

General Session I

The Business Side of Your Practice

Dr. Elaine Painter, *Presiding*

Trends and Demographics Affecting Bovine Practice

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In the first chapter of the 1985 Yearbook of Agriculture, Wayne D. Rasmussen quotes a statement from the summary of the Yearbook of Agriculture 45 years earlier. It read: "The year 1940 marks the end of a decade that has seen more swift and far-reaching changes in agricultural viewpoints and policy than perhaps any other decade in the history of the US... we do face profound changes and we must do something to adjust ourselves to them." In 1961, the foreword to the Yearbook of Agriculture stated that "At no time in thirty centuries has world agriculture faced greater problems, greater challenges, and greater opportunities." James R. Donald, Chairman, World Agricultural Outlook Board, spoke at the December, 1984 USDA Outlook Conference and emphasized that, "Much of the change in recent years has resulted from closer ties to general economic developments and policies here and abroad." He added, "Further significant change is expected in the next decade because of: ever-changing global economic conditions; rapid technological advances, which likely will bring growth in production capacity and shifts in demand for agricultural products; and a growing dependence of US producers on increasingly competitive world markets."

Everyone knows that American agriculture is undergoing significant change and stress. Much of the recent change involving the financial farm crisis is well-known. Underlying these financial difficulties are declines in agricultural exports, and perhaps more importantly, strong technological and structural forces which will cause further changes and adjustments in agriculture for years to come.

In the 30 minutes in which I have the privilege to address you this morning, I would like to briefly outline a few issues which relate directly to food animal veterinary practice.

Meat Consumption

The first issue involves US meat consumption patterns. In

the short run, meat consumption is supply driven. In the long run, meat consumption is demand driven, and after many years of rising per capita consumption of meat in the US, some leveling off has been noted in recent years. In spite of the notable pause in the long term rise in beef consumption since the mid 1970s, from a peak of 94 lbs. in 1976 down to 79 lbs. in 1983, total meat consumption including poultry meat in 1983 was a record. There is little reason to believe that total meat consumption will decline, but that it will continue to increase. Beef consumption is greater in higher income households and due to the decline in the rate of growth of household income, further increases in beef consumption per capita will be much more gradual than has been the case over the past 30 years. The major reason for the increase in poultry meat consumption is not the income effect but rather the large differential in retail prices between poultry meat and red meat.

Household demographic changes are having a major impact on meat consumption. Between 1970 and 1980, one-person households increased 78%; from 17% to nearly 23% of all households. Consumer expenditure surveys show that single member households spent an estimated 6% less for beef consumed at home in 1981 than the average beef expenditures by all households. However, this group spent an estimated 10% more than average for poultry and 12% more for fish and seafood consumed at home. Single-member households and single-parent households with children under 18 years of age are growing in number faster than the total number of households in the US. Households of this type tend to have lower incomes which affect the meats they purchase. It is not likely that the beef sector will benefit from this demographic trend.

Technological Change

Over the next 10 to 20 years, agricultural producers and

the veterinary profession will use an extensive array of new biotechnologies and information technologies that could revolutionize animal agriculture and the delivery of animal health services and products. As you know, technology has made US agriculture a leader in the world economy. From 1920 to 1950, mechanical technology increased the productive capacity by allowing farmers to make the transition from horsepower to mechanical power. From 1950 to 1980, chemical technology further increased productivity through the control of pests and disease and the use of chemical fertilizers. Now, we are being thrust into the era of biotechnology and information technology.

In animal agriculture, advances in protein production, gene insertion and embryo transfer will play a major role in increasing efficiency of production. Regarding information technology, computers and other electronic-based technologies are being applied to the collection, manipulation, and processing of information for control and management of agricultural production and marketing. Animal identification, reproduction, and disease control and prevention are areas of promise for the application of this technology.

While demographic and technological changes are taking place in America, the structure of agriculture is changing.

Production Shifts in Agriculture

A recent Congressional study by the Office of Technology Assessment documents the changing structure of agriculture by analyzing the shift in US production from small to large producers. Categorizing farms according to gross sales per year, the study showed that between 1969 and 1982: 1) the number of small farms declined 39%, while the number of very large farms increased by 100%; 2) the share of cash receipts from very large farms increased slightly, from 29% to 33%, while cash receipts declined from 40% to 25% for small and part-time farms; 3) the share of net farm income declined significantly, from 36% to 5%, for small and part-time farms, and increased from 36% to 64% for very large farms.

Large-scale farms dominate agriculture. If present trends continue to the end of this century, the total number of farms is projected to decline from 2.2 million in 1982 to 1.2 million in 2000. The number of small and part-time farms will continue to decline, but will still make up about 80% of total farms. Large farms with sales of at least \$200,000 in sales will increase in number by nearly 50%. Approximately 50,000 of the 175,000 farms in this category are projected to account for 75% of agricultural production by the year 2000.

