The Basic Resource - The National Cow Herd

Northeast Region

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The northeastern region of the United States for this paper includes 20 states which might logically be divided into two subregions based on feed resources and management practices. The North Central subregion consisting of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio and Wisconsin has 5,074,000 beef cows as of January 1, 1988. This represents 15.4% of the nation's beef cow inventory. The Northeast subregion consisting of Connecticut, Deleware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and West Virginia, has 669,800 beef cows as of January 1, 1988. This represents 2.0% of the nation's beef cow inventory.

Henry C. Gilliam Jr. of the USDA, included the North Central region in the Agricultural Economic Report No. 575 published in 1984 entitled the U.S. Beef Cow Calf Industry. This publication proved to be a valuable resource. In order to update the material and to include data from the Northeast subregion, a survey was conducted of beef cattle specialists in each of the 20 states. Their replies have been summarized and are reported in the following tables. Without their help and cooperation this characterization of the northeastern U.S. beef cow herd would have not been possible.

The northeastern region has been described by Gilliam (1984) as an area of fertile farmland and abundant feed supplies. It includes the central and eastern Corn Belt, the Lake States, the northeastern Appalchians and New England. Annual rainfall increases from 30 inches in the western part to 50 inches in the southern part of the region. The growing season ranges from 7 months in southeastern Missouri to 5 months in the central Lake States and New England. Much of the area is partially wooded and pastures include bluegrass, native prairie grasses as well as improved seeded pastures of bromegrass, orchard grass, timothy, fescue, and legumes including alfalfa, red clover and white clover. Corn and soybean crops are grown on many of these farms especially in the North Central region. Thus corn silage and crop residues such as corn stalks are readily available in addition to hay.

Our survey indicated that the primary feed resources were hay or hay and corn silage, (Table 3) and only 7% percent or less of the herds were utilizing corn silage as the primary winter feed. Crop residues were used more extensively in the North Central Region. Iowa reported that hay and corn stalks were the predominant winter feed resource for beef cows. Estimates for the land area required per cow unit averaged 3.5 acres for the Northeast and 4.5 acres for the North Central (Table 4). This reflects the increased use of crop residues in feeding the cow herd.

Table 1. North Central Region Beef Cow Inventory, January 1, 1988

State	No. of Cows
Illinois	525,000
Indiana	370,000
Iowa	1,201,000
Michigan	130,000
Minnesota	370,000
Missouri	1,866,000
Ohio	412,000
Wisconsin	200,000
Total	5,074,000

(15.4% of the U.S. Beef Cow Inventory)

Table 2. Northeast Region Beef Cow Inventory, January 1, 1988

State	No. of Cows
Connecticut	5,000
Deleware	2,000
Maine	8,000
Maryland	53,000
Massachusetts	10,000
New Hampshire	5,000
New Jersey	11,000
New York	112,000
Pennsylvania	206,000
Rhode Island	800
Vermont	9,000
West Virginia	248,000
Total	669,800

(2.0% of the U.S. Beef Cow Inventory)

Table 3. Primary Winter Feed Resources For Beef Cow Herds

Source	North Central	Northeast
Hay only	53%	70%
Corn Silage Only	7%	6%
Hay and Corn Silage	26%	21%
Crop Residues	14%	3%

Regarding the management of the cow herd, both subregions reported that March and April were the months of highest calving frequency. However, Missouri reported that 35% of their calves were born in September and October. All states indicated that heifers were mated at 15 months to calve at 24 months of age with a few calving for the first time at 30 to 36 months of age. Labor resources available at calving time were considered adequate to assist cows as necessary. Most of the labor was provided by family due to the part time nature of these enterprises.

The average cow weight and frame size were 1125 lbs. and 4.50 for the North Central and 1140 lbs. and 4.75 for the Northeast region. The breeds reportedly used most frequently by the commercial cowherds were Angus, Charolais, Hereford (both horned and polled), Simmentals and the respective crosses of these 4 breeds. Crossbreeding predominates in the North Central region (77%). The Northeast region reported a much higher percentage of the herds were using a straight breeding program (48% vs. 23% for the North Central Region). This might be attributed to the higher percentage of purebred or pedigreed breeders in this region.

In order to estimate the pedigreed cow herd for the region, a number of assumptions were made:

1. Breeders recorded 65% of the heifer calves and 25% of the bull calves produced in their herd.

2. Average calf crop weaned was 80%

3. Using the above assumptions and the number of calves registered per state, we developed a multiplier factor of 2.78 X registrations, to estimate the number of pedigreed cows required to produce the recorded number of calves.

The 1987 annual report of the National Pedigreed Livestock Council indicated that 626,330 beef cattle were recorded. Our estimate of the pedigreed cow herd would be 1,741,197 cows or 5.2% of the 33,779,000 beef cows in the January 1, 1988 inventory.

The data reported in tables 7 and 8 were calculated from registrations reported by the breed associations for fiscal 1987 and expressed as a percentage of January 1, 1988 U.S. Beef Cow herd inventory values for each state. The activity of pedigreed beef cattle breeding appears to be highest in the Northeast subregion, but the North Central region is also above the national average.

