

United States
Department of
Agriculture

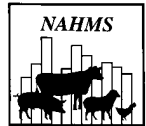
Animal and
Plant Health
Inspection
Service

**Veterinary
Services**

**Part I:
Beef Cow/Calf Herd
Management Practices
in the United States**

Beef

CHAPPA



Cow/Calf Health & Productivity Audit

August 1993

Acknowledgements

This report has been prepared from material received and analyzed by the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS).

The Beef Cow/Calf Health and Productivity Audit was a cooperative effort between State and Federal animal health officials, university researchers, and extension personnel. We want to thank the State and Federal Veterinary Medical Officers (VMO's) who visited the farms and collected the data for their hard work and dedication to the National Animal Health Monitoring System (NAHMS).

The roles of the producer, Area Veterinarian in Charge (AVIC), NAHMS Coordinator, Veterinary Medical Officer (VMO), Animal Health Technician (AHT), and NASS enumerator were critical in providing quality data for this report. All participants are to be commended for their efforts, particularly the producers whose voluntary efforts made the study possible.

Table of Contents

Introduction	1
A. Sample profile	3
1. Descriptive statistics of responding operations	3
2. Animals reported in sample operations	4
B. National population estimates based on data collected	4
1. Cows calved as a percent of those exposed or artificially inseminated	4
2. Percent of calves born by month during 1992	4
3. Percent of operations with one or more calves born by month	5
4. Percent of operations with calves born by number of months	5
5. Calf mortality as a percent of those born	6
6. Calf mortality and morbidity of last weaned calf crop	6
7. Facility characteristics	6
8. Type of business operation	7
9. Financial management tools prepared	7
10. Animal identification: unique number	7
11. Herd identification	8
12. Animal identification: hide branding	8
13. Injections given to beef cattle in the last 12 months by operator or any unpaid or hired worker	10
14. Injections given to beef cattle in the last 12 months by a veterinarian	14
15. Castration practices	18
16. Dehorning practices	20
17. Weaning age and weight	22
18. Females mated or serviced per bull	22

List of Illustrations

Examples of 95% confidence intervals	1
Percent of responding operations by beef cow herd size (n=2,539)	3
Percent of calves born by month, 1992	4
Calf mortality as percent of calves born	6
Animal identification: Tagging or otherwise identifying each cow or calf	7
Hide branding of unweaned calves	8
Injection and branding sites	8
Percent of unweaned U.S. beef calf crop hide branded by site location	9
Producer-delivered injections to cattle	10
Cows located on operations using various injection routes as a percent of cows on all beef operations	11
Percent of all cows by main producer-delivered injection location and route	12
For producers giving injections percent of injection given by route & herd size	13
Injections given to beef cattle in last 12 months by a veterinarian	14
Percent of operations by main location of veterinarian-delivered injections	15
Percent of all U.S. beef cows by main location of injection by veterinarians	16
For operations where veterinarians give injections % given by route & herd size	17
Percent operations by interval of reported percent of male calves castrated before sale	18
Percent of operations by primary method of castration	19
Percent of operations dehorning by proportion of calves dehorned	20
Percent of operations that dehorn by primary method of dehorning	21
Average number of females mated or serviced per bull	22

Introduction

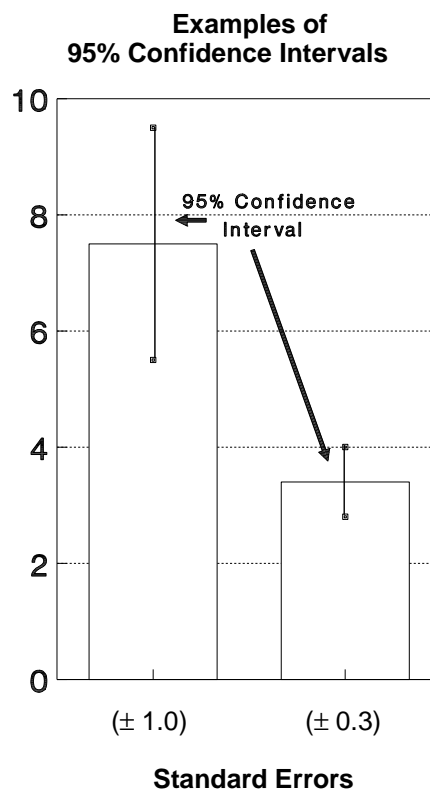
As part of the National Animal Health Monitoring System (NAHMS), USDA:APHIS:Veterinary Services conducted a National study of beef production designed to provide both participants and the industry with information on cow/calf health, productivity, and management practices. This report is the first release of National information resulting from the Beef Cow/Calf Health and Productivity Audit (CHAPA).

Data for *Part 1: Beef Cow/Calf Herd Management Practices in the United States* were collected from beef producers September 29 through October 9, 1992. The National Agricultural Statistics Service (NASS) collaborated with VS to select a producer sample that was statistically designed to provide inferences about the nation's cow/calf population. NASS telephone interviewers contacted producers in the 48 continental States by computer-assisted telephone interview and asked them a series of questions about management practices and the health of their animals. The 2,539 cow/calf producers that participated represented all U.S. cow/calf operations.

Descriptive tables in this report are divided into two parts:

- The **Sample Profile** contains descriptive results from only the sample of operations that completed the telephone interview.
- **National Population Estimates Based on Data Collected** are population estimates, such as averages and proportions which have been weighted to represent the National cow/calf population. Most of the estimates are provided with a measure of variability called the standard error and denoted by (\pm). Chances are 95 out of 100 that the interval created by the estimate plus or minus two standard errors will contain the true population value. In the example at right, an estimate of 7.5 with a standard error of ± 1.0 results in a range of 5.5 to 9.5 (two times the standard error above and below the estimate).

