year 2000 we can be assured of having enough energy to provide abundant food for a growing population and for huge exports, and to provide all the other goods and services which contribute to our enjoying a rewarding and satisfying life, while at the same time achieving a high quality environment. But if these things are to come to pass, we are going to have to pitch in and do our part, both in our personal and in our professional lives. It will be incumbent upon all Americans to avoid the temptation to contribute only unproductive criticism, rather than joining in the effort to effect intelligent application of science and technology so that together we *can* meet the challenges which lie ahead.

The Present and Future Economic Outlook for Beef Production

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During the last 18 months the cattle industry has been buffeted by consumer boycotts, a ban on DES, various phases and stages of price controls, skyrocketing feed grain and protein prices, double digit inflation, and marginal growth in the general economy. Prospects for the next year or two are potentially even more disruptive.

The nation's cattle herd has been building rapidly for several years as stockmen delayed selling cows and held back young heifers to expand their breeding herds in response to rising feeder cattle prices. The total cattle herd had risen to 127.5 million head at the beginning of this year, up 13 million head in just three years. And another six to eight million are being added this year. Also, the calf crop will approach 51 million head this year, up four million head in three years.

Increases in the cattle herd have not been accompanied by an uptrend in slaughter. Total cattle and calf slaughter has remained at about the same level since the mid-1960's. So there is a very large supply of feeder cattle that will support higher slaughter rates during the next few years. Slaughter will swell further as stockmen become discouraged with lower feeder cattle prices and move more of their cattle to market.

The record large feeder cattle and cow inventories will dominate the beef supply picture for the remainder of 1974 and on into 1975. Further increases in production are a certainty but the timing and magnitude of the increases are less clear. With less than 10 million cattle in feedlots for slaughter, this leaves well over 90 percent of the cattle inventory drawing upon the nation's forage supplies, particularly grass. General weather and pasture conditions and the severity of the winter will play an important role in slaughter patterns during the coming months.

The disruptive conditions over the last year are contributing to severe financial losses to cattle feeders in 1974. Most cattle feeders are still losing money. Lower fed cattle prices now are adding to the red ink. Cattle feeding is very sharply curtailed. Placements of feeder cattle have been reduced substantially. Almost three million fewer feeder cattle were placed on feed during the first nine months this year-15 percent fewer than the low level of activity a year earlier. The primary outlet for feeder cattle has been partially closed. The result is a very large buildup in feeder cattle supplies. As of July 1 this year, there were almost 16 million steers and heifers weighing over 500 pounds not on feed and not being held for replacement stock-about three million more than mid-1973.

These feeder cattle were on ranges and pastures. Added to this was a new calf crop of nearly 51 million head dropped in the spring and summer, and over two million more cows added since January 1. Now, mix in a very serious drought which began last spring in the Texas Panhandle area, and quickly spread East and North during the summer, engulfing a major portion of the cattle producing areas.

It is not surprising then that we had a very large movement of cattle from the range during the summer and fall. This movement more than offset reductions in fed cattle marketings.

The movement from the range is not limited to older and heavier cattle. Calf slaughter turned higher this spring reversing a long period of decline. Calf slaughter this summer and fall is running 50 percent higher than last year.

This situation has created some unusual price patterns. Fed cattle prices rose this summer despite larger total supplies of beef than in the spring or last year. The summer price strength was at least partly due to the low level of fed cattle supplies. But other classes of cattle did not fully share in the summer price strength. Feeder cattle prices are remaining well below the fed market, while a year ago they ran \$7 to \$10 higher than the fed market. Choice yearlings that sold for over \$62 per 100 pounds in August 1973 are now selling near \$30. The spread between Choice grade and Good grade cattle has widened as fewer Choice grade and more lower grade cattle move into the market. Feeder calf prices are now only slightly higher than yearling prices while a year ago they were as much as \$15 higher.