Regarding the marketing of cattle from the commercial beef herds, (Table 9) the highest percentage of calves in each region were sold at weaning time (50% for the North Central and 53% for the Northeast). The next most frequently used marketing strategy was to winter the calves and sell them in the spring as feeders. The North Central region reported that a higher percent of it's calf crop was retained and fed for slaughter than the Northeast region (21% vs. 16%). While we did not ask the question in our survey, we believe that the majority of these

Table 4. Management Characteristics Of Beef Cow Herds

	North Central	North East
Land Acre/Cow Unit	4.5 Acres	3.5 Acres
Age at First Calving	2 Years	2 Years
Peak Calving Months	March-April	March-April

Table 5. Physical And Breed Characteristics Of Beef Cow Herds

	North Central	North East
Cow Weight	1125 lbs.	1140 lbs
Cow Frame Size	4.50	4.75

Breeds Most Frequent Reported - Angus, Charolais, Hereford, Simmental and various crosses of these four breeds.

Table 6. Breeding Systems Used In Commercial Beef Cow Herd

Systems	North Central	North East
Straightbred Cows With Straightbred Calves	23%	48%
Straightbred Cows With Crossbred Calves	19%	21%
Crossbred Cows With Crossbred Calves	58%	31%

Table 7. Estimated Pedigree Beef Cow Inventory, January 1, 1988

North Central Region		
State	No. of Pedigree cows	% of Total Beef Cows In In The State
Illinois	40,335	7.6%
Indiana	26,065	7.0%
Iowa	57,488	4.8%
Michigan	10,689	8.2%
Minnesota	22,710	6.1%
Missouri	94,787	5.1%
Ohio	26,988	6.6%
Wisconsin	13,019	6.5%
Total	292,081	5.8%

Table 8. Estimated Pedigree Beef Cow Inventory, January 1, 1988

Northeast Region		
State	No. of Pedigree cows	% of Total Beef Cows in the State
Connecticut	948	19.0%
Deleware	306	15.3%
Maine	1,576	19.7%
Maryland	5,552	10.5%
Massachusetts	1,518	15.2%
New Hampshire	420	8.4%
New Jersey	1,649	15.0%
New York	8,148	7.3%
Pennsylvania	12,535	6.1%
Rhode Island	142	17.8%
Vermont	1,273	14.2%
West Virginia	10,172	4.1%
Total	44,239	6.6%

cattle are fed for slaughter and marketed within this region as opposed to sending them to other regions of the U.S. for finishing and slaughter.

Summary

The Northeast and North Central regions of the U.S. are characterized by abundant feed resources and rainfall above the U.S. average. Hay is the primary winter feed resource. Approximately 3.5 to 4.5 acres are required per cow unit. The peak calving period is March - April but some areas also use fall calving. Most females are bred to calve at 2 years of age. Average cow size is 1100 to 1150 lbs. and frame size 4.5 to 4.75. The breeds used most frequently are Angus, Charolais, Hereford, Simmental and the respective crosses of these 4 breeds. Both subregions use crossbreeding system more than straight breeding but almost half of the cows in the Northeast subregion are straightbred. An estimation of the pedigree cow herd shows that activity in both regions is above the national average. Since seedstock produced in these regions are used nationwide, the match of cattle type and feed resources may not be exact across all regions of the U.S. Most of the calves produced in these regions are sold at weaning time but a significant number are retained and fed for slaughter on the farm or ranch where they were born.

Table 9. Primary Marketing Methods Used By Beef Cow Herds

	North Central	North East
Calves Sold At Weaning	50%	53%
Wintered and Sold in Spring	21%	17%
Wintered, Grazed and Sold In Fall	7%	14%
Retained and Fed for Slaughter	21%	16%

References

H.C. Gilliam, Jr. (1984) The U.S. Beef Cow-Calf Industry Agriculture Economics Report No. 515. USDA

Annual Report (1987) National Pedigree Livestock Council

Survey Respondents:

Connecticut - L.A. Malkus, University of Connecticut
Deleware - R.A. Barcewski, University of Deleware
Illinois - D.F. Parrett, University of Illinois
Indiana - K.S. Hendrix and L.A. Nelson, Purdue University
Iowa - D.R. Storhbehn, Iowa State University
Maine - O.L. Wyman, University of Maine
Maryland - S.M. Barao, University of Maryland
Massachusetts - J.P. Tritschler, University of Massachusetts
Michigan - H.D. Ritchie, Michigan State University
Minnesota - J. Meiske, University of Minnesota
Missouri - J.C. Whittier, University of Missouri
New Hampshire - F.C. Ernst, University of New Hampshire
New Jersey - D.M. Kniffen, Rutgers University
New York - D.G. Fox , Cornell University
Ohio - R.P. Bolze, Jr. The Ohio State University
Pennsylvania - E.H. Cash, Pennsylvania State University
Rhode Island - W.A. Gross, University of Rhode Island
Vermont - P. Saenger, University of Vermont
West Virginia - W.R. Wagner, West Virginia University
Wisconsin - R.A. Kemp, University of Wisconsin