



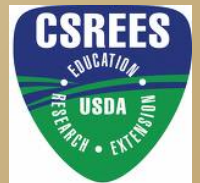
Production and Marketing Practices of Northern Plains Cow-Calf Producers

Nancy M. Hodur
F. Larry Leistritz

NDSU
North Dakota State University, Fargo, ND
**ND Agricultural
Experiment Station**

NDSU College of
**Agriculture, Food Systems,
and Natural Resources**

HREC Beef Research Review
January 10, 2008



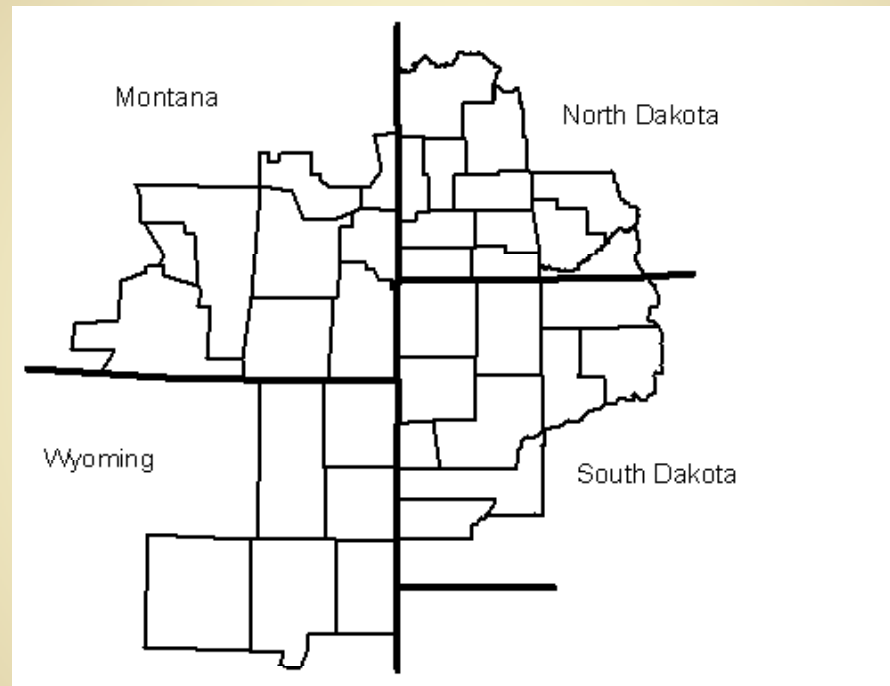
Introduction

- No need to elaborate on the economic significance of ruminant livestock production
- Four-state ruminant consortium, an integrated research and extension program, was created to address issues related to ruminant livestock production
- Purpose of consortium: Enhance economic development in the study area by strengthening and capturing value from the ruminant livestock industry.

Objectives

- Identify factors that influence or perhaps constrain producers ability or willingness to background feeder cattle
- Identify opportunities for and impediments to expansion of the beef industry in the study area
- Identify and document current production and marketing practices
- Provide information to facilitate research and extension programs—lay groundwork for future efforts
- Provide a baseline for future evaluation of the impact of the 4-State Ruminant Consortium Program

Study Area



- 38 county area with substantial similarities in soils, climate, etc.

Methods

- Mail survey delivered to 5,270 livestock producers in study area
- Focus groups with producers from each of the study states

Survey response rate and number of responses:

Overall	20%	1,045
ND	17%	259
SD	21%	330
MT	20%	286
WY	22%	170

Respondent and Household Characteristics, 2005

	Total	ND	SD	MT	WY
	% of respondents				
Years Operating Ranch	29	28	29	28	30
Average Age	54	53	54	54	57
Net Farm/Ranch Income:					
less than \$25,000	41	42	42	39	40
\$25,000 to \$50,000	25	30	22	25	25
\$50,000 to \$100,000	19	15	25	17	15
more than \$100,000	15	13	11	19	20
(n)	(952)	(235)	(298)	(261)	(156)

Respondent and Household Characteristics, 2005 (cont.)

