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WORLD MEAT OUTLOOK: DEMAND PERSPECTIVES

(By James E. Nix, World Food and Agricultural Outlook and Situation Board,
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Meat production for both the United States and the World¹ will reach record-high levels in 1980. But several developments around the world this year do not favor the livestock and poultry industries. Poor growing and harvesting conditions in several countries led to reduced concentrate feed production and caused poor grazing conditions.

These reduced feed supplies are causing a sharp increase in the cost of feedstuffs. Higher feed prices, combined with the rising cost of other inputs, are putting livestock and poultry producers in many countries in a severe cost-price squeeze. This will result in a downward adjustment in total meat production during 1981 in some countries, including the United States.

Demand for meat in some countries is being adversely affected by poor economic growth. This is serving to hold down meat prices and further contributes to the cost-price squeeze on producers. Demand in some countries, however, continues to be strong and per capita meat consumption remains on the rise.

WORLD PRODUCTION

World meat production will probably rise again in 1981 despite reduced feed production in sharply higher cost of feeds. Production rose this year as the increase in the output of meats other than beef more than offset a decline in beef production. The production mix will likely shift in 1981, however, as beef and veal production begins to increase, poultry output continues to rise, and pork production slips. Production of lamb, mutton, and goat meat probably will not change much.

Beef and veal production to rise

After slipping lower every year since 1977, world production of beef and veal may rise in 1981. As in the United States, cattle herds are being rebuilt in many countries. Cattle inventories at the beginning of 1981 are expected to be larger than a year earlier in the United States and Canada while the herd in Mexico shows very little change. This should result in an increase in North American beef production during 1981.

Much change in the level of beef and veal production in South America is unlikely during 1981. Production in Brazil may be up as the cattle herd continues to grow, but it is likely to be lower in Argentina.

¹ World inventories and production as used in this paper include estimates for the major producing countries. Estimates are not available for some countries.

Higher levels of output in some of the smaller producing countries could result in a small increase in South American beef and veal production.

Cattle inventories in Australia and New Zealand at the beginning of 1981 may be near to a little larger than a year earlier. While Australia has had a severe drought this year which slowed the turnaround in its cattle herd, New Zealand has had excellent pasture conditions. The buildup in cattle numbers in New Zealand is expected to be very small, and production in 1981 may not quite match the 1980 level that was favored by good conditions and heavy slaughter weights. Beef and veal production in Australia next year probably will be little changed from the 1980 level.

In the European Community—EC—beef and veal production rose slightly this year but it is likely to be about the same to down slightly in 1981. France, West Germany, and Italy—the largest beef and veal producers in the EC—may have a little higher level of production in 1981.

It appears there has been a concentrated effort in the Soviet Union to maintain cattle inventories despite feed shortages. Beef production has suffered and the 1980 level of output will be down from a year earlier. While the cattle inventory may still be larger than a year earlier at the beginning of 1981, current prospects for feed supplies suggest that 1981 beef and veal production may once again decline.

Pork production likely to decline

High feed cost and poor producer returns are resulting in cutbacks in pork production in many countries. This is likely to result in a slight decline in world pork production in 1981, the first year-to-year decline since 1976.

Pork output in North America will be down as a result of lower production in the United States, Canada, and Mexico. This follows very high levels of production in 1980 that led to lower hog prices and financial losses to producers.

In South America, pork production will probably be up again in 1981 as Brazil, the major producing country, continues its strong expansion.

EC pork production is expanding again in 1980 with increases occurring in all member countries except the United Kingdom and Ireland. Another increase in total EC pork production is expected in 1981.

Soviet pork production will be down this year. Inventories of hogs and pigs at the beginning of 1981 will be down from a year earlier reflecting shortages of feeds this year. Current prospects for feed supplies suggest that the Soviets will have trouble with feed availability again in 1981. If the feed shortage is as severe as now seems likely, it is likely that pork production in 1981 could slip further from this year's depressed level.

Japanese pork production will increase about 5 percent this year following an 11 percent increase in 1979. Pork stocks have been up and prices down and steps have been taken to reduce stocks and the breeding inventory. For 1981, it now looks as if pork production in Japan will remain near to slightly above the year-earlier level,

Poultry production continues to rise

Despite sharply higher feed costs in 1981, it appears as if world poultry production will once again expand next year. The 1981 expansion, however, is not likely to be as large as the 1980 growth. Higher levels of output are expected in North America with the United States, Canada, and Mexico all showing increases. Production increases are also expected in South America. In Japan, poultry production likely will continue to expand in 1981.

