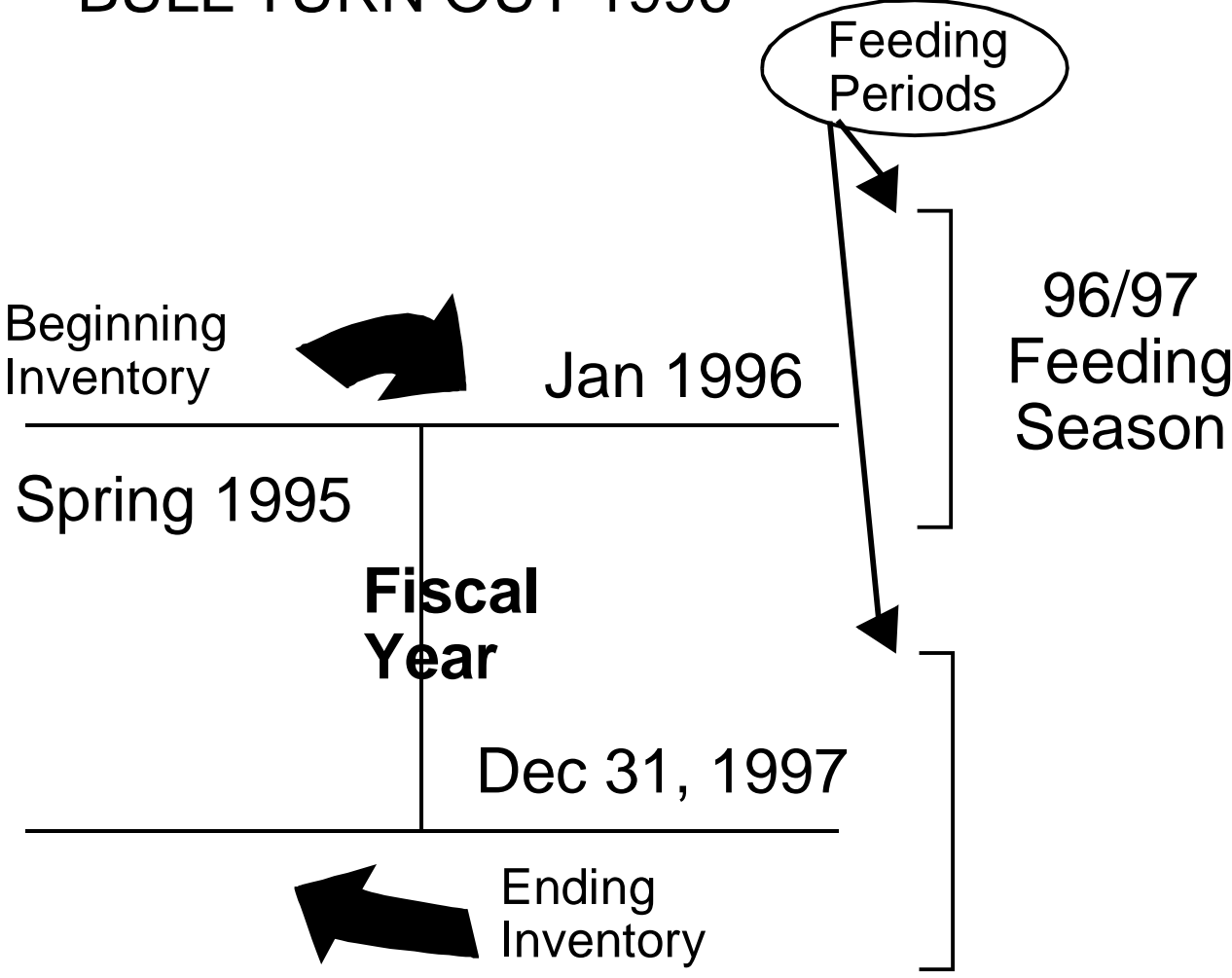
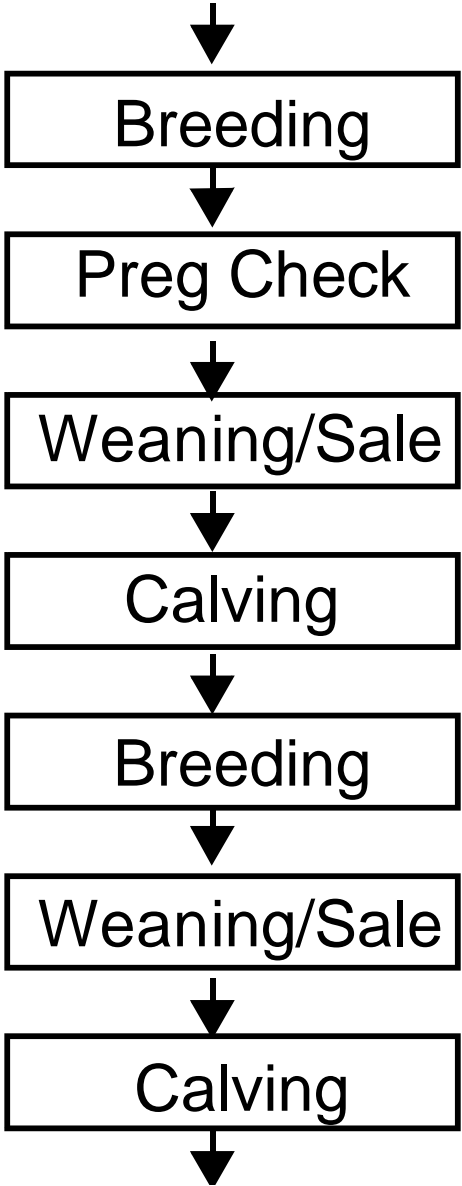
The NDSU Extension - produced Herd Analyzer provides an excellent starting point for you to systematically evaluate your operation. Through comprehensive comparisons you will be able to identify bottlenecks or opportunities that can improve cow herd profitability.

