

Developments in Production & Consumption of Livestock and Meat in the World.

*by Elmer L. Menzie**

The relatively high prices for beef cattle, received by producers in Arizona and elsewhere in the United States, in the past months, have been reflected in higher prices in most other major world markets. An exception was Argentina where prices in the late months of 1968 and early 1969 were relatively lower. Since the United States is a major producer, consumer, and meat importer, it is not surprising to find this similarity in price movements.

Production of beef has been increasing fairly continuously in the United States for a number of years, but it has not maintained pace with increasing demand resulting from higher incomes and population growth. While imports have helped to fill some of the gap, artificial barriers tend to keep external supplies from flowing freely from other areas of the world. As a result, market prices tend to be higher in the United States than in some other producing areas.

World Livestock Numbers Increasing

World wide, cattle numbers have been increasing fairly steadily since World War II. Estimates for 1968 of nearly 1.2 billion head were up over 18 percent from the 1956-60 average.¹ Numbers increased at an average of approximately two percent per year until the last two or three years when the rate declined to less than one percent. Part of the decline in growth has been due to reductions in dairy herd numbers and part to disease or drought conditions in Africa and South America.

World hog numbers exceeded 511 million in 1968, up about 19 percent from the 1956-60 average. While fluctuations in the growth of the hog population are much more rapid than for cattle, the upward trend in numbers has been equally consistent during the past 25 years.

Sheep numbers have also increased but at about one-half the rate of cattle and hogs. The world total was estimated to exceed one billion in 1968 which was nearly nine percent above the 1956-60 level. Numbers of sheep in the United States have been declining fairly steadily and were down about 50 percent in the past ten years. Numbers in Western Europe have also declined slightly.

In 1968 the United States was estimated to have had about 9.4 percent of the world's cattle, 10.8 percent of the hogs, and 2.2 percent of the sheep and lambs. The United States has declined relative to other countries of the world, in terms of both hog and sheep numbers, during the past ten years. There does not appear to have been much change in the distribution of cattle in the various regions of the world, but both South America and Western Europe have increased their share of hog numbers.

Total meat production, in 42 major producing countries, in 1968, was estimated to be nearly 130 billion pounds (carcass weight basis), an increase of about 34 percent over the 1956-60 average. The growth rate was almost double that of either animal or human population growth. This would suggest fairly significant improvements in productivity and in the quantity of meat consumed.

Productivity Levels Differ Significantly

Neither the growth in livestock numbers nor the increases in productivity are evenly distributed throughout the producing countries of the world. The distribution of

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¹Data taken from issues of *World Agricultural Production and Trade*, Foreign Agricultural Service, U.S.D.A., Washington, D.C.

meat production is significantly different from the distribution of animal numbers due to fairly extreme differences in productivity levels. Some of the range in productivity is due to variations in animal weights and some to the output of fewer animals in relation to the basic herd.

The United States and Western Europe tend to have the highest levels of productivity. For example, the United States produces nearly 200 pounds (carcass weight) of beef and veal per cow and calf in the inventory. Eastern Europe and the U.S.S.R. produce less than 100 pounds and South America about 60 pounds. Mexico, with more than one-quarter the number of cattle and calves in the United States, produces less than five percent as much beef and veal. If data were available for Africa and Asia, with about 50 percent of the world's cattle, the productivity levels there would undoubtedly be among the world's lowest. A similar situation exists in production of pork, lamb, and mutton. Brazil, the major South American producer, turns out between 10 and 15 percent as much pork as the United States with a hog inventory estimated to be 20 percent larger.

Productivity changes in the livestock industry have tended to be slow even in the developed countries, except perhaps for pork. While the developing countries of the world have a major share of livestock inventories, the greatest source of increased production is, and likely will remain, in the more developed areas of the world. These are also the areas with the major markets since meat tends to be a relatively high cost source of food. Transfer costs, health regulations, trade restrictions, and other factors tend to restrict the flow of meat from developing areas to those with more lucrative markets. Since markets are generally poor in developing countries, there is, therefore, less stimulus for increased production.

United States Consumption Highest

Estimates indicate that the United States alone consumes the equivalent of about one-quarter of the production of red meat from 42 of the major world producers. Western Europe consumes about the same amount. Per capita consumption in the United States in 1967 was 178 pounds, whereas in Japan total red meat consumption was 20 pounds per capita. In most of the developing countries

Per Capita Consumption, All Meat, In Specified Countries

Country	Average 1956-60	1963	1965	1967
<i>Pounds</i>				
United States	159	169	167	178
Mexico	42	39	40	37
Argentina	218	217	179	212
Brazil	65	53	52	51
France	123	143	151	159
United Kingdom	132	149	140	138
USSR	62	69	72	71
Japan	8	13	16	20
Australia	228	217	209	192

of the world, with a major part of the population, consumption is well below 100 pounds per capita.

While some further increases in per capita consumption of meat can be expected in the United States, the rate of growth will undoubtedly be reduced. As incomes continue to rise, the major emphasis will likely continue to shift to quality and service rather than significantly increased quantities. In Western and Eastern Europe, however, there is still room for substantial expansion in per capita consumption. As incomes grow, demand should continue to be strong.

Government Policies to Stimulate Meat Production

Favorable prices in the United States will stimulate production both through a shifting of resources and increased productivity. If the growth in demand tapers off as well, it can be expected that supplies will increase relative to demand in the near future. While Europe will likely be a major growth market, it will continue to try even harder to supply its own needs. Serious unfavorable imbalances in other sectors of European agriculture will provide a strong incentive to shift resources to livestock production. Government policies are already directed to stimulate meat production. Similar policies are being followed in other livestock producing countries such as Australia, New Zealand, and Argentina.

It would appear that meat producers in the United States can continue to expect relatively strong markets for the near future. However, the indications are that supply-demand relationships can be expected to shift as production expands in response to the strong incentives originating both in markets and in government policies of producing countries. Developing countries present potential markets for the more distant future, but the real capacity for production within many of these countries has hardly begun to be exploited. In the foreseeable future at least, these areas are likely to have more potential as producers of increased meat supplies than as growing markets, so far as the more developed countries of the world are concerned.

Total Meat Production in Specified Regions (Carcass Weight Basis)

Country	Average 1956-60	1965	1966	1967	1968 ^a
<i>Million Pounds</i>					
North America	30,992	36,251	37,333	39,042	40,347
United States	27,215	31,535	32,622	34,238	35,275
South America	12,470	13,173	14,170	14,750	14,980
Europe					
Western	25,755	31,068	32,200	33,190	33,143
Eastern	7,099	9,148	8,881	9,419	9,625
USSR	12,220	15,850	17,090	18,760	18,940
Oceania	4,485	5,435	5,494	5,458	5,885
Total, 42 Major Producing Countries	96,650	116,025	120,718	126,184	129,520

^a Classified as preliminary estimates.

Source: Foreign Agricultural Service, World Agricultural Production and Trade USDA, Washington.