Most countries in the EC are expected to have higher levels of poultry production in 1981, pushing the EC total above the 1980 level. Most other European countries are also likely to expand poultry production in 1981.

Poultry production in the U.S.S.R. during 1980 has been greater than last year despite shortages of feed and reduced production of other meats. Given the Soviet emphasis on poultry production, it may increase again in 1981. However, if Soviet feed supplies are as limited as seems likely now, poultry production may decline next year.

WORLD CONSUMPTION AND TRADE TRENDS

Per capita meat consumption—red meats and poultry meat—in most countries continues to increase, but few countries have a level of total meat consumption per person that approaches that of the United States. Only in Argentina and Australia is per capita meat consumption as much as 90 percent of the level of consumption in the United States. In New Zealand, meat consumption per person is just over 85 percent of the U.S. level, in Canada it is about 80 percent, in the EC about 70 percent, less than 33 percent in Japan, and only about 25 percent in Mexico.

In the past two decades, per capita meat consumption in the United States rose over 40 percent. Australia and Argentina had higher levels of meat consumption in the early 1960's than did the United States. But the growth in consumption in these countries since then has been much less than in the United States, rising less than 15 percent since 1961. Growth in many other countries has been even greater than in the United States with countries like Japan showing about a sixfold increase in the last two decades, the EC up about 60 percent, Mexico almost doubling, and several others showing more than a 200-percent rise.

From the low levels of consumption relative to that of the United States, there is expected to be continued sharp increases in meat consumption in many countries. With rising populations and further increases in per capita consumption, there will be continued pressure on the world's capacity to produce meat to supply this demand.

This rising demand has implications for trade patterns. This year, some sizable changes in the level of meat trade between selected countries have been noted. The Soviet Union has been a major purchaser of meat this year in an effort to offset some of its decline in internal production. The sharp rise in imports by the Soviets has provided a much different trade pattern this year and much uncertainty remains about future level Soviet imports.

Beef trade has been down substantially this year reflecting tight world supplies. Beef imports by the United States, by far the world's largest importer of beef, will be off around 12 percent this year. Beef imports by all importing countries combined are also likely to be off about 12 percent. While world beef production may be up a little in 1981, there is not likely to be much rise in beef trade. Beef and veal imports next year by the United States are expected to remain near the 1980 level.

FEED SUPPLIES AND PRODUCTION COSTS

Feed supplies and prices have had a significant impact on meat production in recent years and will continue to do so next year. Large supplies of feed grains and soybeans at prices favorable to livestock and poultry producers contributed to the record-high levels of meat production this year. But this summer's drought in the United States and developments around the world are now dramatically changing this situation.

In 1979-80, U.S. feed grain production was 233.9 million metric tons, almost 8 percent larger than a year earlier. Based on conditions through October 1 of this year, the 1980-81 feed grain crop is estimated to total only 192.4 million metric tons, almost 18 percent below the crop of a year earlier. However, with large carryover stocks, the total feed grain supply is down only 13 percent.

Export demand for feed grains has been strong and is expected to continue. Domestic feed use will be down this year but it will still be relatively high. Thus, the strong export demand combined with a continued high level of domestic use is drawing down stocks and pushing feed grain prices higher. At the farm level, corn is expected to average \$3.30 to \$3.75 per bushel during 1980-81, compared with \$2.50 the previous year.

The 1979-80 soybean crop of 2,268 million bushels was record large and 21 percent larger than a year earlier. But this summer's drought reduced this year's soybean crop and as of October 1 the 1980-81 crop was estimated at only 1,757 million bushels, 23 percent less than last year's crop. But with record large stocks at the beginning of the year, the total supply will not be down quite as much as that implied by the production decline. The export market for soybeans and soybean products also remains strong. Exports rose in 1979-80, but could slip this year depending on soybean production in some of the other major exporting countries.

The smaller crop and continued strong demand, both domestically and for exports, is resulting in sharply higher prices. Soybean meal—44-percent protein, Decatur—is expected to average around \$250 per short ton during the 1980-81 crop year. This compares with only \$180 per ton a year earlier and \$190 per ton in 1978-79.

The sharply rising prices for feed grains and protein meals are pushing livestock and poultry feeding costs much higher. Prices for other production inputs also continue to rise and they are expected to average higher in 1981 than they have this year. This means that the cost of producing meat in 1981 will be substantially higher than this year.

U.S. MEAT PRODUCTION AND CONSUMPTION

Large changes in meat supplies during the last 2 years have had a major impact on livestock and poultry markets. Recently, there have been some major shifts in types of meats available to consumers and the total supply has reached record-high levels. Production levels and the impact on patterns and levels of consumption are examined below.