To become involved in the IRM Herd Analyzer program, enter your herds information as completely as possible on this form and return for analysis to the address listed on the bottom of page 8. The information you provide will be handled **confidentially** and analyzed to provide a standardized performance and economic analysis. These will then be returned to you through an appointment with an extension professional. Preliminary results can then be confidentially discussed and modified for further individual analysis.



SPA COW-CALF

Production of 1997 Calves
BULL TURN OUT 1996



Herd Inventory Pg 4

Herd Inventory* Name: _____ Calf crop year 1997		Total Females	Mature Cows	Bred Heifer	Replacmt Heifer Calves	Bulls
Numbers of animals comprising the operation is very critical in evaluating both financial and production performance of a herd, but often very difficult to determine historically without written records.						
No. exposed in 1996						No. in service in 1996 _____
Kept for replacement						
Business Year						
No. at beginning of year 1/97			a = b+g		c	No. at beg. of yr.1/1/97
Kept for calving		b				held for breeding _____
Culls held for sale						held for sale _____
Total \$						
No. calved this year 1997						
No. losing calves this year 1997						
No. determined open in fall 1997						
No. leaving herd during calendar yr.			d=h+i+j			No. leaving herd this cal. yr.
Died						Died 1997 _____
Non-breeding sold						Sold 1997 _____
Bred Cows Sold						
No. bought during cal. yr-1997						No. bought 1997 _____
Total \$						
No. at end of year 12/31/97			f=k+l			No. @ end of yr 12/31/97
Kept for calving		k				Kept for breeding _____
Culls held for sale		l				Held for sale _____
Heifer calves kept for replacement						
Inventory check (optional, should equal zero -or- the number of purchased females)						
a	+	s	-	b + d	+	e = f
Beg Inv #		Kept for replacements		No. leaving herd		Purchases = Ending Inv. # Head
Production Schedule - several key dates are required to define pasture and winter feed use						
Date mature cows start calving	___/___/97				Average calving date	/ /97
Grazing Schedule						
		Cows	Heifers	Dry Cows		
Date Off Grass	___/___/96	xxxx	xxxx		Total days calves were creep fed	_____
Date On Grass	___/___/97	xxxx	xxxx		Date calves weaned in 1996	___/___/96
Date Off Grass	___/___/97	xxxx	xxxx		Are your heifer calves	Qraised Qpurchased
Days on aftermath	_____	_____	_____			

#2

#4

#3

Page divided into parts on next slides

Cow Inventory

#2

		Total Females	Mature Cows	Bred Heifers	Replacmt Calves
No. exposed in	1996	_____	_____	_____	
Kept for replacement					
Business Year					
No. at beginning of year	1/97	_____	a = b+g		_____c
Kept for calving		_____b	_____	_____	
Culls held for sale		_____g	_____	_____	
Total \$ _____					
No. calved this year	1997	_____	_____	_____	
No. losing calves this yr	1997	_____	_____	_____	
No. determined open in fall	1997		_____	_____	
No. leaving herd during calendar year		_____	d=h+i+j		
Died			_____	_____	_____
Non-breeding sold			_____	_____	_____
Bred Cows Sold			_____	_____	_____
No. bought during calendar year	1997	_____e	_____	_____	_____
Total \$ _____					
No. at end of year	12/31/97	_____	f=k+l		
Kept for calving		_____k	_____	_____	
Culls held for sale		_____l	_____	_____	
Heifer calves kept for replacements					_____

Demo Herd Cow Inventory

		Total Females	Mature Cows	Bred Heifers	Replacmt Calves
No. exposed in 1996		<u>101</u>	<u>89</u>	<u>12</u>	
Kept for replacement					
Business Year					
No. at beginning of year	1/97	<u>101</u>			<u>14</u>
Kept for calving			<u>80</u>	<u>12</u>	
Culls held for sale			<u>9</u>	<u>0</u>	
Total \$ _____					
No. calved this year	1997	<u>92</u>	<u>80</u>	<u>12</u>	
No. losing calves this year	1997	<u>6</u>	<u>4</u>	<u>2</u>	
No. determined open in fall	1997		<u>0</u>	<u>0</u>	
No. leaving herd during calendar yr.		<u>7</u>			
Died			<u>1</u>	<u>1</u>	<u>0</u>
Non-breeding sold			<u>1</u>	<u>2</u>	<u>1</u>
Bred Cows Sold			<u>1</u>	<u>0</u>	<u>0</u>
No. bought during cal. year-	1997		<u>2</u>		
Total \$ _____					
No. at end of year	12/31/97	<u>101</u>			
Kept for calving			<u>80</u>	<u>13</u>	
Culls held for sale			<u>8</u>	<u>0</u>	
Heifer calves kept for replacements					<u>18</u>

Inventory Check

_____ 101 _____ f

Inventory check (optional, should equal zero -or- the number of purchased females)					
a	s	b + d	e	f	
101	14	9 + 7	2	101	
Beg Inv #	Kept for replacements	No. leaving herd	Purchases	Ending Inv. #	Head

When inventory is right, calculated number on right will equal number in the “f” blank.

