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Livestock Production Cycles and Food Prices

In 1965, the consumer price index accelerated more rapidly than during the preceding four years of economic expansion. Although gains reflected continued upward trends in prices for consumer services and nonfood commodities, the major portion of the increase occurred in food prices. In the past, food prices, though fluctuating moderately, generally have trended upward at about the same rate as the index for all items. Concerned about its ability to expand production without raising prices, the nation is paying more and more attention to factors influencing current food prices and implications for the future.

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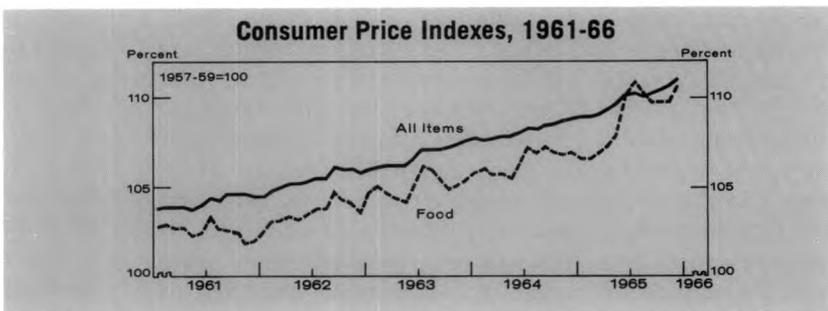
IT'S 'BATTER UP'
IN GEORGIA

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MOTORS UPWARD

SIXTH DISTRICT
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Prices for most food items increased generally in 1965 (see chart on page 18). Meat, poultry, and fish prices showed the most spectacular rise—11 percent from December 1964 to December 1965. A considerably smaller increase of one percent was recorded for cereal and bakery products, while restaurant food prices advanced over 3 percent. Prices for other foods eaten at home—various fats and oils, sugar, non-carbonated drinks, and other items—increased 2 percent. The price of dairy products advanced only a fraction of one percent. Prices for fruits and vegetables fluctuated sharply, but ended the year at a 3-percent lower level.

Most of the expansion in food prices was in meats, particularly pork and beef. During 1965, pork and beef prices advanced 29 and 6 percent, respectively, with most of the gain occurring from May to August. Prices for particular cuts of meat increased even more. By the end of 1965, the price of bacon had risen 39 percent; whole hams, 30 percent. Rib roasts advanced 9 percent, and sirloin and porterhouse steaks were 7 and 8 percent higher, respectively. Meanwhile, poultry prices climbed 2 percent. These rather sharp movements in meat prices reflect the interaction of two basic forces—supply and demand for meat.

Generally, if the demand for a commodity increases as its supply declines, the price will go up. This essentially describes what happened to meat prices in 1965. Evidences of strong consumer demand are reflected in increased incomes, employment, and population. Disposable incomes were over \$30 billion greater in 1965 than in 1964. And \$5 billion, or 17 percent, of the increase went to purchase more food, including meat. Similarly, the continued decline in unemployment indicates that a larger portion of the nation's work force had sufficient incomes to purchase a more balanced diet.

As the consumers' demand for meat became greater throughout 1965, the meat supply dwindled. At the end of December, total production of red meats (beef and veal, pork, lamb and mutton) was 4 percent less than in 1964. Reduced pork output accounted for most of the decline.

Livestock production tends to fluctuate cyclically, reflecting changes in the cost of production and/or prices for livestock. Generally, farmers make livestock production plans on the basis of current prices or profits and short-term forecasts. When prices are relatively high, they may increase their breeding herds and produce more animals. At some later date, when livestock marketings increase, prices decline. These lower prices reduce profits and cause some producers either to stop production or cut back the size of breeding herds. This reduces the supply of livestock at some future date, causing prices to advance once again. The cycles vary in length, depending upon the life span of the animal.

Historically, hog production and prices have followed a four-year cycle, characterized by two years of declining prices resulting in reduced production. The lower production causes prices to advance, thus stimulating increased production usually for two years.

The chart on hog production shows a slight modification of this cycle in 1961, but the basic cyclical pattern still exists. Increasing pork production in the early 1960's tended to depress hog prices. The average slaughter hog price in Chicago was \$15.55 per hundred pounds in 1963 and \$15.54 in 1964. Those relatively low prices reduced the profitability of hog production and caused farmers to change their production plans and reduce output. Thus, pork production declined 4 and 10 percent in 1964 and 1965, respectively. Lower hog production usually tends to lag lower prices by at least one year, because it takes some time for farmers to recognize a downtrend and then to adjust their plans.