Chart 1 shows the percent of dairy sales in real terms by sales class for 1974 and 1982. Farms in the \$20,000 to \$99,000 sales class dominated the production of dairy products in 1974 with 58% of sales. By 1982, their share had declined to 41%. During the same period, dairy farms with sales in excess of \$100,000 increased their share of production substantially, from 19% to 43%.

Chart 2 shows the percent of beef sales in real terms by

CHART 1. US Dairy Sales '74-'82

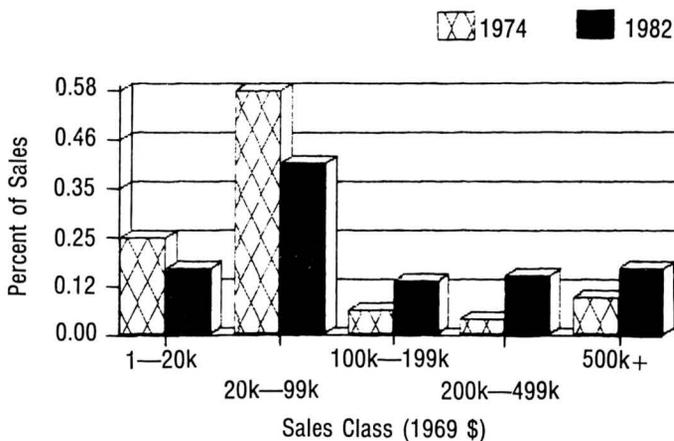
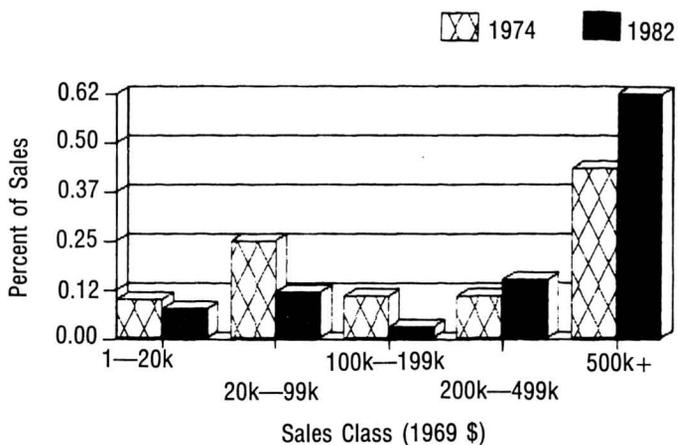


CHART 2. US Beef Sales '74-'82



sales class for the years 1974 and 1982. Sales from feedlots are not included. In the beef sector also, the inversion of structure is striking. Cattle operations with sales in the \$20,000 to \$99,000 class declined from 25% of sales in 1974 to 12% of sales in 1982, while operations with sales in excess of \$500,000 increased from 43% in 1974 to 62% in 1982.

Both the dairy and beef sectors have a bimodal structure. While sales are becoming skewed towards the larger sales class farms, the lower sales classes (less than \$100,000) have a larger percentage of sale than the middle range of producers (\$100,000 to \$2,000,000).

Regional Shifts in Livestock Production

For the purpose of the AVMA manpower study of 1985, projections of food animal populations at the national and geographic divisional levels were made by the Department of Agricultural Economics Forecasting Group at Michigan State University under contract with AVMA's Office of Economics. Using a large econometric model of the US agricultural sector, forecasts of livestock populations were

developed taking into account domestic and international demand and supply conditions, quantities and prices for agricultural products, and factors such as human population and income that influence total demand for food animal products.

A shift-share analysis allocated the projected totals among geographic divisions of the US by extrapolating historical trends in the geographic divisional shares to the period 1980-2000. Charts 3 and 4 give the number of dairy and beef cattle projected for each geographical division for 1980 and 2000.

The country-wide trend toward reduced milk cow numbers is perhaps the most striking factor and appears in all but the West division. In 2000, the national dairy herd is projected to decline to 76% of the 1980 level. This decline varies across the country as the Southern division milk cow population would decline to 55% of its 1980 level; while the Northeast population would decline to 84% of its 1980 level in 2000. In the West, dairy cattle would grow 7%.