Bull Inventory

Bulls	
No. in service in 1996	5
No. at beg. of yr.	1/1/97
held for breeding	5
held for sale	0
No. leaving herd this calendar year	
Died 1997	1
Sold 1997	1
No. bought 1997	2
No. at end of year	12/31/97
Kept for breeding	5
Held for sale	0

#3

Production Schedule

#4

Production Schedule - several key dates are required to define pasture and winter feed use				
Date mature cows start calving	3/20/97		Average calving date	4/18/97
Grazing Schedule	Cows	Heifers	Dry Cows	
Date Off Grass	10/30/96	xxxx	xxxx	Total days calves were creep fed <u>0</u>
Date On Grass	5/15/97	xxxx	xxxx	Date calves weaned in 1996: 10/31/96
Date Off Grass	10/30/97	xxxx	xxxx	Are your heifer calves : raised 9 purchased
Days on aftermath	<u>0</u>	<u>0</u>	<u>0</u>	

INPUT FORM Pg 5

Calf production Name _____
 Accurate and complete herd production records are fundamental to an operator's analysis.

	Steers	Heifers	Bulls		
Number weaned	<u>86</u>	<u>68</u>	<u>0</u>		
Avg. actual weaning weight	<u>579</u>	<u>548</u>	<u>0</u>	Wean Date <u>10/30/97</u>	Weigh Date <u>10/30/97</u>
Overall average weaning weight					

#5

Cattle Sales Exclude Culls Held for Sale on January 1, 1997
 A record of actual cattle sales receipts are needed of cull cattle and weaned calves.
If calves are not sold at weaning please leave blank.

How Were Calves Marketed	
<input type="checkbox"/> Cattle Buyer	<input type="checkbox"/> Sale Barn
<input type="checkbox"/> Video Auction	<input type="checkbox"/> Private Treaty
<input type="checkbox"/> Backgrounded	<input type="checkbox"/> Other _____
<input type="checkbox"/> Finished in ND Feedlot	
<input type="checkbox"/> Finished in Outstate Feedlot	

#6

	Fall Cull Cows	Bred Females Sold	Cull Open Heifers	Cull Bulls	<u>Heifer Calves</u> group 1 group 2		<u>Steer Calves</u> group 1 group 2	
1997 Sales								
Number of head sold	<u>21</u>	<u>0</u>	<u>4</u>	<u>1</u>				
Avg weight of animals sold	<u>1100</u>	<u>1100</u>	<u>800</u>	<u>1800</u>	<u>559</u>		<u>579</u>	
Avg price/cwt of animals sold	<u>\$31.00</u>	<u>0</u>	<u>\$58.00</u>	<u>\$35.00</u>	<u>\$56.00</u>		<u>\$65.00</u>	
Total \$'s Bred Females Sold		<u>\$ 0</u>						
Estimated marketing shrink _____ % on calves					<u>10/30/97</u>	<u>__/__/__</u>	<u>10/30/97</u>	<u>__/__/__</u>

#7

Feed Description
 Provide name and information for feeds, used in winter feeding and pasture supplementation.

	Name	Unit/wt.	% Dry Matter	Market Price per unit
Example/Grain	<u>Oats</u>	<u>bu./ 32</u>	<u>88</u>	<u>\$ 1.05</u>
Your Feeds				
Grain*	<u>Barley</u>	<u>bu./ 32</u>	<u>88</u>	<u>1.65</u>
Supplement	<u>Protein</u>	<u>ton/2,000</u>	<u>86</u>	<u>166.00</u>
Forage 1	<u>Gr Hay</u>	<u>ton/2,000</u>	<u>90</u>	<u>40.00</u>
Forage 2	<u>Straw</u>	<u>ton/2,000</u>	<u>90</u>	<u>20.00</u>
Forage 3	<u>Alfalfa</u>	<u>ton/2,000</u>	<u>90</u>	<u>50.00</u>
Salt & Mineral – Herd intake per day <u>3154</u> lbs.		<u>ton/2,000</u>	<u>xxxx</u>	<u>320.00</u>

*If more than one grain is fed you should treat it as a mixed grain and average unit wt., % dry matter and market price.

Calf Production

Calf production

Name _____

Accurate and complete herd production records are fundamental to an operator's analysis.

#5

	Steers	Heifers	Bulls	Wean Date	Weigh Date
Number weaned	<u>86</u>	<u>68</u>	<u>0</u>		
Avg. actual weaning weight	<u>579</u>	<u>548</u>	<u>0</u>	<u>10/30/97</u>	<u>10/30/97</u>
Overall average weaning weight				565	

How Were Calves Marketed

How Were Calves Marketed

Cattle Buyer

Sale Barn

Video Auction

Private Treaty

Backgrounded

Other _____

Finished in ND Feedlot

Finished in Outstate Feedlot

Cattle Sales

Cattle Sales Exclude Culls Held for Sale on January 1, 1997

A record of actual cattle sales receipts are needed of cull cattle and weaned calves.

If calves are not sold at weaning please leave blank.

#6

1997 Sales	Fall Cull Cows	Bred Females Sold	Cull Open Heifers	Cull Bulls	Heifer Calves		Steer Calves	
					group 1	group 2	group 1	group 2
Number of head sold	21	0	4	1				
Avg weight of animals sold	1100	1100	800	1800	559		579	
Avg price /cwt of animals sold	\$31.00	0	\$58.00	\$35.00	\$56.00		\$65.00	
Total \$'s Bred Females Sold		\$ 0						
Estimated marketing shrink _____ % on calves					10/30/97	__/__/__	10/30/97	__/__/__

Feeds Fed To Cow Herd

Feed Description

Provide name and information for feeds, used in winter feeding and pasture supplementation.

