## The Decade Ahead for Meat and Dairy Products

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"We would like to have you talk about the factors that are influencing the livestock market at the present time, and also factors that may influence the livestock market during the next several years. This, of course, includes both meat and milk production." So reads the charge for this address.

Yet, also, Bank of America has been told that "we would like one speaker to talk on international livestock production ..." and "the other ... to speak on livestock's place in the world food crisis ...."

These subjects cannot in fact be wholly separated. United States livestock production is a relatively minor element in national foreign trade or aid. Yet both for meat and dairy products there have been times when foreign production has been deeply disruptive. Further, foreign livestock enterprise can and often does sharply affect the American industry by means of its impact on feed utilization and price.

In consequence, these three presentations will differ mainly in terms of emphasis and there will necessarily be some overlap among them. Evaluation of the current livestock economy is undertaken with substantial humility. Prognosis over a decade ahead can be no more than an informed and reasoned estimate. That awareness of the complexity of current market analysis, awareness of the literal impossibility of prediction and awareness of the severe limitations of projection rests on long academic, governmental and commercial contact with food and agricultural industries. That basic sensitivity is further fortified by experience in managing the largest dairy cooperative and in operating a cow-calf ranch.

Even broadly to cover the assigned issues requires drastic selection and condensation of relevant data. Accordingly, emphasis centers upon the years of 1972-74 when surpluses suddenly became shortage; upon major attributes of the current and near-term future livestock economy; and upon possible long-term changes that may be important. For convenience and economy, meat and dairy industry are considered separately except with respect to determinants effectively common to both.

In the quarter century after the close of World War II, the American food and agriculture economy changed more drastically than in all its prior history. These changes in every important dimension and relationship of the livestock industries were parallel to and perhaps generated by equally pervasive

change in the economic, social and political attributes of the nation. In effect, growth of large-scale enterprise at retail and processing levels led to a tightly coordinated structure from farm to consumer. The parts of that structure in general were not and are not integrated by contract or ownership. Yet those parts fit and depend one upon another almost as if they were in fact so related.

Means of accommodation to this change differed widely among livestock producers. These were the years in which dairy farmers began to forge regional cooperatives for marketing and processing. Livestock farms in general became larger, more specialized and much more capital-intensive. Farms became far more sensitive to technological or economic changes in all parts of the American economy and, in fact, throughout the world.

Yet, despite sharp change, there was essential stability of price, cost and output relationships for more than two decades. Then, with little advance awareness by anybody, surplus grain stocks shrank to disturbingly low levels, general price inflation spread around the earth and shortly afterwards the first world-wide recession in four decades compounded these dislocations. It is only some three years ago that there were five-dollar wheat, soybean futures at \$10 to \$12 dollars, and annual food price increases of 14 to 15 percent. There were strident calls by often ig-



norant and petulant people for a new-and usually undefined-national or worldwide food policy. These were three years of sporadic-if short-lived-increases in net farm incomes. Except for intermittent and often short periods, rising farm prices for livestock in those years did not result in sustained increase in net farm income.

Today, there is marked instability at the farm level of most livestock industries. Generally, the short-term outlook is for at least one more harsh year of loss or break-even operation, and there is substantial possibility of two or three such years. Uncertainty prevails with respect to grain utilization and price patterns; to range, forage and grass conditions; to weather determinants and to purchasing power and other demand shifters. Yet, enough is known of major factors affecting costs, prices and outputs to support acceptably secure short-run outlook projections.

Total red meat production in September 1976 was about one-eighth above both 1975 and 1974 at around 3.5 billion pounds. For the three quarters of 1976, red meat output was up 7%, mainly from beef increases that offset lamb and mutton decreases.

September beef output at 2.3 billion pounds was 10% above 1975 and 22% above 1974. At 3.7 million head, 2% above 1974 and 21% above 1975, liveweight average at 1,018 pounds was 44 pounds heavier than in 1975 and five pounds above 1974.