Meat production declining from record-high levels

Total U.S. meat production was between 51½ and 52 billion pounds from 1976 through 1979. This year, total meat output may exceed 53 billion pounds, up 2 to 3 percent from a year earlier. At this level, 1980 output would be up about 29 percent from the 1965 level and a little over 11 percent greater than in both 1970 and 1975. Total meat output in 1981 is expected to decline but it may still exceed 52 billion pounds.

This year's record-high level of meat output will be the result of sharp increases in pork production and a little larger poultry production combined with beef output near last year's level. Pork production in 1979 was up over 15 percent from the year earlier and a 7-percent rise is expected for this year. Pork production in 1980, however, saw sharp rises during the first half of the year and year-to-year drops during the last 6 months. The expected 1980 pork output would be record large and over 40 percent greater than the low level of production in 1975. Current indications are that a sharp decline in pork production is likely next year.

Total poultry production rose almost 11 percent last year as both broiler and turkey output rose. This year's output probably will be up about 2 percent as a result of sharp increases during the first half of the year. But, because of a severe cost-price squeeze on producers from mid-1979 through mid-1980, production is being cut. Second-half 1980 poultry output will be lower than a year earlier.

Poultry production is expected to increase again in 1981 but the higher feed costs will limit these gains. Year-to-year increases in poultry meat output are likely to be larger during the last half of 1981 than during the first half.

Following 1979's large decline of over 11 percent in beef production, the 1980 output may be about unchanged from the year earlier. First-quarter 1980 beef production was down 5 percent from a year earlier, but production has been greater since. For 1981, beef production is expected to about equal the 1980 level. With production in each of the years 1979, 1980, and 1981 being at about the same level, they would all be about 17 percent less than the record-high production in 1976.

These production situations for the various types of meats have resulted in very large total meat supplies this year. First-quarter total meat production was 6 percent greater than a year earlier and second-quarter production was up 7 percent. These large increases in production were significant in the weakness in livestock and poultry prices this spring.

Total meat output gains slowed this summer. Third-quarter total meat production declined seasonally and was near the year-earlier level. This was different from the situation of last year when third-

quarter production rose seasonally and from a year earlier. This fall, total meat production will increase seasonally but will be lower than a year earlier.

Total meat output for 1981 is expected to be down from this year's level. First-quarter production may be near the year-earlier level as increases in beef production almost offset lower pork production and poultry production rises slightly. Total meat output next spring, however, is expected to drop substantially below the record-high 1980 level as a result of lower red meat production. During the last half of 1981, red meat production is likely to remain under the July-December 1980 level but poultry production may be larger. This is expected to result in a slightly lower level of total meat output than that of this year. For all of 1981, total meat production may be down 1 to 3 percent from the record high output of this year.

Meat consumption also record high but slipping

In first quarter 1979, per capita meat consumption—retail weight basis—was down a little from a year earlier. It was during this period when a sharp upward spiral in meat prices got underway. Then during the spring quarter, as pork production increased sharply, per capita meat consumption rose a little above the year-earlier level. Year-to-year increases in per capita consumption continued during the last half of 1979, and meat prices weakened.

At the beginning of this year the situation was considerably different from the previous year. Per capita meat consumption rose above the year-earlier level and was a record high. This continued through the spring and meat prices dropped below the year-earlier level. But this summer per capita meat consumption slipped to about the same level as a year earlier. With pork supplies dropping from the year-earlier level this fall, per capita meat consumption will be lower than during October-December 1979. For all of 1980, per capita meat consumption will be record large and may exceed 212 pounds.

In 1981, per capita meat consumption will decline and for each quarter it probably will be below the level of the previous year. The largest declines are likely to occur during the spring which could be a period when strong upward pressure on meat prices develops. By the end of 1981, per capita meat consumption may be only slightly under the level of this fall. Per capita meat consumption for all of 1981 will be down from the record-high 1980 level but may still be near the 1976-78 level.

Poultry accounts for higher percentage of meat consumed

During the past decade there have been some large year-to-year shifts in the types of meats consumed in the United States. Cyclical changes in production have been the primary cause of these changes in consumption but net trade in meats has made a minor contribution. However, there has been a general trend of poultry accounting for a larger share of the total meat consumed.