	Name	Unit/wt.	% Dry Matter	Market Price per unit
Example/Grain	<u>Oats</u>	<u>bu./ 32</u>	<u>88</u>	<u>\$ 1.05</u>
	Your Feeds			
#7 Grain*	<u>Barley</u>	<u>bu./ 32</u>	<u>88</u>	<u>1.65</u>
Supplement	<u>Protein</u>	<u>ton/2,000</u>	<u>86</u>	<u>166.00</u>
Forage 1	<u>Gr Hay</u>	<u>ton/2,000</u>	<u>90</u>	<u>40.00</u>
Forage 2	<u>Straw</u>	<u>ton/2,000</u>	<u>90</u>	<u>20.00</u>
Forage 3	<u>Alfalfa</u>	<u>ton/2,000</u>	<u>90</u>	<u>50.00</u>
	Salt & Mineral – Herd intake per day <u>3154 lbs.</u>	<u>ton/2,000</u>	<u>xxxx</u>	<u>320.00</u>

*If more than one grain is fed you should treat it as a mixed grain and average unit wt., % dry matter and market price.

Input Page 6

You have two options for winter feeds: 1) complete #8 below, or 2) #17 back page

#8 Winter Feed Option:
Reliable estimates or typical daily rations during the wintering period are needed and should be equivalent to total feed disappearance.

	Grain <u>Barley</u>	Supplement <u>Protein</u>	Forage 1 <u>Gr Hay</u>	Forage 2 <u>Straw</u>	Forage 3 <u>Alfalfa</u>
Name (from previous feed description)					
*Cows – pounds fed/cow/day					
Mid gestation	_____	_____	_____	_____	_____
Late gestation	_____	_____	_____	_____	_____
Lactation	_____	_____	_____	_____	_____
Bred Heifers – pounds fed/heifer/day					
Mid gestation	_____	_____	_____	_____	_____
Late gestation	_____	_____	_____	_____	_____
Lactation	_____	_____	_____	_____	_____
Heifer Calves – pounds fed/heifer/day	_____	_____	_____	_____	_____
Bulls – pounds fed/bull/day	_____	_____	_____	_____	_____
– in drylot _____ days	_____	_____	_____	_____	_____
Creep fed to calves – intake per day	_____	_____	_____	_____	_____
Estimated percent feeding loss (waste)	_____	_____	_____	_____	_____

***If feeding multiple rations for each production stage, rations should first be averaged before feeding.**

#9 Farm Raised Feed (Cash Costs of Production)
Home raised feed production and associated cash expenses are needed to estimate the "cash costs" of producing feeds for the cow herd.
DO NOT include purchased feeds in this section.

	Example!	Grain	Forage 1	Forage 2	Forage 3
Name	<u>Oats</u>	_____	_____	_____	_____
Acreage	<u>40</u>	_____	_____	_____	_____
Yield	<u>80</u>	_____	_____	_____	_____
Cash Costs per acre (total \$/acre)	_____	_____	_____	_____	_____
Or:					
Fuel	<u>5.86</u>	_____	_____	_____	_____
Seed	<u>6.00</u>	_____	_____	_____	_____
Fertilizer	<u>4.32</u>	_____	_____	_____	_____
Chemical	<u>1.68</u>	_____	_____	_____	_____
Repairs	<u>8.76</u>	_____	_____	_____	_____
Real Estate Taxes	<u>0</u>	_____	_____	_____	_____
Cash Rent	<u>0</u>	_____	_____	_____	_____
Custom Hire	<u>0</u>	_____	_____	_____	_____
Operating Interest	<u>1.34</u>	_____	_____	_____	_____
Other Misc.	<u>1.05</u>	_____	_____	_____	_____

#10 Machinery and land debt for cropland only - -

	Example!	Your Values
Remaining Land Debt	<u>120,000</u>	_____
Interest rate	<u>10%</u>	_____
Years left in loan	<u>15</u>	_____
Remaining Mach Debt	<u>20,000</u>	_____
Interest rate	<u>10%</u>	_____
Years left in loan	<u>5</u>	_____
Total acres farmed	<u>2,000</u>	_____

Per Acre Family Living Draw \$ _____/Acre

Allocated Overhead \$ _____/Acre



WINTER 1996/1997

Winter Feed Option:

Reliable estimates or typical daily rations during the wintering period are needed and should be equivalent to total feed disappearance.

Name (from previous feed description)	Grain <u>Barley</u>	Supplement <u>Protein</u>	Forage 1 <u>Gr Hay</u>	Forage 2 <u>Straw</u>	Forage 3 <u>Alfalfa</u>
*Cows – pounds fed/cow/day					
Mid gestation	<u>0</u>	<u>18</u>	<u>11</u>	<u>10</u>	<u>0</u>
Late gestation	<u>0</u>	<u>18</u>	<u>14</u>	<u>8</u>	<u>0</u>
Lactation	<u>0</u>	<u>18</u>	<u>20</u>	<u>0</u>	<u>8</u>
Bred Heifers – pounds fed/heifer/day					
Mid gestation	<u>0</u>	<u>18</u>	<u>16</u>	<u>5</u>	<u>0</u>
Late gestation	<u>0</u>	<u>18</u>	<u>20</u>	<u>3</u>	<u>0</u>
Lactation	<u>0</u>	<u>18</u>	<u>20</u>	<u>0</u>	<u>8</u>
Heifer Calves – pounds fed/heifer/day	<u>2</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>15</u>
Bulls – pounds fed/bull/day	<u>0</u>	<u>18</u>	<u>29</u>	<u>0</u>	<u>0</u>
– in drylot <u>90</u> days					
Creep fed to calves – intake per day	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Estimated percent feeding loss (waste)	<u>1%</u>	<u>0</u>	<u>8%</u>	<u>10%</u>	<u>5%</u>

*If feeding multiple rations for each production stage, rations should first be averaged before feeding.