September 1976 pork production at 1.1 billion pounds was 20% higher than in 1975 but 4% lower than in 1974. Calf slaughter dropped in numbers by 4% from the liquidation level of 1975 but was 73% above September 1974 slaughter. Liveweight average at 263 pounds was about 20 pounds below levels for 1974. The shrinkage in lamb and mutton kill continued, down from September 1975 by 15% in pounds and 18% in numbers.

In the first three quarters of 1975, 13.8 million head of cows and heifers were slaughtered against a comparable 1976 kill of 15.4 million. It is clear then that substantial liquidation of cattle is still occurring. Increased canner and cutter kill may also indicate accelerated culling of dairy herds at least for the present. Beef slaughter in 1975 rose above 11% above 1974. The cow kill exceeded 1974 magnitudes by some 50%.

Large outputs of broilers and pork are expected to offset declines in beef production into spring 1977, with total meat as much as 6% above year-earlier levels. Feeding may go down a little in 1976-77. Hog production may shade down a little from the earlier expectation of a 15-20% increase over last year. Broiler output is expected to continue upward.

With farm prices-especially for fed cattle and for hogs-down substantially, with increases of still uncertain amounts in input prices, and with localized hay and forage shortages, larger cattle marketings, either to feedlots or direct to slaughter, are anticipated through the first quarter of 1977.

Cattle price increases are not foreseen until mid-1977. Hog slaughter may be 17 to 19% higher in firsthalf 1977 than 1976. With large slaughter of beef ahead, little price strengthening is in view. All told, total red meat supplies will be lower in first-half 1977 than latter-half 1976 but still above 1976 magnitudes. Cattle numbers will continue downward in 1977, but the inventory decrease will be less than the six to eight million head drawdown envisioned for 1976. The 1977 slaughter is expected to decline by about 5%.

Present estimates indicate that feed prices will be unstable but will center around year-earlier levels with some prospect of declining in the latter part of the feeding year.

Of interest to bovine practitioners is the expectation of continued decline during 1977 in cattle numbers. With 1976 slaughter of 48 to 49 million head, the January 1977 inventory should be down six to eight million head below 1976 to a level of about 120 to 122 million head. Since January 1975, net inventory will have declined by almost 11 million head. The beef and dairy cow inventory will have dropped from 54.8 million to around 51-52 million by January 1977. The 1976 calf crop was 46.9 million head. With a normal 1977 calf crop, total slaughter would have to fall to about 41 million head in order to stabilize the inventory. Accordingly, there is very little chance that a turnaround in cattle numbers can occur before 1978.

Dairy farmers, all told, have had a good income year up until the fourth quarter of 1976. Output may exceed 1975 by 3%, the largest rise in 25 years. While numbers declined by 1%, heavier feeding has induced about a 5% upsurge in milk production per cow. Again, only 153.8 million beef cows and heifers that had calved were in inventory on July 1, 1976, down 7% and 5% from 1975 and 1974. Beef replacement heifers at 6.5 million head were down 9 and 6%, respectively. On the contrary, milk cow numbers at 11.1 million head had declined only slightly. And milk replacement heifers at 3.9 million head were up slightly from 1974 to 1975. Accordingly, in summary, there is little capacity quickly to expand beef numbers, and substantial capacity to expand milk cow numbers and milk output. Again, beef cattle numbers will decline in 1977, but less so than in 1976.

Nonetheless, there is reason to anticipate improvement in cattle prices for 1977 as a whole, with some aggregate profit in feeding, and an increase in fed cattle kill to about 60% of total slaughter. With strong red meat demand, the total cattle slaughter for the first half of 1977 is expected to be about 5% below 1976.

Presently, beef consumption is at or near record levels. Retail prices are about 20 cents per pound below 1975 levels. Choice steers were down by \$10, feeder prices have declined less, but the farm-retail spread is about 10% above year-ago levels. USDA projects a 4 to 6% decline in beef production this winter. Its summary estimate is moderate gain in

slaughter prices, improving above \$40 by mid-1977, with feeder cattle and cow prices improving slowly and at a lesser rate.

Putting it all together, with respect to my own operation, I have decided to cull normally and to keep calves, not so much in response to sophisticated projections but rather because I have grass for which there is no better use.