The output of beef and veal also tends to follow cyclical production patterns. The cycle for cattle is much longer than for hogs; it has varied from nine to eleven years since the late 1930's. Usually, cattle and calves have increased in number seven to eight years. The liquidation or declining phase of the cycle has lasted only two to four years. Since 1958, the number of cattle and calves on farms has been expanding steadily, resulting in production increases of 2 to 6 percent annually. However, in 1965, cattle numbers were only one percent greater than a year earlier, and by January 1, 1966, the cattle population had dropped below the 1964 level. This turnaround in the buildup

phase of the cattle cycle was in response to lower cattle prices in 1963 and 1964.

Sheep production, unlike cattle numbers, has been declining every year since 1961, resulting in higher prices for sheep and lambs. By 1965, slaughter lamb prices reached a yearly average of over \$24.50** per hundred pounds in Chicago markets, the highest level since 1952. Higher prices induced sheep producers to hold back ewe lambs rather than sell them for slaughter. Hence, total slaughter of lambs was down 10 percent from a year earlier, even though the number of sheep and lambs on farms was essentially unchanged.

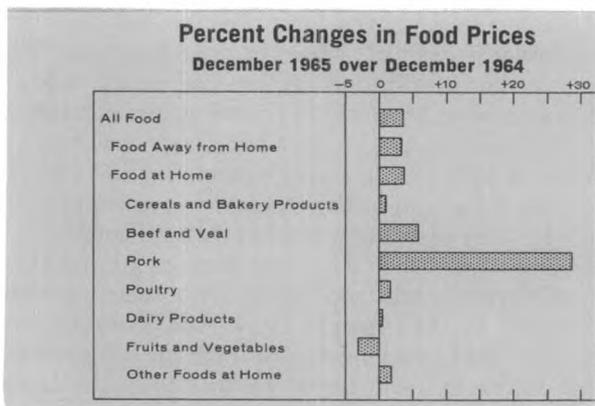
Since the production of beef and veal, pork, lamb and mutton were near the cyclical lows in 1965, further implications for consumer meat prices become evident. When the price of an item goes up, the consumer usually tries to find a substitute product at a lower price. In 1965, however, he discovered that the general price level had risen for all meat cuts. Since the nonmeat substitutes (eggs, beans, and dairy products) were poor, most of the demand for protein foods remained in the meat market. Consequently, prices for each meat product advanced more than might have been indicated by its drop in production.

If past experience is any guide, we can expect today's higher meat prices to result in increased production and lower prices in the future. Some evidence that farmers are changing production plans is already available. During the December 1965-May 1966 period, farmers plan to farrow 6 percent more sows than in the same period a year ago. If these intentions are carried out, hog marketings would expand during the latter part of 1966, causing downward pressures on prices.

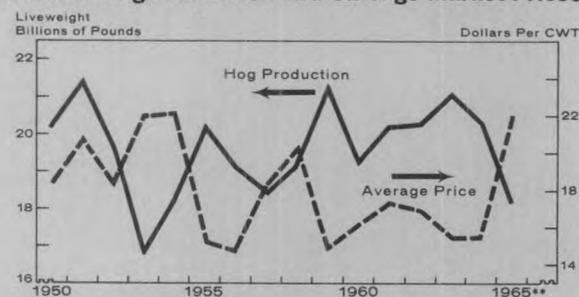
Likewise, sheep producers are expanding the size of breeding herds. There are signs that beef producers may start to rebuild their cattle herds. Except for hogs, however, the main impact of the resulting increased production probably will not come this year.

The general outlook for 1966 is that meat prices will continue relatively strong. Production of all major meat items except poultry will be below last year's levels during the first half of this year, and meat prices will remain well above those of a year ago. During the last half of the year, increased pork production and possible expansion in beef and sheep production may result in moderating meat prices. However, production levels are not expected to advance enough to force meat prices back to levels that existed during the first quarter of 1965.

ROBERT E. SWEENEY



National Hog Production and Chicago Market Prices*



*Average price for 200-220 pound barrows and gilts.
**Estimated by this Bank.