FARM RAISED FEED (CASH COST OF PRODUCTION)

NOTE: The cost of raising 1995 feeds that went into Fall1995 feed inventory

Farm Raised Feed (Cash Costs of Production)

Home raised feed production and associated cash expenses are needed to estimate the "cash costs" of producing feeds for the cow herd.

DO NOT include purchased feeds in this section.

	Example!	Grain	Forage 1	Forage 2	Forage 3
Name	<u>Oats</u>	<u>Barley</u>	<u>Gr Hay</u>	<u>Straw</u>	<u>Alfalfa</u>
Acreage	<u>40</u>	<u>140</u>	<u>141</u>	<u>1</u>	<u>353</u>
Yield	<u>80</u>	<u>50</u>	<u>1.5</u>	<u>1</u>	<u>2</u>
Cash Costs per acre (total \$/acre)		<u>\$47.54</u>	<u>\$65.12</u>	<u>\$10.00</u>	<u>\$71.76</u>
Or:					
Fuel	<u>5.86</u>				
Seed	<u>6.00</u>				
Fertilizer	<u>4.32</u>				
Chemical	<u>1.68</u>				
Repairs	<u>8.76</u>				
Real Estate Taxes	<u>0</u>				
Cash Rent	<u>0</u>				
Custom Hire	<u>0</u>				
Operating Interest	<u>1.34</u>				
Other Misc.	<u>1.05</u>				
Family Living Draw Per Crop Acre \$					
Overhead Per Crop Acre \$					

MACHINERY AND LAND DEBTS

Machinery and land debt for cropland only - -		
	Example!	Your Values
Remaining Land Debt	<u>120,000</u>	<u>0</u>
Interest rate	<u>10%</u>	<u>11%</u>
Years left in loan	<u>15</u>	<u>30</u>
Remaining Mach Debt	<u>20,000</u>	<u>0</u>
Interest rate	<u>10%</u>	<u>10%</u>
Years left in loan	<u>5</u>	<u>7</u>
Total acres farmed	<u>2,000</u>	<u>1,000</u>

*Include all acres farmed; do exclude pasture acres.

Input Page 7

Pasture use and costs Name _____

Pasture and related expenses associated with cow herd, breeding bulls and replacement heifers are needed to determine summer feed costs.

Annual Public Land Costs	\$ _____		Owned	Rented
Rented Pasture		Total Cash Pasture Costs		
Acres	_____	Total (per acre)	\$ _____	XXXXX
Rent per acre	\$ _____	Or:		
Acres per cow	_____	Fuel	\$ _____	\$ _____
Owned Pasture		Seed	\$ _____	\$ _____
Acres	_____	Fertilizer	\$ _____	\$ _____
Acres Per Cow	_____	Chemicals	\$ _____	\$ _____
Market value per acre	\$ _____	Real estate taxes	\$ _____	\$ _____
Pasture Loan (principal remaining)	\$ _____	Fencing/repairs	\$ _____	\$ _____
Interest Rate	_____	Water development	\$ _____	\$ _____
Years in loan (remaining)	_____	Other _____	\$ _____	\$ _____
Aftermath Grazing				
Daily cost per cow	\$ _____			

#11

Total Livestock Expenses (source: your IRS records, 1040 schedule F tax form)
 Total expenditures on behalf of cow herd, breeding bulls and replacement heifers
 (Be sure expenditures are in proportion to cows in this herd analysis.)
 Number of cows covered by expenses (head) _____ (Normally Jan 1. Inventory unless operating separate herds).

	Total Farm	% to Cow Herd		Total Farm	% to Cow Herd
Veterinary and Medicine	\$ _____	_____ %	Electric Utilities	\$ _____	_____ %
Fuel (for feed processing, feeding, manure removal)	\$ _____	_____ %	Hired Labor	\$ _____	_____ %
Supplies	\$ _____	_____ %	Trucking	\$ _____	_____ %
Marketing Fees	\$ _____	_____ %	AI Breeding	\$ _____	_____ %
Misc _____	\$ _____	_____ %	Other	\$ _____	_____ %
			Family Living from Cow Herd	\$ _____	_____ %

Did you borrow money to feed the cow herd and/or for livestock expenses?
 ___ No ___ Yes, if so, average interest rate was _____ % and principal amount was \$ _____

#12

Page divided into sections on next slides

Depreciation and capital gains information (source: your IRS records)

Complete for purchased cows only:

Total cow herd depreciation taken	\$ 0 /herd	
Livestock capital gains this year (IRS form 4797)	\$ 8000	
Dollars from bull sales	\$ 600 covering	1 bulls
Dollars from cow sales	\$ 7,400 covering	10 cows

Raised cows should be on a depreciation schedule with a zero value (basis) and purchased cows should be on the depreciation schedule at book value when:
 Book Value = purchase cost minus accumulated depreciation taken.