As beef consumption rose in the 1970's, it accounted for a larger proportion of all meats, increasing from about 41 percent in 1970 and 1971 to 46 percent in 1976. It has since declined and in 1980 may account for around 37 percent. Per capita beef consumption may decline slightly in 1981 but, with the sharp drop in pork consumption, beef may account for almost 38 percent of the total,

Pork consumption as a percent of total meats has fluctuated more than either beef or poultry. It dropped from over one-third in 1971 to just over one-fourth in 1975 and 1976 and, with the large available supplies of this year, it could once again account for almost one-third of the total meat consumed. In 1981 as pork production drops sharply, pork may account for around 30 percent of the meat consumed.

Red meats accounted for over three-fourths of total meat consumption in the early 1970's. In the mid-1970's, red meats' share of total consumption began to slip and then became more pronounced in 1978 and 1979 when beef supplies dropped sharply. This year, red meats may account for almost 71 percent of the total but this will probably drop to under 70 percent in 1981.

With poultry production rising during the decade of the 1970's, it accounted for a larger share of total meat consumption. Both broilers and turkeys have gained a larger share of the total and poultry may account for about 29 percent of the meat consumed this year and over 30 percent in 1981. This compares with less than 24 percent in 1970 and 1971.

DEMAND PROSPECTS

The effect that various factors have on the consumer demand for meats is difficult to measure, particularly when viewed in the short run. The primary determinants of the long-run demand are consumers' tastes, preferences, attitudes, and incomes. Current incomes and relative prices of other products affect short-run demand. When the prices for many goods are changing rapidly as has occurred during the past year, it is difficult to measure the consumer response and the effect it has on the demand for any one product.

One approach to examining the demand for meat is to look at incomes, savings, and expenditures for various goods. This approach does not give conclusive evidence about either the level or changes in the demand for meats but at least it gives some indication of whether it is strengthening or weakening.

Growth in consumer incomes to strengthen

Per capita disposable income—current dollars—rose rapidly during the last decade, far outpacing the rate of increase in the previous two decades. Real incomes, however, rose at a much lower rate than current dollar incomes and the rate of growth during the 1970's was near that of the 1960's. Rising incomes and a strong preference for meat generated a strong demand for meats as evidenced by a general upward trend in per capita meat consumption at higher prices.

Per capita disposable income increased 10.9 percent—current—and 3.8 percent—real—during 1978. Incomes continued to rise substantially in early 1979, but then the growth began to slow with real income actually dropping below the year-earlier level by late in the year. For all of 1979, per capita disposable income rose 10.5 percent—current—and only 1.5 percent—real. As the growth in income tapered off in 1979, the demand for meat weakened. Incomes weakened further this spring when current dollar incomes were rising at an annual rate of only 3.4 percent. Meanwhile per capita disposable income in real terms declined at a 6.8-percent annual rate. This contributed to a weak demand situation for meat this spring.

The impact of the decline in economic activity on the demand for meat was lessened this summer by record-large cost-of-living increases in Federal transfer payments. Per capita disposable income during the third quarter rose at an estimated annual rate of 11.2 percent—current—and 1.5 percent—real. Fourth-quarter income growth is expected to slow from the summer quarter level but it is expected to be much stronger than in early 1980. For all of 1980, per capita disposable income is expected to be up around 9 percent—current—but down over 1 percent—real.

In early 1981, the outlook for consumer incomes does not suggest much strength in the demand for meats, compared with late 1980. There will, however, be some seasonal demand shifts occurring during this period. Per capita disposable income in current dollars is expected to rise at an annual rate of under 10 percent during the first half of the year but then pick up and rise at a rate of over 10 percent in the last half of the year. Real per capita disposable income, however, likely will be down during the first half of the year but show its strongest growth since 1978 in the last half of the year. This would suggest that the demand for meat will strengthen toward mid-1981.

Next summer, the demand for meat may again be strengthened by increased Federal transfer payments. This expected 1981 income situation suggests stronger demand for meat next year than existed during much of 1980. The real strength, however, will depend on how consumers allocate their incomes to various goods, services, and savings.

Shifts occurring in personal consumption expenditures

Personal consumption expenditures—PCE—for all goods and services have grown steadily during the past 2½ years, rising 11.6 percent in 1978 and 11.8 percent in 1979. They continued higher this year, rising about 12 percent during the first quarter and 10 percent during the second. While up from the year earlier, second-quarter total expenditures were down slightly from the level of the first quarter but began rebounding this summer.

Within the total expenditures some shifts occurred that probably affected the demand for meat. PCE for durable goods rose 12 percent in 1978, but only 6.3 percent last year. As the economic situation deteriorated during 1979, year-to-year increases in PCE for durable goods fell from over 15 percent during the first quarter to less than 2 percent in the fourth quarter. PCE for durables were up about 3 percent during the first quarter of this year but this spring they dropped 6 percent below the year-earlier level. PCE for durables also picked up this summer.