Subsequent Beef CHAPA activities collected additional data from producers in 18 of the largest cow/calf-producing States. Data were collected by Veterinary Services field staff from January 1993 through January 1994. Interpretive summaries of Beef CHAPA data and tabular results from subsequent data collections



will be released as they are completed. A Technical Report containing details on the methodology employed during the Beef Cow/Calf and Productivity Audit is also available.

If you have questions about this report, contact:

Center for Animal Health Monitoring
USDA:APHIS:VS
555 South Howes, Suite 200
Fort Collins, Colorado 80521
(303) 490-7800

Sample Profile¹

1. Descriptive statistics of responding operations:

a. Beef cow herd size (as of 10/92)	<u># Operations</u>
0 (no cows, but had heifers)	19
1-4	106
5-9	135
10-49	790
50-99	460
100-199	345
200-299	200
300-499	179
500+	<u>305</u>
Total	2,539

b. Type of business operation:	<u># Operations</u>
Registered cattle only	96
Commercial cattle only	2,018
Registered and commercial cattle	<u>392</u>
Total	2,506

c. Predominant calving period:	<u># Operations</u>
Spring	1,641
Fall	<u>286</u>
Total	1,927

2. Animals reported in sample operations:	<u># Animals</u>
a. Beef cow inventory	646,019
b. Calves born (10/1/91 - 9/30/92)	561,239

¹ Actual study sample values; not population estimates.

National Population Estimates Based on Data Collected

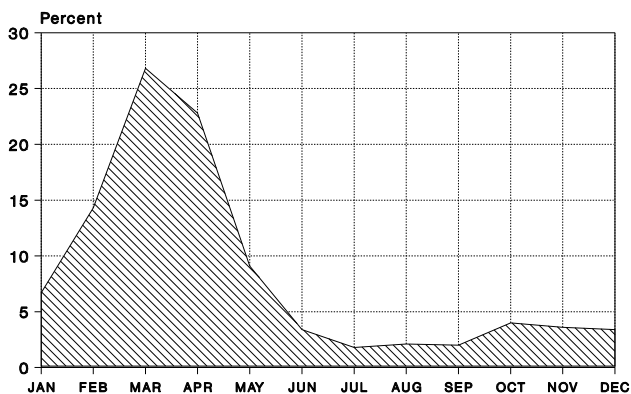
1. Cows calved as a percent of those exposed to a bull or artificially inseminated¹:

<u>Female Class</u>	<u>Percent</u>	<u>Standard Error</u>
Replacement heifers (calving first time)	89.1	(± 1.4)
First calf heifers (calving second time)	93.8	(± 0.7)
Cows	93.1	(± 0.4)
All females	92.4	(± 0.3)

2. Percent of calves born by month during 1992:

<u>Month</u>	<u>Percent</u>	<u>Standard Error</u>
January	6.7	(± 0.5)
February	14.3	(± 0.8)
March	26.8	(± 0.8)
April	22.8	(± 0.8)
May	9.1	(± 0.5)
June	3.4	(± 0.3)
July	1.8	(± 0.2)
August	2.1	(± 0.4)
September	2.0	(± 0.3)
October	4.0	(± 0.3)
November	3.6	(± 0.2)
December	<u>3.4</u>	(± 0.3)
Total	100.0	

Percent of Calves Born by Month, 1992



- 1 The retrospective data collected did not allow calculation of percentages according to National Cattlemen's Association - Integrated Resource Management - Standardized Performance Analysis (NCA-IRM-SPA) guidelines. On-going data collection will allow the calculation of SPA calving percentages and will be available in a subsequent report.

3. Percent of operations with one or more calves born in each of the following months:

<u>Month</u>	<u>Percent</u>	<u>Standard Error</u>
January	23.8	(± 1.5)
February	37.7	(± 1.8)
March	51.3	(± 1.9)
April	49.9	(± 1.9)
May	36.3	(± 1.8)
June	21.2	(± 1.5)
July	14.3	(± 1.3)
August	12.3	(± 1.3)
September	9.8	(± 1.0)
October	20.3	(± 1.5)
November	16.6	(± 1.3)
December	15.8	(± 1.3)

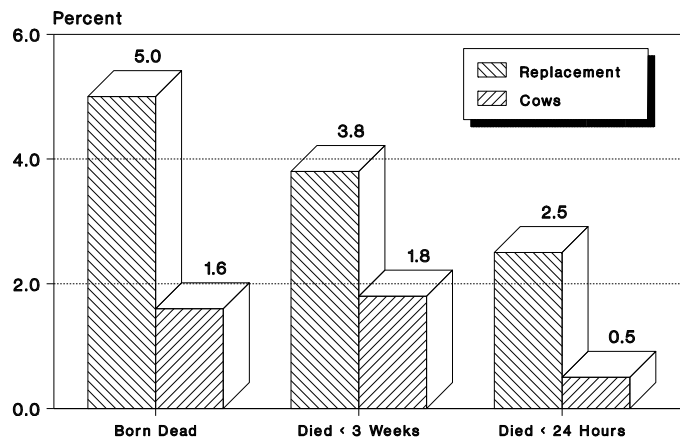
4. Percent of operations with calves born by number of months (for example, 14.4 percent of the operations had calves born in only one month):

<u>Number of Months</u>	<u>Percent</u>	<u>Standard Error</u>
1	14.4	(± 1.6)
2	20.1	(± 1.7)
3	23.9	(± 1.7)
4	16.1	(± 1.5)
5	7.9	(± 1.0)
6	7.5	(± 0.9)
7	4.6	(± 0.9)
8	1.9	(± 0.5)
9	1.1	(± 0.3)
10	0.9	(± 0.3)
11	0.7	(± 0.3)
12	<u>0.9</u>	(± 0.3)
Total	100.0	

