

A Better Way To Measure Food Costs

The nickel beer, quarter-a-loaf bread and dollar-a-pound steak may sound like reminders of the "good old days," but the fact is that food is a much better bargain today.

While retail food prices are more than four times higher than a half century ago, the average worker's paycheck is more than 11 times higher.

As a result, the typical wage-earner worked only 61 minutes in 1980 to buy the same basket of foods that required almost two hours of work in 1929, says USDA economist Lloyd Teigen.

These figures don't mean that food is getting "cheaper" every year—even in terms of hours worked. That same food basket that took 61 minutes of work in 1980 required a minute less in 1967. The reason: Grocery store prices rose 155%, while hourly wages rose only 151%.

Relatively Modest

But economists say that food price rises have been relatively modest compared with other prices in the economy. For example, food prices more than doubled during the 1970s, while fuel prices more than tripled based on the consumer price index (CPI).

A better way to measure the real cost of food to consumers, Teigen says, is to take into account the growth in after-tax income of each breadwinner (personal disposable income). To do this, Teigen devised an index which compares food prices to disposable personal income per member of the labor force.

This translates the price of beef steak into an index of work time, while comparisons based on the CPI can only express the price of beef steak as so many units of other consumer goods.

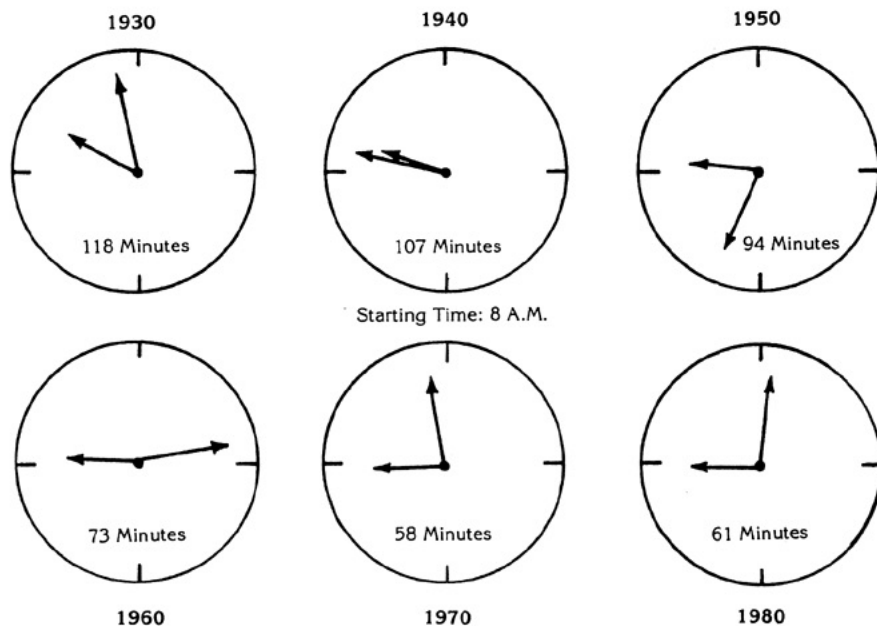
Besides adjusting for inflation, Teigen's index separates the growth in family income from the trend in recent years of more family members going to work. In other words, this index prices food in terms of a proportion of working time required or leisure given up.

Using the Index

By this yardstick, food costs fell more than 2.5% annually from 1947 to 1972, then shot up 11% from 1972 to 1974. Since then, the index has stayed on a plateau which has seen year-to-year variations of less than 3%.

Using the CPI's standard market basket of food—a widely used measure of food price movement—let's examine Teigen's food price indexes for the items in that standard basket (see table).

The Average Wage Earner of 1930 Worked Nearly Twice as Long to Buy the Same Amount of Food¹



¹Based on average annual income and the cost for a comparable "basket" of foods representing average quantities purchased by urban wage earners in 1967 from 1 hour's work.

The index fell from almost 180 points in 1940 to less than 95 points in the early 1970s just before farm prices boomed. Last year the index hit 101.2. In other words, food costs were far higher in 1940.

Peeking into the basket, some items are better bargains than others in real price terms.

From 1940 to 1980, food costs fell:

- About 37.6% for all meats.
- Around 79.5% for poultry.
- 55% for dairy products.
- 64.7% for margarine.
- 55.8% for processed fruits and vegetables.
- For cereals and baked goods, about 48%.
- For sugar, 34.2%.

What About the Future?

What is the likelihood that food prices will stay at such relatively modest levels in future years? The answer depends greatly on the parts of the food chain that are between farmers and consumers.

"Where the assembly, processing and distribution components of the food system are relatively competitive," Teigen says, "there is a strong likelihood that farm productivity gains will be translated into lower consumer prices."