Last year, Utility cow prices ran about \$11 under Choice steer prices. This fall the margin has widened to \$20-\$30 per 100 pounds. Thus, the Choice slaughter steer market will not be as representative of the general level of cattle prices during the next several months as it has been in the past.

Although cow-calf producers are facing a period of lower markets, prospects appear to be improving slowly for the cattle feeder. Feed costs have advanced sharply since summer, but prices of replacement cattle have been below fed cattle prices since May. Cattle sold this fall and winter will have been purchased on a feeder market that has been about half of yearearlier prices. Cattle feeders who have been buying older, heavier cattle this summer, and feeding them for 60 to 90 days have realized a more favorable return than those on longer feeding programs. With conditions of high feed costs, lower feeder cattle prices, and a fluctuating fed cattle market, feeders who start with heavier cattle and operate a flexible marketing schedule may be in the best position in the months ahead. In the long-term, feeding of calves will probably continue to decline as continued high feed costs discourage this kind of feeding.

Tight feed grain supplies in the 1974-75 marketing year will restrict cattle feeding to some extent, but changes in feeding practices will tend to stretch feed grain supplies. Cattle placed in feedlots weighing 75 to 100 pounds more than last year would mean less weight added in the feedlot. Also, lowering marbling requirements for Federal grades could further reduce feed requirements somewhat. Thus, considering reduced feed requirements for hogs, dairy and poultry, together with changing concepts in feeding cattle, it's conceivable that almost as many cattle could be fed next year as in 1974, even with 15 to 20 percent less concentrate feed available. Smaller supplies in the first half could be about offset by an increase in the second half.

Many facets of the beef industry have undergone significant change over the past year and the composition of cattle slaughter is one of them. Since last spring, grain fed steer and heifer marketings have been a smaller proportion of total slaughter while steers and heifers that received little or no grain have made up an increasing proportion. The lack of profits in cattle feeding since the fourth quarter last year has resulted in a further decline in placements and marketings of fed cattle, despite rapidly increasing feeder cattle supplies. As a result there has been a substantial increase in the number of cattle marketed with limited grain feeding or directly from grass or other roughage. The number of these other steers and heifers slaughtered this year will be over four million head compared with less than one million last year.

Looking ahead to 1975, marketing patterns can be expected to be similar to those in the last half of this year. The current feed grain situation is not encouraging. Limited supplies and high feed prices suggest a continuing shift away from grain fed beef. But slaughter of more cows and other steers and heifers which have had little grain feeding background will be more than offsetting. Weather and range feed supplies will largely determine the total slaughter of cattle, while feed prices will hold the key to shifts in the quality of the beef.

Two distinct price levels will likely continue to prevail, with Choice grain fed beef at the top, and grass fed prices well below. Part of the burden of low prices is being shifted from cattle feeders to cattle producers. Cattle feeding later this fall and next year could turn profitable once again despite higher feed costs, if feeder cattle prices remain relatively low and the market for high quality beef perks up as expected. But increases in fed beef supplies will be slow in coming. Profits will have to be up for awhile to draw outside investors back into the cattle feeding business in the large commercial lots of the Southwest. And many smaller feeders in the Corn Belt who are harvesting a good crop may rather sell grain on a high cash market than feed it. One possible source of increased activity in custom feedlots stems from some ranchers maintaining ownership of their feeders and feeding them out to slaughter weights, rather than to sell them on a depressed feeder market. In the Corn Belt, larger supplies of frost and drought damaged feed and silage may bring some cattle feeders into the market.

Beef supplies are expected to continue higher than a year earlier through the first half of 1975 although the margin of increases may be slow. The tightest beef supply situation could occur next spring when pastures green up and cattle are moved back to grass. With really good feed conditions, prices for fed cattle could rise sharply with feeder cattle and cow prices also strengthening.