5. Calf mortality as a percent of those born:

	<u>All Female</u>		<u>Replacement Heifers</u>		<u>Cows</u>	
	<u>Percent</u>	<u>Standard Error</u>	<u>Percent</u>	<u>Standard Error</u>	<u>Percent</u>	<u>Standard Error</u>
a. Born dead	2.1	(± 0.1)	5.0	(± 0.4)	1.6	(± 0.1)
b. Died prior to 24 hours of age	0.8	(± 0.1)	2.5	(± 0.3)	0.5	(± 0.0)
c. Died prior to 3 weeks of age ¹	2.1	(± 0.1)	3.8	(± 0.3)	1.8	(± 0.1)

Calf Mortality As Percent of Calves Born



6. Calf mortality and morbidity of last weaned calf crop:

	<u>Operation Average</u>		<u>Animal Average</u>	
	<u>Percent</u>	<u>Standard Error</u>	<u>Percent</u>	<u>Standard Error</u>
a. Percent of calves:				
Died prior to weaning ²	2.7	(± 0.4)	3.5	(± 0.3)
Died prior to 4 months of age ²	2.1	(± 0.3)	2.3	(± 0.2)
Developed scours prior to weaning	2.9	(± 0.5)	4.7	(± 0.5)
Developed scours prior to 4 months of age	2.5	(± 0.5)	4.2	(± 0.5)
Developed respiratory disease prior to weaning	0.6	(± 0.2)	1.6	(± 0.2)
Developed respiratory disease prior to 4 months of age	0.5	(± 0.2)	1.2	(± 0.2)

7. Facility characteristics

	<u>Percent</u>	<u>Standard Error</u>
a. Percent of operations with:		
Corrals	79.9	(± 1.6)
Crowding pen	58.0	(± 1.8)
Alley way	58.2	(± 1.7)
Head catch/stanchion (without squeeze)	55.9	(± 1.8)
Squeeze chute	40.1	(± 1.7)
Calf table (tilting squeeze chute for calves)	10.1	(± 0.9)
Weight scale	9.2	(± 1.1)

1 Includes deaths prior to 24 hours.

2 Includes deaths shown in 5b and c above.

8. Type of business operation					
a. Percent of operations with:			<u>Percent</u>	<u>Standard Error</u>	
Registered cattle only			4.4	(± 0.9)	
Commercial cattle only			81.3	(± 1.5)	
Both registered and commercial cattle			<u>14.3</u>	(± 1.3)	
Total			100.0		
9. Financial management tools prepared					
a. Percent of operations preparing:			<u>Percent</u>	<u>Standard Error</u>	
Income statement (profit/loss statement)			49.4	(± 1.8)	
Balance sheet (net worth statement)			33.4	(± 1.7)	
Cash flow statement			28.6	(± 1.6)	
Cattle or enterprise budget			12.0	(± 1.1)	
10. Animal identification: unique number					
a. Percent of operations tagging or otherwise individually identifying each cow or calf with a unique number:					
		Cows		Calves	
		<u>Percent</u>	<u>Standard Error</u>	<u>Percent</u>	<u>Standard Error</u>
		44.3	(± 1.7)	34.9	(± 1.6)
b. Number of cows/calves on operations that tag or otherwise individually identify each cow or calf with a unique number as a percent of cows/calves on all U.S. beef operations:					
		Cows		Calves	
		<u>Percent</u>	<u>Standard Error</u>	<u>Percent</u>	<u>Standard Error</u>
		61.3	(± 1.5)	50.3	(± 1.7)

11. Herd identification

a. Percent of operations using a brand (or some other type of overall herd identification, where each animal has the same identification):

<u>Percent</u>	<u>Standard Error</u>
28.2	(± 1.3)

b. Number of cows on operations using a brand (or some other type of overall herd identification, where each animal has the same identification) as a percent of cows on all beef operations:

58.9	(± 1.4)
------	---------

12. Animal identification: hide branding

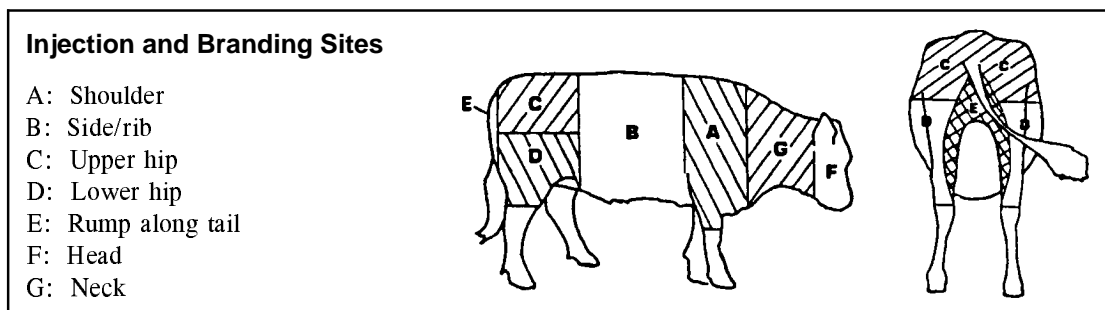
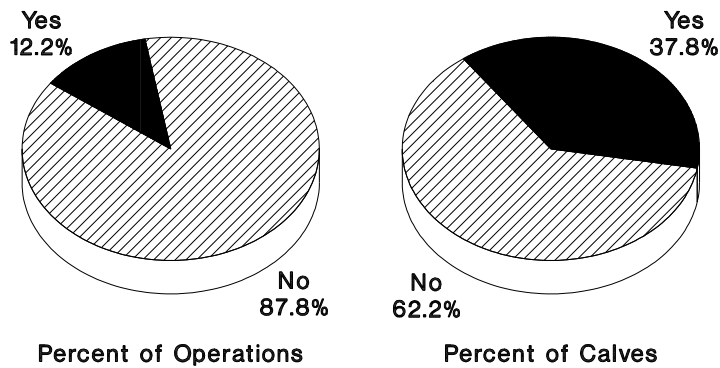
a. Percent of operations hide branding unweaned calves:

<u>Percent</u>	<u>Standard Error</u>
12.2	(± 0.7)

b. Number of unweaned calves on operations hide branding as a percent of unweaned calves on all beef operations:

37.8	(± 1.6)
------	---------

Hide Branding of Unweaned Calves



12. Animal identification: hide branding (continued)

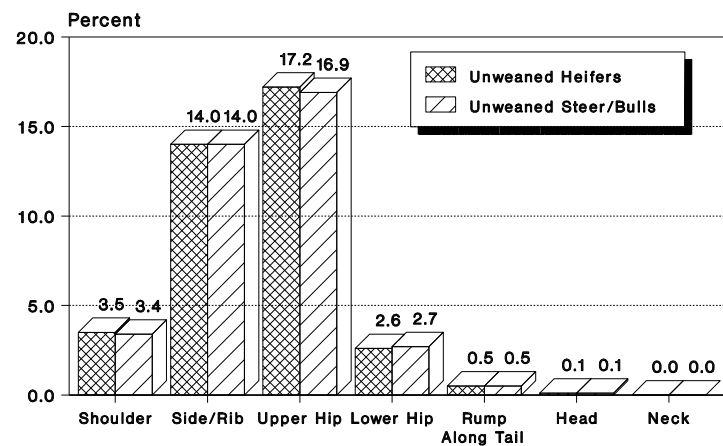
c. For operations hide branding, percent of operations branding by site location and operation average percent of unweaned calves branded:

Site	Operations Branding		Percent of Calves Branded			
	Percent	Stand. Error	Unweaned Heifers	Stand. Error	Unweaned Steers/Bulls	Stand. Error
Shoulder (site A)	9.2	(± 1.7)	93.9	(± 2.5)	92.7	(± 3.0)
Side/rib (site B)	34.5	(± 2.9)	95.8	(± 1.4)	96.8	(± 0.8)
Upper hip (site C)	49.4	(± 3.2)	92.7	(± 2.8)	91.8	(± 2.8)
Lower hip (site D)	8.7	(± 1.6)	93.0	(± 2.7)	90.7	(± 5.9)
Rump along tail (site E)	4.1	(± 2.1)	62.5	(± 27.1)	98.7	(± 1.4)
Head (site F)	0.1	(± 0.1)	100.0	(± 0.0)	100.0	(± 0.0)
Neck (site G)	0.1	(± 0.1)	100.0	(± 0.0)	100.0	(± 0.0)

d. Percent of unweaned U.S. beef calf crop (heifers and steers) hide-branded by site location:

Site	Percent Branded			
	Unweaned Heifers	Standard Error	Unweaned Steers/Bulls	Standard Error
Shoulder (site A)	3.5	(± 0.6)	3.4	(± 0.6)
Side/rib (site B)	14.0	(± 1.2)	14.0	(± 1.2)
Upper hip (site C)	17.2	(± 1.5)	16.9	(± 1.5)
Lower hip (site D)	2.6	(± 0.6)	2.7	(± 0.6)
Rump along tail (site E)	0.5	(± 0.3)	0.5	(± 0.3)
Head (site F)	0.1	(± 0.1)	0.1	(± 0.1)
Neck (site G)	0.0	(± 0.0)	0.0	(± 0.0)

Percent of Unweaned U.S. Beef Calf Crop Hide-Branded by Site Location



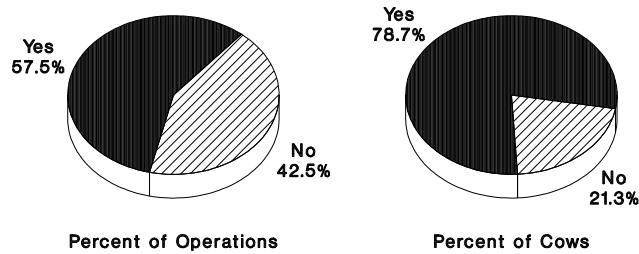
13. Injections (vaccine, antibiotic, injectable dewormer, injectable minerals or vitamins) given to beef cattle in the last 12 months by *operator or any unpaid or hired worker*

- a. Percent of operations where producers give injections:

<u>Percent</u>	<u>Standard Error</u>
57.5	(± 1.8)
- b. Number of cows on operations giving injections as a percent of cows on all beef operations:

78.7	(± 1.1)
------	---------

Producer-Delivered Injections to Cattle



c. For operations where producers give injections, percent of operations giving one or more injections by each of the following routes:

<u>Route</u>	<u>Percent</u>	<u>Standard Error</u>
Muscle or intramuscular	78.9	(± 2.0)
Under the skin or subcutaneous	61.9	(± 2.4)
Other	1.1	(± 0.6)

d. For operations where producers give injections, operation average percent of injections given by each route:

<u>Route</u>	<u>Percent</u>	<u>Standard Error</u>
Muscle or intramuscular	57.7	(± 2.0)
Under the skin or subcutaneous	41.5	(± 2.0)
Other	<u>0.8</u>	(± 0.5)
Total	100.0	

13. Injections given to beef cattle in the last 12 months by *operator or any unpaid or hired worker*
(continued)

e. For operations using various injection routes, number of cows as a percent of cows on all beef operations:

<u>Route</u>	<u>Percent</u>	<u>Standard Error</u>
Muscle or intramuscular	60.3	(± 1.5)
Under the skin or subcutaneous	56.6	(± 1.6)
Other	0.8	(± 0.4)

f. Percent of operations by main location of injection within each route:

Injection Route:	<u>Percent of Operations by Site Within Each Route</u>					
	Muscle/Intramuscular		Skin/Subcutaneous		Other	
<u>Site</u> ¹	<u>Percent</u>	<u>Standard Error</u>	<u>Percent</u>	<u>Standard Error</u>	<u>Percent</u>	<u>Standard Error</u>
Shoulder (site A)	11.7	(± 1.6)	16.6	(± 2.4)	54.7	(± 29.5)
Side/rib (site B)	0.2	(± 0.2)	1.8	(± 0.6)	0.3	(± 0.3)
Upper hip (site C)	45.5	(± 2.6)	4.7	(± 1.3)	0.0	(± 0.0)
Lower hip (site D)	13.4	(± 2.0)	2.5	(± 0.8)	0.0	(± 0.0)
Rump along tail (site E)	13.8	(± 1.7)	1.5	(± 0.8)	3.6	(± 3.4)
Head (site F)	0.2	(± 0.1)	0.7	(± 0.3)	6.4	(± 7.2)
Neck (site G)	<u>15.2</u>	(± 1.6)	<u>72.2</u>	(± 2.6)	<u>35.0</u>	(± 26.8)
Total	100.0		100.0		100.0	

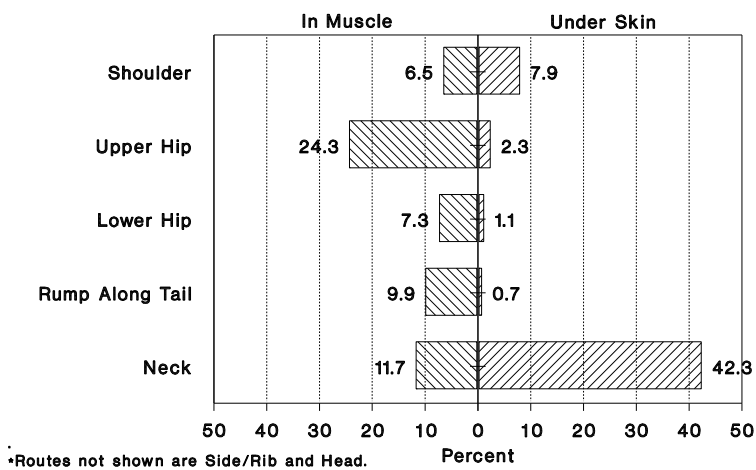
¹ See diagram of sites on page 8.

13. Injections given to beef cattle in the last 12 months by *operator or any unpaid or hired worker* (continued)

g. Percent of all U.S. beef cows in herds by preferred injection site by route:

Injection Route: Site ¹	Muscle/Intramuscular		Skin/Subcutaneous		Other	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Shoulder (site A)	6.5	(± 0.8)	7.9	(± 0.8)	0.0	(± 0.0)
Side/rib (site B)	0.1	(± 0.1)	2.0	(± 0.6)	0.0	(± 0.0)
Upper hip (site C)	24.3	(± 1.5)	2.3	(± 0.5)	0.0	(± 0.0)
Lower hip (site D)	7.3	(± 0.8)	1.1	(± 0.3)	0.0	(± 0.0)
Rump along tail (site E)	9.9	(± 1.3)	0.7	(± 0.3)	0.1	(± 0.1)
Head (site F)	0.2	(± 0.1)	0.5	(± 0.2)	0.0	(± 0.0)
Neck (site G)	11.7	(± 1.1)	42.3	(± 1.7)	0.1	(± 0.0)

Percent of All Cows by Main Producer-Delivered Injection Location and Route*



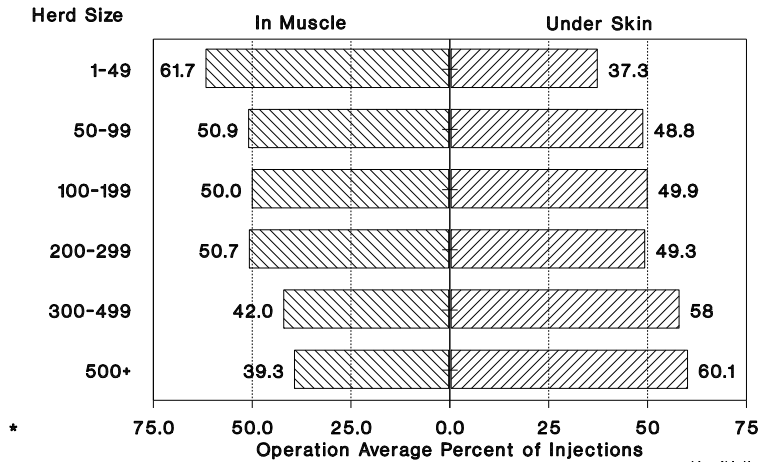
¹ See diagram of sites on page 8.

13. Injections given to beef cattle in the last 12 months by *operator or any unpaid or hired worker*
(continued)

h. For producers giving any injections, operation average percent of injections by route and herd size:

<u>Beef Cow Herd Size</u>	<u>Percent of Injections</u>					
	<u>Muscle/Intramuscular</u>		<u>Skin/Subcutaneous</u>		<u>Other</u>	
	<u>Percent</u>	<u>Standard Error</u>	<u>Percent</u>	<u>Standard Error</u>	<u>Percent</u>	<u>Standard Error</u>
1-49	61.7	(± 2.7)	37.3	(± 2.6)	1.1	(± 0.8)
50-99	50.9	(± 3.1)	48.8	(± 3.0)	0.3	(± 0.2)
100-199	50.0	(± 3.3)	49.9	(± 3.3)	0.0	(± 0.0)
200-299	50.7	(± 2.9)	49.3	(± 2.9)	0.0	(± 0.0)
300-499	42.0	(± 4.3)	58.0	(± 4.3)	0.0	(± 0.0)
500+	39.3	(± 4.0)	60.1	(± 4.2)	0.7	(± 0.6)
All	57.7	(± 2.0)	41.5	(± 2.0)	0.8	(± 0.5)