#13

Pasture Use and Costs

Summer 1997

Pasture use and costs		Name _____	
Pasture and related expenses associated with cow herd, breeding bulls and replacement heifers are needed to determine summer feed costs.			
Annual Public Land Costs	\$ _____		
		Owned	Rented
Rented Pasture		Total Cash Pasture Costs	
Acres	_____	Total (per acre)	\$ _____
Rent per acre	\$ <u>7</u>	Or:	
Acres per cow	_____	Fuel	\$ <u>80.00</u>
Owned Pasture		Seed	\$ <u>0.00</u>
Acres	<u>1200</u>	Fertilizer	\$ _____
Acres Per Cow	<u>10</u>	Chemicals	\$ _____
Market value per acre	\$ <u>125</u>	Real estate taxes	\$ <u>1.32</u>
Pasture Loan (principal remaining)	\$ <u>75,000</u>	Fencing/repairs	\$ <u>.49</u>
Interest Rate	<u>10 %</u>	Water development	\$ _____
Years in loan (remaining)	<u>25</u>	Other _____ Labor _____	\$ <u>1.00</u>
Aftermath Grazing		Family Living Draw Per Past Acre	\$ <u>0</u> /A
Daily cost per cow	\$ _____	Family Overhead Per Acre	\$ <u>10</u> /A

#11

Total Livestock Expenses

Total Livestock Expenses (source: your IRS records, 1040 schedule F tax form)

Total expenditures on behalf of cow herd, breeding bulls and replacement heifers
(Be sure expenditures are in proportion to cows in this herd analysis.)

Number of cows covered by expenses (head) 166 (Normally Jan 1. Inventory unless operating separate herds).

#12

	Total Farm	% to Cow Herd		Total Farm	% to Cow Herd
Veterinary and Medicine	<u>\$3,411</u>	<u>100 %</u>	Electric Utilities	<u>\$ 674</u>	<u>100 %</u>
Fuel (for feed processing, feeding, manure removal)	<u>\$1,096</u>	<u>100 %</u>	Hired Labor	<u>\$ 0</u>	<u>%</u>
Supplies	<u>\$ 438</u>	<u>100 %</u>	Trucking	<u>\$ 0</u>	<u>%</u>
Marketing Fees	<u>\$1,315</u>	<u>100 %</u>	AI Breeding	<u>\$ 0</u>	<u>%</u>
Misc _____	<u>\$ 0</u>	<u>%</u>	Other	<u>\$ _____</u>	<u>%</u>
			Family Living from Cow Herd	<u>\$15,000</u>	<u>%</u>

Did you borrow money to feed the cow herd and/or for livestock expenses?

No Yes, if so, average interest rate was _____ % and principal amount was \$ _____

Depreciation and Capital Gains Information

Depreciation and capital gains information (source: your IRS records)

#13

Complete for purchased cows only:

Total cow herd depreciation taken		<u>\$ 0 /herd</u>
Livestock capital gains this year (IRS form 4797)		<u>\$ 8000</u>
Dollars from bull sales	<u>\$ 600</u> covering	<u>1</u> bulls
Dollars from cow sales	<u>\$ 7,400</u> covering	<u>10</u> cows

Raised cows should be on a depreciation schedule with a zero value (basis) and purchased cows should be on the depreciation schedule at book value when: book value = purchase cost minus accumulated depreciation taken.

Input Page 8

#14	Cattle Investment and Ownership			Leasing Information	
	Best estimates of cattle values, average bull purchases and associated debts are required to determine ownership costs and cash flow requirements.				
		Cows	Bulls	Breeding Heifers	
	Market value per head	\$ _____	\$ _____	\$ _____	*Number of leased cows kept for calving _____ head
	Average purchase price	\$ _____	\$ _____	\$ _____	Total lease payment \$ _____
	Average years of use		_____ Yrs		Describe lease arrangements in detail _____ _____
	Loans -				_____
	Remaining principal balance	\$ _____	\$ _____	\$ _____	*These must be included in beginning herd inventory
Interest rate	_____ %	_____ %	_____ %		
Remaining years	_____ Yrs	_____ Yrs	_____ Yrs		

#16	Capital Investment					
	Investments included should be based on allocation of value and debts associated with the cow herd for items such as buildings (i.e. barn, wells, feed storage facilities), equipment (i.e. corrals, bunks, water fountains, chutes, scales, stock trailers), and machinery (i.e. manure spreader, feed wagons, feed grinders, tractors for feeding and for feed production). DO NOT INCLUDE FARMING MACHINERY.					
		Building Used For Cows		Equipment Used For Cows		Machinery Used For Cows
	Total market value/cow herd share or	\$ _____ / _____ %	\$ _____ / _____ %	\$ _____ / _____ %		
	Include items/value/cow herd share					
	Example	Barns / 20,000 / 50%	Scale / 2,000 / 100%	Tractor / 50,000 / 35%		
		/ /	/ /	/ /		
		/ /	/ /	/ /		
		/ /	/ /	/ /		
	Loans - Remaining principal balance	\$ _____	\$ _____	\$ _____		
Interest rate	_____ %	_____ %	_____ %			
Remaining years	_____ Yrs	_____ Yrs	_____ Yrs			

<p>IRM Producer Comments</p> <p>Through the use of the CHAPS program and IRM-Herd Analyzer we have been able to show more profit in our cow-calf operation. With the beef cow-calf herd analyzer, which integrates herd performance data and business management records, it tells us which parts of our operation where we can or should cut costs and other aspects of the operation we can build on. We greatly appreciate the knowledge and expertise of our area livestock specialist and county agent.</p> <p style="text-align: right;">Myron Wold, Watford City</p>	<p>Return complete herd analyzer input forms for processing to:</p> <p>Harlan Hughes NDSU 301E Morrill Hall Fargo, ND 58105</p> <p>For additional information contact: Ph: 701-231-7380 Fax: 701-231-1059 E-Mail: harlan.hughes@gte.net Web Page: www.ag.ndsu.nodak.edu</p>
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CATTLE INVESTMENT AND OWNERSHIP

Cattle Investment and Ownership

Best estimates of cattle values, average bull purchases and associated debts are required to determine ownership costs and cash flow requirements.