	Total	ND	SD	MT	WY
% of respondents					
Total Net Household Income					
less than \$25,000	23	25	27	21	17
\$25,000 to \$50,000	20	29	24	29	21
\$50,000 to \$100,000	30	30	31	28	30
more than \$100,000	20	16	19	22	26
(n)	(952)	(235)	(298)	(261)	(164)
Gross Farm Income from:					
livestock sales	82	72	85	82	92
crop sales	12	20	10	12	3
other	6	8	5	6	5
(n)	(996)	(244)	(313)	(275)	(164)

Respondent and Household Characteristics, 2005 (cont.)

	Total	ND	SD	MT	WY
% of respondents					
Net Household Income From:					
Net Farm/ranch income	66	61	72	68	59
Off-farm employment	26	30	21	24	28
Other	8	9	7	8	13
(n)	(969)	(242)	(300)	(269)	(157)
Business Structure:					
Sole proprietor	71	83	77	63	56
Partnership	14	14	13	12	18
Other (corporation, LLC, etc.)	15	3	10	25	26
(n)	(997)	(246)	(310)	(276)	(163)

Cow Herd Size, 2005

	Total	ND	SD	MT	WY
	% of respondents ¹				
Commercial Beef Cows, January 1					
100 or less	36	40	32	36	40
101 to 200	28	34	28	26	21
201 to 400	25	21	29	27	22
over 400	11	5	11	11	17
Average	215	173 ^b	228 ^a	218 ^a	249 ^a
(n)	(1038)	(258)	(358)	(278)	(162)

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Calves Raised, Calving and Weaning Dates

	Total	ND	SD	MT	WY
number of calves ¹					
Calves Raised (avg.)	204	163 ^a	215 ^b	207 ^b	245 ^b
(n)	(920)	(236)	(291)	(249)	(142)
Calves Born by Month:	% of calves				
March	33	29	36	35	33
April	50	53	50	52	42
May	11	13	10	9	14
Calves Weaned by Month:	number of calves ¹				
October	65	61	68	66	64
November	27	30	26	26	23
Average Weaning Weight (#):	562	567 ^a	568 ^a	563 ^a	539 ^b
(n)	(981)	(242)	(314)	(269)	(154)

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Timing of Marketing Calves

	Total	ND	SD	MT	WY
	% of calves ¹				
At weaning	61	51 ^b	63 ^a	67 ^a	63 ^a
15 to 45 days after weaning	3	4 ^{a,b}	1 ^b	4 ^{a,b}	6 ^b
46 to 120 days after weaning	17	29 ^a	15 ^b	13 ^b	9 ^b
Retain ownership through backgrounding or finishing	9	10 ^a	10 ^a	7 ^a	12 ^a
(n)	(730)	(248)	(316)	(270)	(159)
Marketed at Weaning	Average weight ¹				
Steer calves	587	598 ^a	596 ^a	580 ^b	568 ^b
Heifer calves	543	539 ^{a,b}	552 ^a	546 ^a	524 ^b

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Value-added Strategies for Calves Marketed at Weaning

	Total	ND	SD	MT	WY
	% of respondents ¹				
Vaccinations between birth and weaning	93	90 ^b	97 ^a	91 ^b	95 ^{a,b}
Vaccinations at weaning	55	62 ^a	57 ^{a,b}	51 ^{a,b}	47 ^b
Creep feed prior to weaning	27	42 ^a	32 ^a	20 ^b	8 ^b
Beef quality assurance	29	44 ^a	29 ^b	19 ^c	29 ^b
(n)	(722)	(154)	(238)	(214)	(116)

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Marketing Channels for Calves

	Total	ND	SD	MT	WY
	% of calves ¹				
Auction	59	63 ^b	77 ^a	37 ^d	56 ^c
Order buyer	14	14 ^b	6 ^c	24 ^a	12 ^b
Contract sales	10	9 ^b	5 ^b	19 ^a	8 ^b
Video sales	10	7 ^b	6 ^b	13 ^a	16 ^a
Internet	1	3 ^a	0 ^b	1 ^{a,b}	1 ^{a,b}
(n)	(980)	(244)	(312)	(269)	(152)