For Producers Giving Injections Percent of Injections Given by Route & Herd Size



14. Injections (vaccine, antibiotics, injectable dewormer, injectable minerals or vitamins) given to beef cattle on this farm in the last 12 months by a *veterinarian*

a. Percent of operations where veterinarians give injections: Percent Standard Error
42.1 (± 1.7)

b. Number of cows on operations giving injections as a percent of cows on all beef operations:
52.8 (± 1.7)

c. For operations where injections are given by a veterinarian, percent of operations where one or more injections are given by each of the following routes:

<u>Route</u>	<u>Percent</u>	<u>Standard Error</u>
Muscle or intramuscular	72.2	(± 3.0)
Under the skin or subcutaneous	57.6	(± 3.1)
Other	0.4	(± 0.2)

d. For operations where injections are given by a veterinarian, operation average percent of injections given by route:

<u>Route</u>	<u>Percent</u>	<u>Standard Error</u>
Muscle or intramuscular	57.8	(± 2.8)
Under the skin or subcutaneous	41.9	(± 2.8)
Other	<u>0.3</u>	(± 0.2)
Total	100.0	

e. For operations using various injection routes, number of cows as a percent of cows on all beef operations:

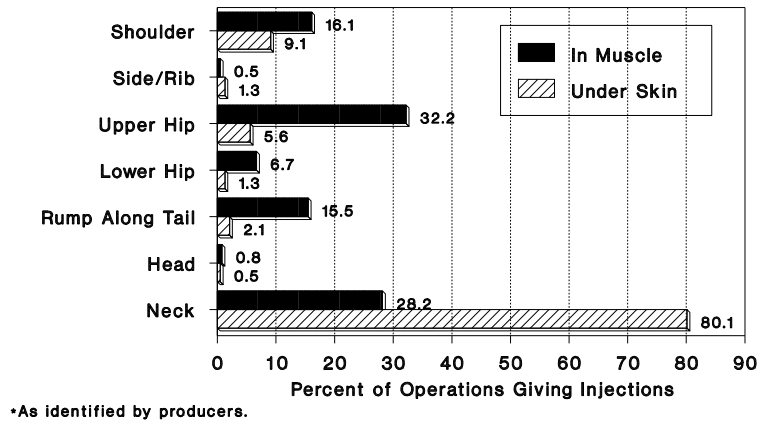
<u>Route</u>	<u>Percent</u>	<u>Standard Error</u>
Muscle or intramuscular	26.5	(± 1.6)
Under the skin or subcutaneous	28.9	(± 1.5)
Other	0.2	(± 0.1)

14. Injections given to beef cattle on this farm in the last 12 months by a veterinarian (continued)

f. Percent of operations by main location of injection within each route:

Injection Route: Site ¹	Percent of Operations by Site Within Each Route					
	Muscle/Intramuscular		Skin/Subcutaneous		Other	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Shoulder (site A)	16.1	(± 2.5)	9.1	(± 3.4)	0.0	(± 0.0)
Side/rib (site B)	0.5	(± 0.3)	1.3	(± 0.4)	0.0	(± 0.0)
Upper hip (site C)	32.2	(± 3.3)	5.6	(± 2.3)	0.0	(± 0.0)
Lower hip (site D)	6.7	(± 1.7)	1.3	(± 1.2)	0.0	(± 0.0)
Rump along tail (site E)	15.5	(± 2.7)	2.1	(± 1.0)	3.3	(± 3.8)
Head (site F)	0.8	(± 0.5)	0.5	(± 0.5)	0.0	(± 0.0)
Neck (site G)	<u>28.2</u>	(± 3.2)	<u>80.1</u>	(± 3.9)	<u>96.7</u>	(± 3.8)
Total	100.0		100.0		100.0	

Preferred Sites by Route for Veterinarian-Delivered Injections*



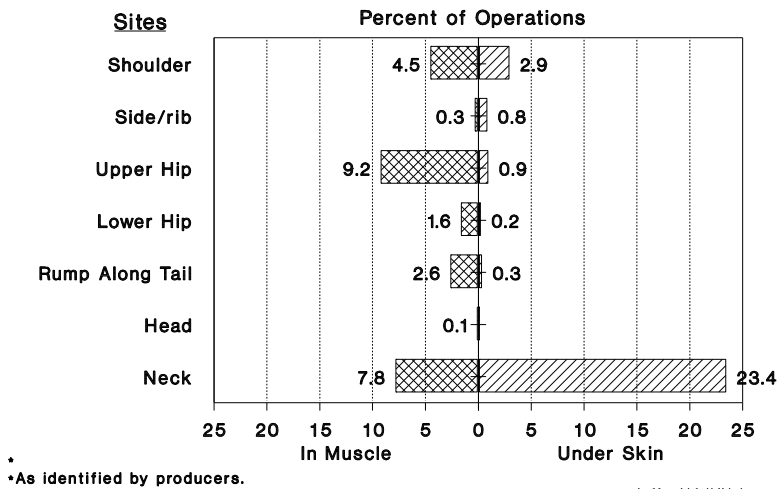
1 See diagram of sites on page 8.