As noted, dairy farmers had a good price year up to mid-August 1976, with an average farm price up about one dollar per hundred-weight above 1975. Cash farm receipts will be at or near \$11 billion. Also as noted, production may well be 3% higher than in 1975, the highest increase in a quarter century. Concentrate feeding rose sharply, as did milk production per cow.

Output of manufactured dairy products, especially cheese, has increased greatly. Fluid milk sales have thus far held at about 1975 levels. Stocks of dairy products have risen sharply in the last quarter year. Recently, product markets, in effect, settled at price support levels. The federal government began to purchase cheese in the first week of November 1976. Competent analysts consider that, with moderate softening in the feedstuffs markets, dairy farmers may continue to feed more heavily than in recent years. Weakness in the cow market may inhibit any acceleration of culling. Accordingly, it is generally expected that farm prices for milk will remain at or near support levels. Yet there is no general expectation of any precipitous decline in numbers or in production per cow during the remainder of 1976. The milk-feedprice ratio remains fairly favorable. Relative shortage of hay and silage may in fact further enhance grain feeding.

Thus, there may well be unusually high total stocks of dairy products by the commencement of the 1977 spring flush. If the expected improvement in the market for slaughter cows materializes by mid-1977, declines in cow numbers and in milk production may then occur. In the six months ending September 1976, retail prices of meats, poultry and fish had declined nearly 3%. Dairy product prices rose by nearly 9%. There is reason to believe that farm prices may hover around the October 1, 1976, support price of about \$8.26.

Historically, milk cows are retained when beef prices are low. Cow prices at present and until the spring of 1977 offer little incentive to sell dairy cows for slaughter. Production per cow in September 1976 was up two pounds per day above 1975. That rate of increase sustained for one year would add nearly eight billion pounds to annual milk production. Per cow output is affected by feeding rates for concentrates, itself affected by the milk-feed price ratio; by genetic improvement; by heat and humidity; and by roughage quality. Variability in these determinants affects cow numbers.

National milk production in 1976 will be apt to range from 119 to 120.4 billion or perhaps even a little higher. Annual output is adjusted by subtracting farm use and adding net imports and carry-in stocks to estimate commercial supply. Subtraction of projected use in fluid and products outlets yields commercial and governmental stocks estimates.

While feed supplies could quickly return to surplus status, feed prices compared to past levels will remain relatively high during 1977. Our people think that downward pressure on milk production may therefore occur over the long term. With much land not effectively useable for food crops, forage and pasture may become more important in animal rations. Substantial change in herd management may thereby be required. Deceleration in cow numbers and in milk production may be fortified by political difficulties in maintaining dairy price support programs.

For the long term, USDA projects that food production capacity is not really limited when set against visible future demands. In fact, the department has concluded that this nation "could provide an adequate diet for several times as many people ...." Yet, wisely, it is stressed that this is only a physical capacity, a potential that is "not ... unattainable, only uneconomical." There is immense latitude for long-term increase in supply of food and fiber, more responsive to relative prices than to known or prospective technology.

Assuming population increases of about 0.6% annually, real per capita income at 2.7% and export at 3.5%, USDA estimates that the annual increase in commercial demand for American farm products will range from a low of 1.2% to a high of 2.1%. Acknowledging the inherent troubles of long-run guessing, it is estimated that 1985 per capita consumption will exceed 1974 magnitudes by 7% for beef and veal and by 2% for pork. Aggregate consumption changes are set at 20% increase for red meats; 23% for chickens; 25% for turkeys; 9% for eggs, with a slight per capita decrease offset by rising population; and an 8% increase for milk despite a projected 5% decline in per capita consumption. Corn and barley utilization are estimated to rise by 20%; wheat by 27%; rice by 30%; and a small decline in oats.

Specific commodity projections are especially difficult because of close substitutability. Yet with baseline price assumptions of \$55-\$57, and a price-cost ration of 180, USDA estimates a physical potential for increase in beef-veal from 23.5 billion pounds in 1974 to 38.2 billion pounds in 1985. That appears to be a reasonably valid estimate of physical possibility despite substantial land and crop conversion assumptions. The economic potential is tricky-dependent on such tricky variables as weather; grain supplies and prices; range, forage and general grass conditions; real purchasing power levels and distribution; and the consistency of livestock product outputs.