The second half of 1975 could again be a replay of the second half of this year, with fall fed cattle marketings as well as cow slaughter increasing. Total beef supplies could exceed year-earlier levels by a large margin. Fed cattle prices could weaken along with prices of lower quality cattle. Some of the price weakness in 1975 will be tempered by prospective reduction in pork and broiler output.

Herd liquidation next year? Not likely. The January 1, 1975, inventory could stand at 133-135 million head, up six to eight million head. Although many cows are being culled from the herd this year, most will be replaced by heifers which are selling at relatively low prices. Next year's calf crop will again be larger, but perhaps the rate of increase will slow. To entirely stop the growth in the herd next year, cattle and calf slaughter would have to be up in excess of 20 percent, at around 47 million head. Increases of this magnitude seem highly unlikely unless widespread drought conditions reoccur again next year. Continued sharp increases in calf slaughter for the remainder of 1974 and on into 1975 could jeopardize cattle slaughter supplies of 1976.

The Present and Future for Dairy Production

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In accepting this assignment, one question kept cycling back to me as I considered what dimensions of the dairy outlook to emphasize. That question was "Why? - Why are the veterinarians concerned with the future of dairy production?" You can probably specify better reasons than I can, but here are a couple.

- 1. Since the livelihood of many of you is pretty closely related to the size and location of the dairy industry, the future of milk production is obviously pretty close to your own vested interest.
- 2. The problems and the emphasis in research and practice that come to your profession are partly influenced by what is happening in the milk industry. Therefore, as you as a profession plan for the future, you require a perspective on key trends across the milk industry.

Initially, I'd like to make the assumption that we are talking about dairy production and the dairy industry only in the United States. But to make that assumption, I believe that we need a quick overview of where the U.S. milk industry stands relative to the rest of the world.

In this year of 1974, we will be producing almost exactly 115 billion pounds of milk in this country. That happens to be just about 15 percent of the nearly 772 billion pounds of cow's milk that will be produced in the major dairy countries around the world this year. We can note in passing here that cow's milk accounts for about 90% of the world's milk supply, with sheep, goats and some other species producing the remainder.

In the early 1960's about 20% of the world's milk supply was produced in the U.S. but two shifts have occurred in this past decade:

1. U.S. milk production has dropped by about 9%.

2. World milk production has increased by abost 20%.

Today, Russia ranks as the world's No. 1 milk producing country, contributing 26% of the world's supply. We are easily in second place and France

(9%) is a distant third. However, a number of countries that do not produce a great volume of milk do in fact produce a lot more than they can handle in their own domestic markets; these countries include several West European nations, New Zealand, Australia, and to some extent Canada. This complicates commerce in dairy products somewhat. Most countries that have dairy products to export also have price support programs in effect to protect producer milk prices. This, in turn, means that these countries, such as France and Ireland, have high consumer prices for milk products in their own countries but must provide export subsidies to move their surplus product into foreign trade. This is where the trade issue gets sticky. U.S. milk producer interests get uptight pretty quick when relatively low priced imports come in and erode what they consider to be their markets. That is why we currently hear telk about countervailing duties. The question is, "Why should we be a dumping ground for somebody else's surplus?"

It's hard to come up with a soothing answer to that question, of course. Actually, we hame pretty rigid import quotas on milk coming into this country. These are called Section 22 quotas. The rationale for Section 22 quotas is that when there is a price support program directed to a commodity, and we have a milk price support program, then it doesn't make sense to undermine the purposes of that program by permitting unlimited imports. So we have annual quotas on imports of dairy products. In most recent years, imports of dairy products into this country have only amounted to 1.5% of our total milk supply, simply because quotas have held them down to that level. Of course, there was a spurt of imports in 1973 (up to 3.5% of our supply) and this has generated a lot of reaction across the dairy industry. Initially, quotas were relaxed in 1973 and early 1974 because of a serious shortage of milk solids in this country; but ultimately, the imports of cheese and nonfat dry milk were a prime factor in the serious break in producer