14. Injections given to beef cattle on this farm in the last 12 months by a *veterinarian* (continued)

g. Percent of all U.S. beef cows in herds by preferred injection site by route:

Injection Route: Site ¹	Percent of Cows by Route					
	Muscle/Intramuscular		Skin/Subcutaneous		Other	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Shoulder (site A)	4.5	(± 0.9)	2.9	(± 0.5)	0.0	(± 0.0)
Side/rib (site B)	0.3	(± 0.2)	0.8	(± 0.3)	0.0	(± 0.0)
Upper hip (site C)	9.2	(± 1.2)	0.9	(± 0.3)	0.0	(± 0.0)
Lower hip (site D)	1.6	(± 0.3)	0.2	(± 0.1)	0.0	(± 0.0)
Rump along tail (site E)	2.6	(± 0.4)	0.3	(± 0.1)	0.0	(± 0.0)
Head (site F)	0.1	(± 0.0)	0.0	(± 0.0)	0.0	(± 0.0)
Neck (site G)	7.8	(± 0.9)	23.4	(± 1.4)	0.2	(± 0.1)

Percent of All U.S. Beef Cows by Main Location of Injection by Veterinarians*



¹ See diagram of sites on page 8.

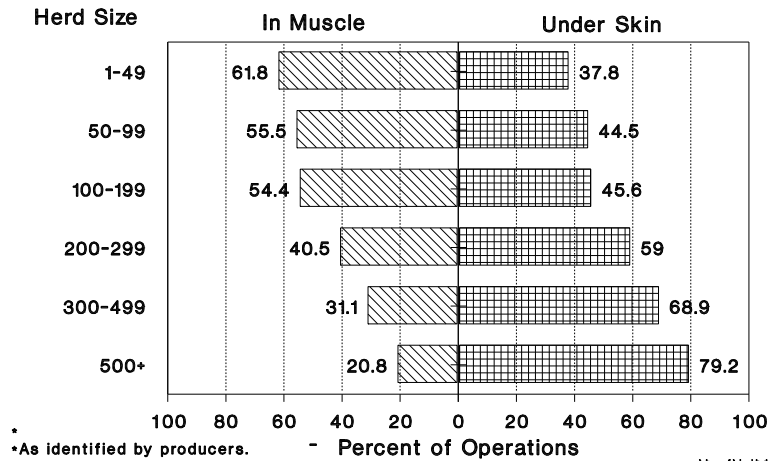
14. Injections given to beef cattle on this farm in the last 12 months by a veterinarian (continued)

14. Injections given to beef cattle on this farm in the last 12 months by a veterinarian (continued)

h. For operations with veterinarians giving any injections, operation average percent of injections by route and herd size:

Beef Cow Herd Size	Percent of Injections by Route					
	Muscle/Intramuscular		Skin/Subcutaneous		Other	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
1-49	61.8	(± 3.7)	37.8	(± 3.7)	0.4	(± 0.3)
50-99	55.5	(± 4.9)	44.5	(± 4.9)	0.1	(± 0.1)
100-199	54.4	(± 5.2)	45.6	(± 5.2)	0.0	(± 0.0)
200-299	40.5	(± 4.7)	59.0	(± 4.7)	0.5	(± 0.4)
300-499	31.1	(± 5.3)	68.9	(± 5.3)	0.0	(± 0.0)
500+	20.8	(± 3.8)	79.2	(± 3.8)	0.0	(± 0.0)
All	57.8	(± 2.8)	41.9	(± 2.8)	0.3	(± 0.2)

For Operations Where Veterinarians Give Injections % Given by Route & Herd Size*



15. Castration practices

	<u>Percent</u>	<u>Standard Error</u>
a. Operation average percent of male calves castrated before sale:	60.1	(± 1.6)
b. Percent of male calves castrated before sale:	80.8	(± 1.1)
c. Percent of operations by interval of reported percent of male calves castrated before sale ¹ :		
<u>Reported</u>	<u>Percent of</u>	<u>Standard</u>
<u>Percent Castrated</u>	<u>Operations</u>	<u>Error</u>
0	34.4	(± 1.7)
1-24	2.4	(± 0.5)
25-49	0.5	(± 0.2)
50-74	2.9	(± 0.6)
75-99	6.0	(± 0.7)
100	<u>53.8</u>	(± 1.7)
Total	100.0	
	<u>Days</u>	<u>Standard Error</u>
d. Operation average age calves are castrated ¹ :	75.3	(± 3.1)
e. Average age calves are castrated ¹ :	71.1	(± 2.8)

¹ 15 d, e, f, and g are comparable items.

15. Castration practices (continued)

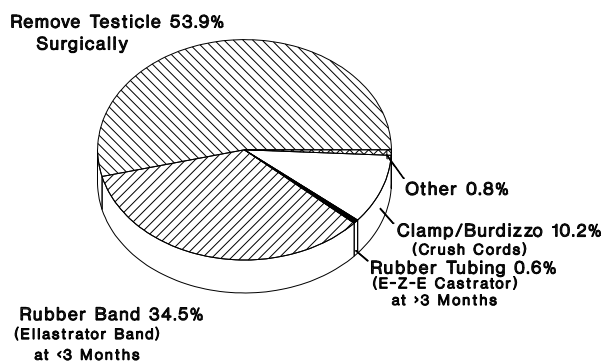
f. Percent of operations by reported average age of calves at castration¹:

<u>Age in Days</u>	<u>Percent</u>	<u>Standard Error</u>
1-30	38.4	(± 2.1)
31-61	22.0	(± 1.7)
62-92	13.4	(± 1.4)
93-122	8.3	(± 1.2)
123-153	4.6	(± 0.9)
154-183	7.4	(± 1.1)
184-214	2.9	(± 0.6)
215+	<u>3.0</u>	(± 0.8)
Total	100.0	

g. Percent of operations by primary method of castration¹:

<u>Primary Method</u>	<u>Percent</u>	<u>Standard Error</u>
Remove testicle surgically	53.9	(± 2.1)
Rubber band (Elastrator band) at less than 3 months of age	34.5	(± 2.1)
Clamp/Burdizzo (crush cords)	10.2	(± 1.4)
Rubber tubing (E-Z-E castrator) at more than 3 months of age	0.6	(± 0.4)
Other	<u>0.8</u>	(± 0.5)
Total	100.0	