Some livestock economists, aware that long-term change is generated by short- and intermediate-term decisions, consider that foreign ranges of feed and forage costs should lead to per capita consumption ranging from 135 to 150 pounds yearly by 1980. Many

analysts see substantial recovery in cattle numbers by late 1978 and maintenance thereof for at least two years thereafter.

There is far greater uncertainty with respect to longer-term dairy prospects. Many dairy people believe that present trends will continue, that by 1986 one-half of present farms will be gone; that two-thirds of dairy farms with less than 30 cows will have disappeared; that one-half of present manufacturing facilities will have been closed; and that production of Grade B milk will be virtually eliminated. It is expected that enterprises in all segments of the dairy industry will be fewer, larger, more specialized and business-oriented, more highly coordinated with needs of customers, more capital-intensive and more competitive.

There are dairy people who hold that the present output of over 120 billion pounds will shrink to 100 billion pounds and that cow numbers will drop from 11 to 8 million head by 1985. This seems far too pessimistic an estimate. Even assuming a drop of 5% in annual per capita consumption, which is probably too high, USDA estimated that population increase would generate an 8% increase in total consumption. Further, it is not the intention of dairy farmers that consumption per capita shall so drop. Dairy farmers cannot mount the promotion of other food and beverage industries. Yet their programs are expanding and are improving in impact.

As a summary statement, there should be no compelling basis to foresee shrinkage or nogrowth in the dairy industry. Rather, steady progress appears to be a valid projection, albeit, and for clear reasons, at a lesser rate than is forecast for beef.

Certainly the bovine products producers have accommodated well to massive change in the past three decades. They have served consumers better than they have served themselves. There will be equally drastic adjustment required by economic and technological determinants that now exist but have not come into full play. And there will be new determinants not now visible. There will be, as there now are, hostile groups who are often as witless as they are strident. So no rational analyst will project a pathway unmarked by harsh obstacles.

Such analysts will, I think, soberly project an economic vista that will be deeply difficult for a year at least, and for two or three years as a not unlikely alternative. But these days will end.

There is every basis to expect growth and fair prosperity in the years ahead.

This, to close on a personal note, is why I work so hard on a ranch that does not at the moment bring me profit. This is why the farmers of Associated Milk Producers work so hard in the face of prolonged adversity. Besides, I think we enjoy and take pride in ranching and farming.

I saw a while ago a short heading, "Your Veterinarian, Friend or Foe?" With a veterinarian, and a female one, in my immediate family, with AMPI farmers and myself dependent on veterinarian services during cold nights and hot days, I naturally say "friend." Which does not mean that fees are inconsequential. There will be solid and growing business based on bovine animal production. Our friendly veterinarians will continue to be a major element of major, vital and growing industries.

As best one can project, even the short-term outlook through the summer of 1977 is for decline in beef numbers. There is good prospect for expansion in 1978. Certainly there is good prospect for long-term growth in beef production at a rate higher than the increase in population. The dairy prospect is for heavy production and stocks with prices at or near support levels through next summer. I cannot concur in the view that drastic decline in dairy cow numbers and milk production will occur in the long-term.

Yet, a final caveat is clearly necessary. September 1976 milk production was the highest on record. Higher farm prices and the best milk-feed price ratio in many years led to substantial increase in output per cow and an increase in national production in the first three quarters of 1976 of 4.1% above 1975. The price impact showed itself sharply in October and November. Now for the first time the American corn crop is estimated at more than six billion bushels. Other feeds except for soybean meal are generally abundant. World grain output is guessed to be more than 9% above last year. Accordingly, the basis for more profitable beef feeding may soon appear. The inducement for continued feeding of dairy cows may well be generated. Yet, honesty requires explicit hedging of estimates with respect to long-term projections. Right now there is uncertainty in world markets. We have learned that two short-crop years bring sharp grain price increases. We know also that two long-crop years can bring a return of surpluses. What is written with respect to long-run projections must be tempered by this awareness.