	Cows	Bulls	Breeding Heifers
Market value per head	\$ 800	\$1,750	\$ 700
Average purchase price	\$	\$1,750	\$
Average years of use		4 Yrs	
Loans -			
Remaining principal balance	\$	\$1,750	\$
Interest rate	0 %	11 %	0 %
Remaining years	Yrs	4 Yrs	Yrs

LEASING INFORMATION

Leasing Information

*Number of leased cows kept for calving 0 head

Total lease payment \$ 0

Describe lease arrangements in detail

*These must be included in beginning herd inventory

CAPITAL INVESTMENT

Capital Investment

Investments included should be based on allocation of value and debts associated with the cow herd for items such as buildings (i.e. barn, wells, feed storage facilities), equipment (i.e. corrals, bunks, water fountains, chutes, scales, stock trailers), and machinery (i.e. manure spreader, feed wagons, feed grinders, tractors for feeding and for feed production).

DO NOT INCLUDE FARMING MACHINERY.

	Building Used For Livestock	Equipment Used For Livestock	Machinery Used For Livestock <small>(Do not include farming machinery – only livestock machinery)</small>
Total market value/cow herd share	\$ 20,000 / 100 %	\$ 10,000 / %	\$ 5,000 / %
or			
Include items/value/cow herd share			
Example	<u>Barns / 20,000 / 50%</u>	<u>Scale / 2,000 / 100%</u>	<u>Tractor / 50,000 / 35%</u>
	/ /	/ /	/ /
	/ /	/ /	/ /
	/ /	/ /	/ /
	/ /	/ /	/ /
Loans -			
Remaining principal balance	\$ 5,000	\$ 2,500	\$
Interest rate	11 %	11 %	%
Remaining years	15 Yrs	10 Yrs	Yrs

Winter Feed Option 2

Feed Quantities to Beef Cow Herd			No. Cows _____	
	Feed Name	Unit Wt	Amt Fed	Unit Price
Grain	1 _____	_____	_____	\$ _____
	1a _____	_____	_____	\$ _____
Protein	2 _____	2000	_____	\$ _____
	2a _____	2000	_____	\$ _____
Forage 1	3 _____	2000	_____	\$ _____
	3a _____	2000	_____	\$ _____
Forage 2	4 _____	2000	_____	\$ _____
	4a _____	2000	_____	\$ _____
Forage 3	5 _____	2000	_____	\$ _____
	5a _____	2000	_____	\$ _____
Min/Salt	6 _____	2000	_____	\$ _____
	6a _____	2000	_____	\$ _____