It often has been hypothesized that during a recession when consumers shift away from durables they spend more for meats. This does not seem to have been the case in 1980. For instance, this spring when total personal consumption expenditures rose about 10 percent above the year-earlier level and expenditures for durables declined 6 percent, meat expenditures declined about 4 percent. During the last half of 1980, however, meat expenditures are rising a little above year-earlier levels. How consumers allocate their incomes during the next year will have a major impact on the demand for meat. If there is a strong recovery in expenditures for durables this could hold down the demand for meat. On the other hand, if incomes continue to rise and

durable expenditures remain low, then this could help strengthen the demand for meat.

PCE for nondurable goods rose faster than those for durables in 1979 and continued to rise this year when durable expenditures fell. During 1978, PCE for nondurable goods rose 10.2 percent but in 1979 they rose 12.5 percent. They rose over 14 percent during the first quarter of this year and continued almost 13 percent above the year-earlier level this spring when durable expenditures fell almost 6 percent.

Changes in PCE for various categories of nondurable goods have been vastly different. During 1978, combined PCE for two energy related categories of goods—gasoline and oil plus fuel oil and coal—increased 8.5 percent while PCE for foods rose a little over 10 percent. The situation was much different last year when sharply rising petroleum prices pushed PCE for the energy related goods up sharply. PCE for the energy related goods rose almost 29 percent last year compared with an increase of 11.2 percent for food. Increases for the energy related goods rose faster during the latter half of the year than in the first 6 months, up almost 37 percent in the third and fourth quarters compared with about 18 percent during the first quarter. They continued to rise sharply this year, up 43 percent in the first quarter and 37 percent in the second quarter.

This sharp takeoff in PCE for the energy related goods coincides closely with the declining meat prices which began last spring. Price increases for petroleum products have slowed and consumers have adjusted to the higher prices by reducing their purchases of some of these products. This should slow the increases in PCE for energy related goods. With consumers having made some of these adjustments, it is not expected to have as much weakening effect on the demand for meat in the coming months as it has had in the past year. Year-to-year increases in PCE for the energy related goods likely will be much smaller next year than they were this year. Thus, with incomes continuing to rise, this will relieve consumers of some of the pressure they have felt in the past year as they had to allocate an increasing share of their income to these goods.

PCE for services have also been increasing. These increases, however, have been more stable than those for either durable or nondurable goods. Also, they have increased at a slightly higher rate than PCE for all goods and services.

Personal savings low

To help maintain the high level of PCE in late 1979 and early 1980, consumers drew down personal savings. Personal savings increased over 10 percent in 1978, but only 2.5 percent last year. During the latter part of 1979, savings were dropping below the year-earlier level with the fourth quarter showing over a 16-percent decline. Personal savings during the first quarter of this year rose some from the fourth-quarter 1979 level, but were still almost 19 percent lower than a year earlier. Savings picked up this spring as consumer attitudes about the economic situation began changing and were near the level of a year earlier. Savings began to slip a little this summer from the level they had attained earlier in the year. The level of personal savings could affect the demand for meat but it will probably have more impact on the purchases of durables than on meats.

RETAIL MEAT PRICES

During 1980, only moderate increases in retail meat prices will be registered. The record-large meat supplies and a weaker demand situation than existed in 1979 will be responsible for these moderate increases. The Bureau of Labor Statistics—BLS—index of retail beef prices may rise around 6 percent this year following the 27-percent increase registered last year. In 1981, the BLS index of retail beef prices will likely average 12 to 16 percent above the 1980 level.

Sharpest increases in meat prices next year are likely to be for pork. The BLS retail pork price index rose only 2 percent in 1979 and for 1980 it will probably be down around 2 percent. But in 1981 with sharply reduced pork supplies and an expected strong demand situation, retail pork prices may average 25 to 30 percent above the 1980 level.

These rises in beef and pork prices would push the retail red meat price index sharply higher in 1981, perhaps similar to the 17-percent increase registered in 1979. The BLS total meat price index will be up only around 4 percent this year.

Poultry prices will also be up sharply next year. In 1979, when the BLS retail red meat price index rose 17 percent, the poultry meat price index rose only 5 percent. This year the poultry price index will probably be up a little more than that for red meats, perhaps averaging around 6 percent above the 1979 level. For all of 1981, a 14- to 18-percent increase in retail poultry prices is expected.