CHART 3. Dairy Cattle Projections — AVMA Study 1980-2000

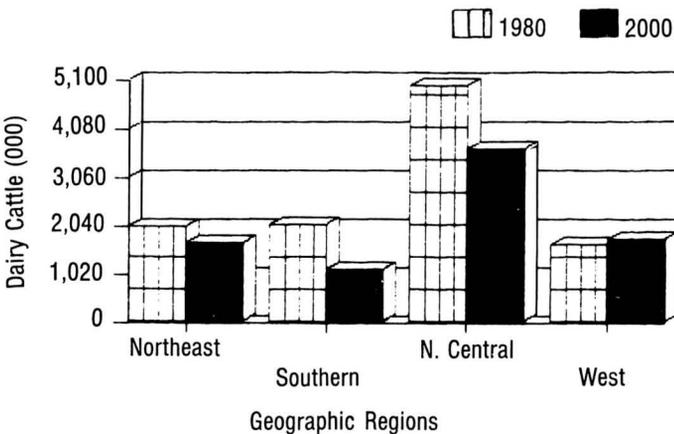
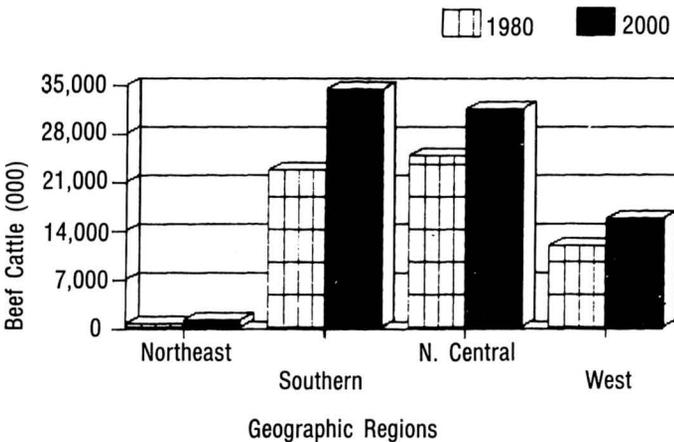


CHART 4. Beef Cattle Projections — AVMA Study 1980-2000



The population of beef cattle including beef cows, cattle on feed, and feeder cattle was projected to increase 38% from 1980 to 2000. Solid gains were projected for the Southern and North Central divisions. Included in the Southern division is the West South Central states region (Texas, Oklahoma, Arkansas, and Louisiana) which shows an impressive gain of 50% over the 20 year period.

Projected Supply of Food Animal Veterinarians

In conjunction with the 1985 AVMA veterinary medical manpower study, the population of food animal veterinarians was determined and projected to the year 2000. Factors taken into account included the current supply of food animal veterinarians, proportions of veterinary college graduates entering food animal practice by geographic division, labor force participation rates, hours worked, and female-to-male enrollments.

On the basis of the above model elements, the most plausible and baseline projections of full-time equivalent food animal practitioners were developed for the US and 9 divisions of the US. Results showed that the supply of food animal practitioners would increase 73% from about 7,000 in 1980 to about 12,000 in 2000.

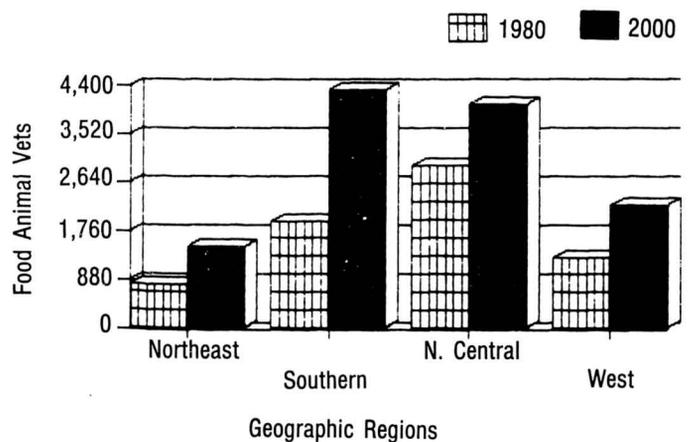
Chart 5 shows the growth in veterinarians varied by geographic division, ranging from a low of 37% in the North Central division to a high of 123% in the Southern division. The Northeast and West division would increase 86% and 73%, respectively.

Comparing the projected supply of veterinarians and the projected livestock populations reveals the important conclusion that at least for the remainder of this century the number of food animal practitioners would grow 2 times faster than the number of beef and dairy livestock.

Market Survey of Beef and Dairy Operators

The final section of this paper is devoted to a very brief report on the current study I am conducting for the AVMA on the food animal veterinary services market. The final

CHART 5. Veterinarian Projections — AVMA Study 1980-2000



report on the study is due to be completed in early March, 1987. In addition to the securing of all available secondary data on the agricultural market on veterinary medical services and product, the study also involved 2 primary national mail surveys: 1) survey of food animal veterinarians; and 2) survey of livestock producers.