To Be Used Instead of Inputting Daily Cow & Heifer Rations

#17

The end of
IRM-FARMS
Input

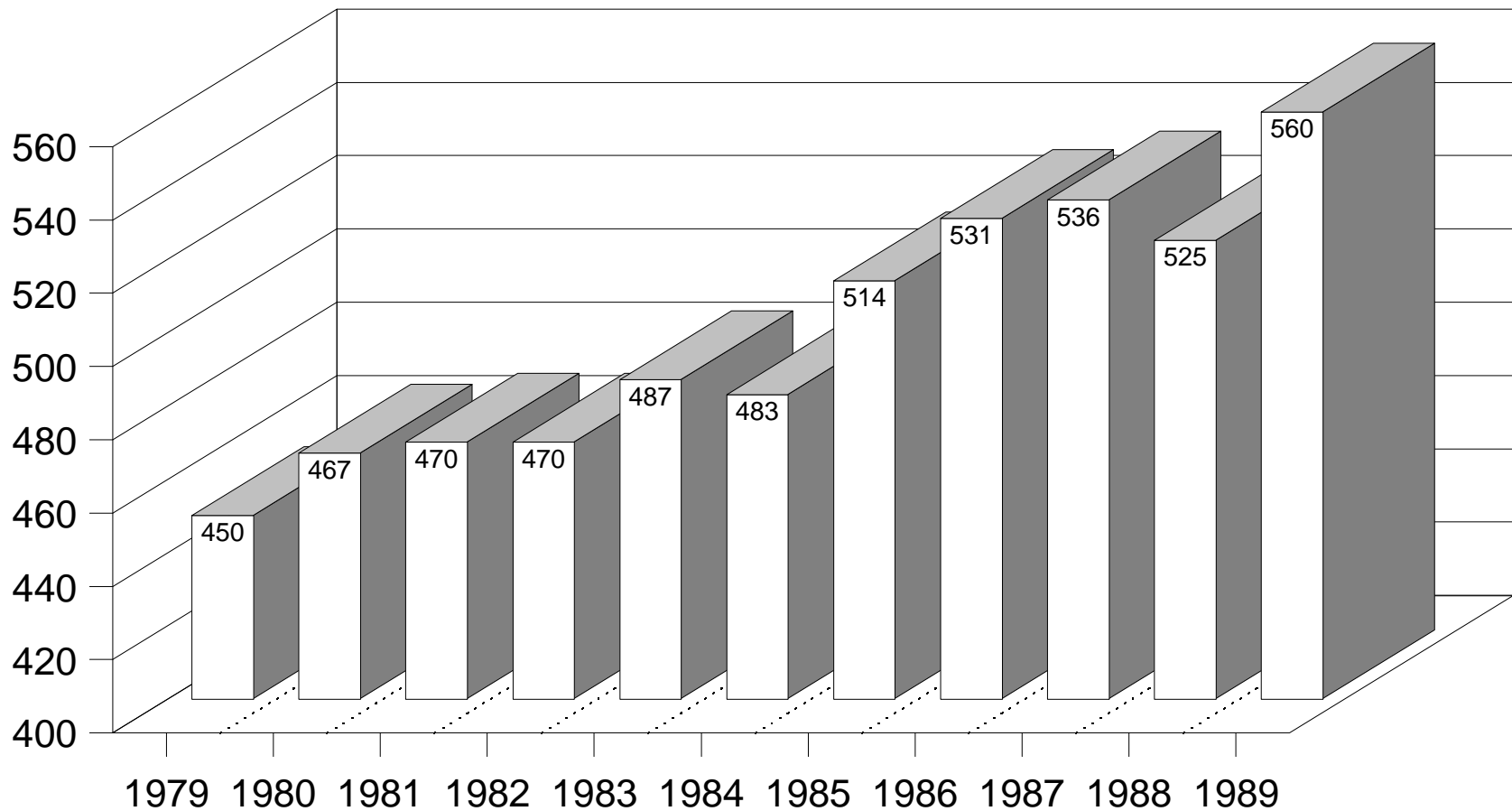
In Summary

Let's Once Again Take A Look
At What Happened In The
Last Cattle Cycle

CHAPS Weaning Weights

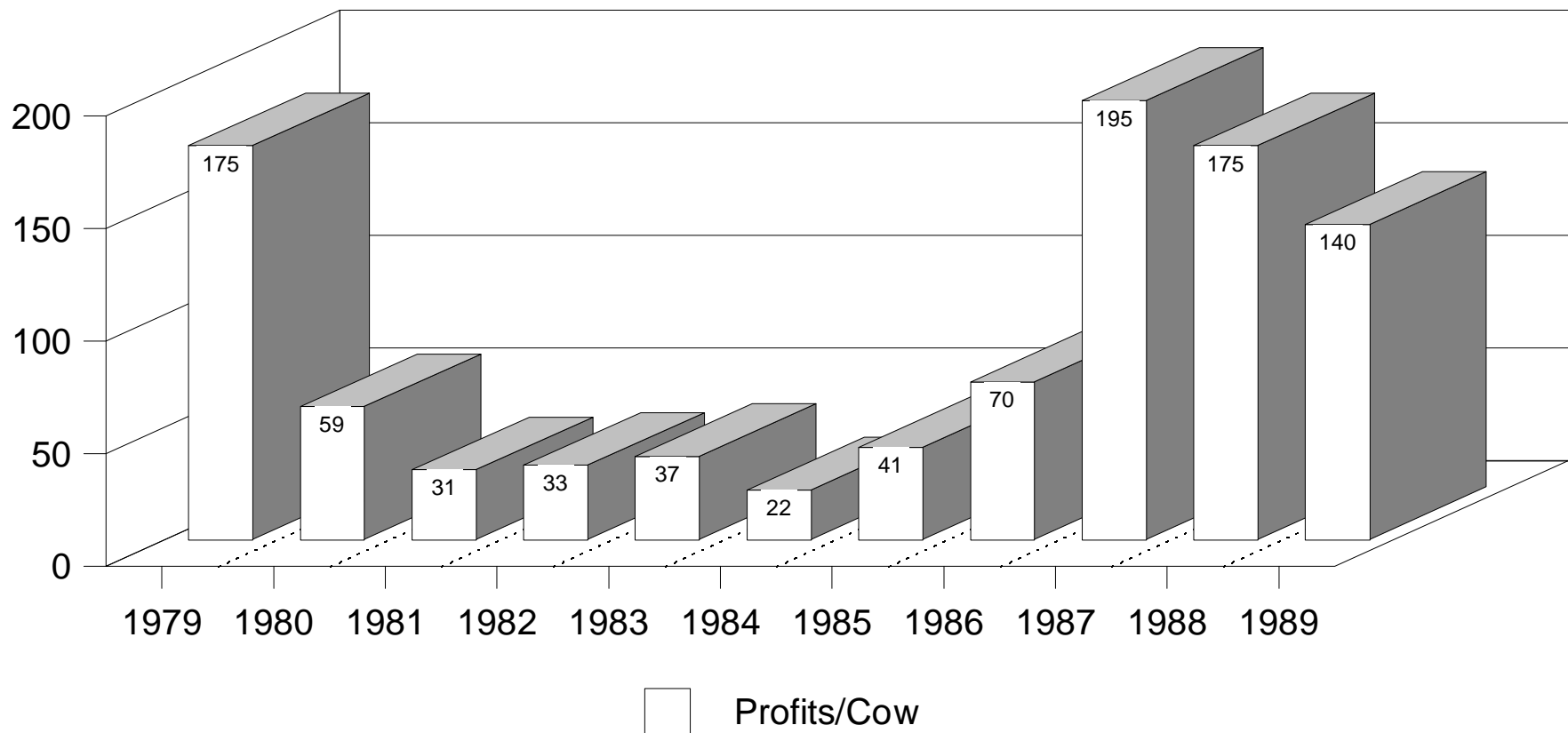
Trend = 10 lbs/calf/year!

Average Weaning Weight



Beef Cow Enterprise Profits

Farm Business Management Record Summaries



Your Beef Cow Profits Are Impacted By

- # The economic cost and return of your beef cow herd
- # More so than by the weaning weights that you produce.

Ten Year Goal Is To Get Every North
Cattlemen to Use These Tools

IRM TOOLS