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Marketing Channels for Calves, by Herd Size

	Herd Size (# of calves raised)		
	<100	100-299	>300
	% of respondents ¹		
Auction	77 ^a	56 ^b	38 ^c
Order buyer	8 ^b	16 ^a	17 ^a
Contract sales	7 ^a	11 ^a	12 ^a
Video sales	5 ^c	10 ^b	19 ^a
Internet	0 ^b	2 ^{a,b}	3 ^a
	(n)	(835)	

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Backgrounding Calves on Ranch, by State

	Total	ND	SD	MT	WY
	% of respondents ¹				
Background some calves on ranch	51	61 ^a	57 ^a	43 ^b	42 ^b
Avg. months retained	4.8	3.9 ^b	4.8 ^b	4.9 ^b	6.1 ^a
Avg. market weight	759	746 ^a	760 ^a	766 ^a	780 ^a

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Reasons for Not Retaining/Backgrounding Calves on Ranch

	Total	ND	SD	MT	WY
	% of respondents ¹				
Drought conditions	67	62 ^a	70 ^a	63 ^a	72 ^a
Lack adequate feedlots	56	48 ^b	50 ^b	61 ^{a,b}	65 ^a
Do not want to invest to develop feedlot	39	36 ^{a,b}	31 ^{a,b}	47 ^a	39 ^{a,b}
Prefer to take profit	36	31 ^a	32 ^a	42 ^a	37 ^a
(n)	(440)	(90)	(125)	(142)	(83)

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Changes in Cow-calf Pairs and Calves Backgrounded, Fed, or Finished, Last 5 Years

	Total	ND	SD	MT	WY
% of respondents ¹					
Cow-Calf Pairs:					
Decreased	48	36	49	47	64
Stayed the same	28	32	29	28	20
Increased	24	32	22	25	15
(n)	(1,011)	(248)	(319)	(275)	(167)
Calves Backgrounded, Fed or Finished:					
Decreased	46	47	42	55	36
Stayed the same	38	31	44	30	53
Increased	16	22	14	15	11
(n)	(796)	(203)	(245)	(217)	(129)

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Average increase cow-calf pairs: 40%, average decrease cow-calf pairs: 33%

Average increase background: 59%, average decrease background: 59%

Reasons that Influenced Decision to Increase or Decrease Number of Calves Backgrounded

	Total	ND	SD	MT	WY
% of respondents ¹					
Influences to Decrease:					
Drought conditions	92	83	95	94	91
Inadequate Feed Supply	54	42	65	62	39
(n)	(294)	(59)	(103)	(65)	(67)
Influences to Increase:					
Increase in cattle prices	34	45	30	26	23
Increased access to pasture	34	44	21	39	31
(n)	(121)	(44)	(33)	(31)	(13)

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Changes Under Consideration, Next 5 Years

	Total	ND	SD	MT	WY
	% of respondents ¹				
Increase my cow-calf herd	57	55 ^a	60 ^a	60 ^a	51 ^a
Increase number of calves backgrounded	20	27 ^a	22 ^a	14 ^b	13 ^b
(n)	(885)	(209)	(277)	(247)	(152)

¹Means with the same letter are not statistically different. Duncan's multiple stage test at $\alpha \pm .05$.

Opportunities for Expanding Value-added Enterprises

- Past few years not conducive for backgrounding
 - Scarce feed supplies
 - Feeder calf prices at record levels
- Major incentive to sell at weaning and take profit
 - Especially true for producers with operating loans
- Available feed used to maintain cow/calf herd or could be readily marketed
- More favorable weather and a change in the cattle cycle may improve potential returns from backgrounding
 - Decision to background based on availability of feed

Opportunities for Expanding Value-added Enterprises

- Backgrounding as a marketing strategy rather than value-added
 - --delay marketing until after September/October
 - Feedlots may provide incentive for an “improved” calf; with high corn prices an 800 pound calf may be preferred to more typical 600 pound calf
- Marketing heifer calves in the replacement heifer market
 - Local and national inventories are down
 - Replacement market should stay strong for some time
 - Potentially excellent opportunities for producers with superior genetics