The surveys were designed with the assistance of the AVMA Council of Public Relations steering committee composed of large animal veterinarians. The purpose of the surveys were to gather data on producers' expenditures for and veterinarians' revenues from veterinary product and service categories. In addition, information was secured on beliefs and attitudes about practitioners and other veterinary health care and product suppliers, on the part of both producers and veterinarians surveyed.

Preliminary analysis of these survey data yielded the following estimates for 1985:

	Beef	Dairy
Median # of veterinary visits/year	5	20
Median \$ of veterinary services and products purchased from veterinarian/year:	\$500	\$1,500

For now, I have no specific comments about these preliminary findings except to note that they validate previously estimated measures of the utilization of veterinary services by producers. Particularly noteworthy is the ratio of beef visits to dairy visits of 5/20 or 0.25. The AVMA manpower study used a ratio of 0.20 to estimate "veterinary livestock units" as a measure to summarize the

demand for food animal veterinary services in the US.

Charts 6 and 7 provide preliminary information on the responses by 894 beef and 417 dairy producers across the nation to a set of statements about the importance of veterinarians to their respective farm/ranch operation, and their opinions about their utilization of livestock veterinarians. In general, most respondents felt that veterinarians were important to their operation. As we might expect, at least 4 out of 5 beef and dairy operators felt that the local veterinarian was very important for the diagnosis and treatment of sick or injured animals. About 2/3 of the dairy operators and about 1/2 of the beef operators said that the local veterinarian was very important for herd health management advice and information on reproductive problems. Regarding information on feed and nutrition, 1 out of 3 beef operators and nearly 1 out of 4 dairy operators indicated their local veterinarian was not important.

Nine out of 10 operators agreed that veterinarians were good at explaining what they know to them and were also good at listening to them about their operation. Nearly all the respondents felt that veterinarians' services were beneficial to them.

Slightly more than 2 out of 4 beef operators and 3 out of 4 dairy operators agreed that they thought of their local veterinarian as a herd management consultant. Finally, about 1 out of 3 beef operators and 1 out of 5 dairy operators indicated that they usually call the veterinarian only as a last resort.

CHART 6. Importance of Local Veterinarian to Farm/Ranch Operation.

	Beef			Dairy		
	Very Important	Somewhat Important	Not Important	Very Important	Somewhat Important	Not Important
1. Diagnosis of sick or injured animals.	80%	18%	2%	90%	9%	1%
2. Required regulatory testing.	53%	30%	17%	55%	33%	11%
3. Information on feed and nutrition.	14%	54%	32%	17%	60%	23%
4. Purchases of animal vaccines.	51%	37%	13%	63%	26%	11%
5. Purchases of medications/antibiotics.	53%	36%	11%	55%	35%	10%
6. Treatment of sick or injured animals.	80%	17%	3%	89%	10%	1%
7. Herd health management advice.	45%	41%	14%	65%	30%	5%
8. Information on reproductive problems.	48%	36%	16%	72%	24%	4%

Responses based on 1986 survey of 894 beef operators and 417 dairy operators.

CHART 7. Responses By Beef and Dairy Farmers and Ranchers To Statments about veterinarians.

	Beef		Dairy	
	Agree	Disagree	Agree	Disagree
1. Local veterinarians know a lot about agribusiness and farm economics.	62%	38%	70%	30%
2. Veterinarians I have used are good at explaining what they know to me.	93%	7%	93%	7%
3. New veterinarians graduating today are as good as older veterinarians.	67%	33%	68%	32%
4. Veterinarians I have used are good at listening to me about my operation.	89%	11%	92%	8%
5. I think of the local veterinarian as a herd management consultant.	58%	42%	75%	25%
6. Local veterinarian's services are beneficial to me.	97%	3%	98%	2%
7. I usually call the veterinarian only as a last resort.	35%	65%	20%	80%

Responses based on 1986 survey of 894 beef operators and 417 dairy operators.

Conclusion

In summary, American society and agriculture is undergoing significant change. Food consumption patterns are shifting. Technological change is rapidly propelling us into a new era of biotechnological and information management. Agricultural production is shifting from small to large producers, and is influencing the regional shares of production in both beef and dairy sectors. The national dairy herd is declining, the national beef herd is growing

moderately. Finally, the number of food animal veterinarians is expected to grow twice as fast as the livestock sectors over the next 15 years.

There are many other important issues that we could address, but time just doesn't permit their review. All of these have important implications for the veterinary profession, veterinary education, and the public. For the remainder of the day, I hope to hear more about these issues, and how we might take advantage of new opportunities and meet the challenges of the future.