**Percent of Operations by Primary
Method of Castration**



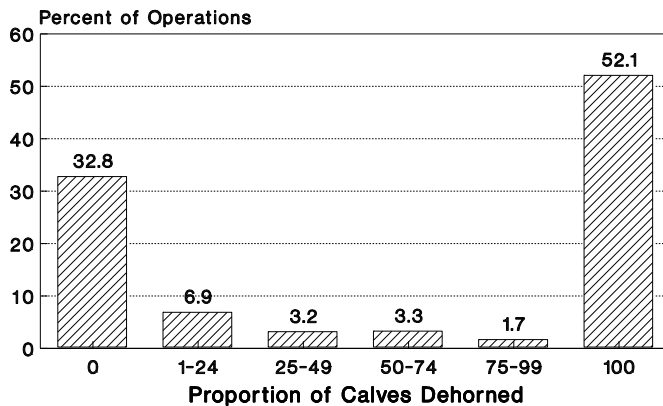
¹ 15 d, e, f, and g are comparable items.

16. Dehorning practices

a. Horned calves:	<u>Percent</u>	<u>Standard Error</u>
i. Operation average percent of calf crop horned:	19.0	(± 1.1)
ii. Percent of calves horned:	29.3	(± 1.2)
iii. Percent of operations with horned calves:	45.3	(±1.8)
b. Horned calves dehorned:		
i. Operation average percent of calf crop horned on operations that dehorn:	41.5	(± 2.2)
ii. Percent of nonpolled calf crop dehorned:	71.2	(± 3.0)
iii. Percent of horned calves on operations that dehorn:	80.3	(± 3.2)

iv. Percent of operations dehorning by proportion of calves dehorned:		
<u>Reported Percent of Calves Dehorned</u>	<u>Percent</u>	<u>Standard Error</u>
0	32.8	(± 2.4)
1-24	6.9	(± 1.2)
25-49	3.2	(± 0.7)
50-74	3.3	(± 0.8)
75-99	1.7	(± 0.4)
100	<u>52.1</u>	(± 2.5)
Total	100.0	

Percent of Operations Dehorning by Proportion of Calves Dehorned

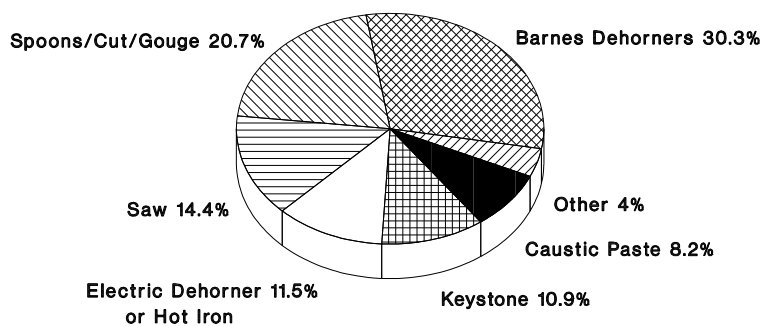


c. Practices specific to operations that dehorn:	<u>Percent</u>	<u>Standard Error</u>
i. Operation average percent of horned calves that are dehorned:	85.7	(± 1.8)
ii. Percent of horned calves dehorned on operations that dehorn:	88.3	(± 1.5)

16. Dehorning practices (continued)

	<u>Days</u>	<u>Standard Error</u>
iii. Operation average age calves are dehorned:	158.5	(± 6.6)
iv. Average age calves are dehorned:	104.0	(± 5.0)
v. Percent of operations dehorning at various ages:		
<u>Age in Days</u>	<u>Percent</u>	<u>Standard Error</u>
1-30	10.6	(± 1.5)
31-61	11.7	(± 1.5)
62-92	13.2	(± 1.7)
93-122	8.9	(± 1.8)
123-153	9.1	(± 2.2)
154-183	16.2	(± 2.2)
184-214	11.8	(± 2.4)
215+	<u>18.5</u>	(± 2.6)
Total	100.0	
vi. Percent of operations by primary method of dehorning:		
<u>Methods</u>	<u>Percent</u>	<u>Standard Error</u>
Caustic paste	8.2	(± 1.3)
Spoons, cut, gouge	20.7	(± 2.2)
Barnes dehorner	30.3	(± 2.6)
Keystone (guillotine)	10.9	(± 2.8)
Saw	14.4	(± 3.0)
Electric dehorner or hot iron	11.5	(± 1.4)
Other	<u>4.0</u>	(± 1.3)
Total	100.0	

**Percent of Operations That Dehorn
by Primary Method of Dehorning**



17. Weaning age and weight (a and b are comparable items)

a. Weaning age:	<u>Days</u>	<u>Standard Error</u>
Operation average weaning age	205.5	(± 1.8)
Calf average weaning age	214.4	(± 1.4)
b. Weaning weight:	<u>Pounds</u>	<u>Standard Error</u>
Operation average weaning weight	474.0	(± 3.7)
Calf average weaning weight	504.2	(± 2.5)

18. Females mated or serviced per bull:

	Yearling Bull		Mature Bull	
	<u># Females</u>	<u>Stan. Error</u>	<u># Females</u>	<u>Stan. Error</u>
Operation average	17.2	(± 0.3)	26.8	(± 0.4)
Females per bull	19.0	(± 0.3)	29.2	(± 0.3)

**National Animal Health Monitoring System
USDA:APHIS:VS
2150 Centre Ave., Bldg. B, MS 2E7
Fort Collins, Colorado 80526-8117
(970)494-7000**

N130.893