Opportunities for Expanding Value-added Enterprises

- Retain ownership through backgrounding at other location
 - Provides opportunity for feedlot performance and carcass data
 - Genetics, carcass traits and other characteristics important
 - Animal that perform and grade well earn a premium
 - Retain small lots of 5-40 in test programs to obtain carcass data
- “All natural” product
 - Requires adherence to specific management practices (e.g., animal id, no antibiotics)
 - Price premiums make it worth wild
 - Producers wary of potential for liability if protocol violated after animal left their premises

Opportunities for Expanding Value-added Enterprises

- Niche markets
 - Heifers as surrogates for embryo transplants
 - Breeding and feeding dairy cattle
 - Branded products
- Manage input costs
 - Matching calving cycle with natural feed cycle
 - Don't need to market large calf, a 500 pound calf just as profitable
 - Calving earlier and marketing a larger calf
 - Smaller heifers: 1,100-1,200 pounds rather than larger heifers
 - Grazing rather than haying marginal hayland to reduce overhead and equipment costs
 - Crop sharing irrigate alfalfa to eliminate equipment costs

Research Implications- Cow/calf herd expansion

- Are the economics of expanding cow/calf herd preferable to backgrounding?
 - 57 % considering increasing cow head
 - Only 20% considering expanding backgrounding
 - Only 14 % considering expanding number retained through backgrounding
 - 57% would prefer to use available feed and forage to expand cow/calf herd
 - 62% said forage was biggest impediment to retaining feeder calves

Exploring options for expanding cow herds may be more in line with producers plans and resources.

Research Implications- Feed and Forage Limitations

- Are there options for increasing the feed base or is forage availability beyond the producers control?
 - Feed and forage are critical limiting factors
 - Research did not quantify or qualify feed limitations
 - Are feed stocks short every year or only occasional shortages?
 - How do feed stock issues vary across the study area?
 - Can some shortages be addressed with subtle changes in land management or land use?

Research Implications- Alternate Marketing Channels

- Local auctions are dominant marketing channels
- Some marketing outlets may require larger homogenous lots and may not be appropriate for smaller producers
- Other new outlets like video sales may offer substantial advantages to local auctions
- Alternate marketing strategies may improve profitability without change in production practices.
- 54 percent of producers interested in information on marketing strategies

Research Implications- Expanded use of Carcass and other Performance Data

- Only 20 percent of producers received carcass data
- Of those that received carcass data, a majority used the data in the management and marketing of their herd
- Programs that provide carcass and performance data may offer opportunities for increased profitability with changing herd size, backgrounding practices, or other production practices

Research Implications- Participants Preference for Information

Item	% of respondents		
	Interested	Neutral	Dis-Interested
Balancing feed rations	63	23	14
Marketing strategies, futures, options, forward contracting	54	22	24
Economics of alternate forage productions	54	25	21
Alternate forage production options	51	25	23
Economic of alternate weaning dates	50	29	21
Retain ownership of calves at off ranch location	30	27	43
(n)	(978)		

Research Implications- Information Delivery

	Interested	Disinterested
Item	% of respondents	
Pamphlet or bulletin	56	16
On site demonstration or tours	48	22
Half-day conferences or seminars	46	23
Testimonials from producers	44	20
E-mail notifications	31	40
CD/internet multi-media presentations	28	36
Internet/online information	35	38
(n)	(978)	

Final thoughts

- One size fits all is not appropriate
- Production practices, opportunities and constraints vary considerably across the study area
- Hopefully this baseline study will provide some insight and documentation that will facilitate additional research and outreach efforts to expand and improve the profitability of ruminant livestock production in the study area.

Questions?

- Nancy Hodur can be reached at 701-231-7357 or nancy.hodur@ndsu.edu
- Larry Leistritz can be reached at 701-231-7455 or F.Leistritz@ndsu.edu