That middleman segment was where much of the food price surge of the early 1970s occurred, Teigen says, after the economy was shaken by wage and price controls and the OPEC oil embargo.

As the CPI soared, personal disposable income gains slowed at the same time commodity prices rose, forcing the sharp jump in Teigen's food price index.

Rising energy costs and slowing labor productivity growth in many food processing and distribution industries boosted food prices after the products left the farm.

Productivity Holds Down Costs

The increases could have been much higher—historically as well as in recent years—except for gains in productivity on the farm and (until the mid-1970s) in the food system.

In fact, Americans still spend a far smaller portion of personal income on food—16% last year—than any other people. The proportion varies considerably world-wide: 27.5% in Britain, 62.5% in India, 59.3% in Sierra Leone (West Africa) and 45% in the USSR.

Technology has been the key, enabling farmers to keep up with production costs in most years by squeezing more and more output from their farms.

Substitution of machines and chemicals for labor is one way that technology has increased productivity. In 1944, the farm work force totalled 10.2 million compared with 3.8 million in 1979.

Chemicals

During that period, use of agricultural chemicals increased 36-fold—a 10% annual gain—and the use of tractors doubled while tractor horsepower increased more than 4¼ times.

Meanwhile, farmers were squeezing more production than ever from their fields. For instance, the average U.S. corn yield was 33 bu. per acre in 1944. The 1981 yield could measure 107 bu. per acre, according to last September's estimates.

While yields increased dramatically, over-all variable costs per unit of production also rose. For instance, it cost \$1.10 to produce a bushel of corn in 1974—the first year of USDA's cost of production survey—compared with \$2.36 in 1980.


Although consumers benefit from such productivity gains, some savings stay on the farm.

"Increased productivity boosted total farm output and output per farm enough to enable net income per farm to double in real terms over the last 25 years," Teigen says.

Other Comparisons

In 1930, net income per farm was \$1,041 in 1967 dollars—a measure that disallows gains due to inflation. The figure rose to \$3,029 in 1955 and \$6,104 in 1979.

Total net farm income—in 1967 constant dollars—made solid gains, at least until last year: \$6.9 billion average in 1930-1934 to \$14.1 billion in 1955, to \$14.2 billion in 1979. The best year, Teigen notes, was 1973, when net farm income topped \$25 billion in 1967 dollars before falling to \$17.7 billion the next year.

Last year's \$20 billion net farm income represented a relatively meager \$8.1 billion in 1967 dollars, by far the worst showing in many years, and this year may be no better. —Reprinted from *FARMLINE* 

New BVD Vaccine Promises Safe Use, No Side Effects

... killed product protects against BVD without causing side effects.

A first-of-its-kind vaccine for bovine virus diarrhea appears able to solve a widespread problem that has plagued beef producers in recent years.

Briefly, the problem has been this: The modified live virus BVD vaccines—although the only ones available—have been implicated in numerous post-vaccination disease breaks. The MLV vaccines also have been known to cause abortions and birth abnormalities in pregnant animals.

Yet, not vaccinating for the disease has been a high-risk situation, too. Some experts say BVD has become one of the most prevalent cattle diseases on U.S. farms and ranches today.

Triangle-1, a new killed virus vaccine now available through veterinarians nationwide, will solve that dilemma, according to Dr. Richard Searl of Fort Dodge Laboratories. Searl is spokesman for the Ft. Dodge, Iowa, company responsible for the breakthrough product.

"Triangle-1 is a completely killed virus vaccine, so it may be administered to animals of any age and in any stage of pregnancy," Searl explains. "Unlike the modified live virus vaccines for BVD, which were the only BVD vaccines available until we introduced Triangle-1, our killed virus product can't produce the disease for the simple reason that the virus can't reproduce itself."

"Another advantage," notes Searl, "is that the killed virus can't transmit to other animals. We have completed work, and additional studies are in progress, which show that Triangle-1 does not immunosuppress."

Searl explains that immunosuppression means a reduction or elimination of the animal's ability to ward off disease. When immunosuppression occurs, the white blood cells in the body which normally produce antibodies to fight disease decrease rapidly in number and become less active.

"The modified live virus vaccines tend to suppress the immune system," says Searl, "which makes the animal more susceptible


after vaccination to a host of diseases, including BVD itself, and other common bovine diseases such as IBR, PI₃ and Pasteurella pneumonia."

There is no increased susceptibility to other diseases, including the highly-fatal mucosal disease form of BVD, when animals of any age are vaccinated with the killed virus product, says Searl.


Because the killed virus can't become virulent, there's no need to isolate vaccinated animals from those not vaccinated, the veterinarian emphasizes. With MLV vaccines, there's a risk of transmitting the disease whenever freshly-vaccinated animals are exposed to those not vaccinated.

In Searl's opinion, BVD is "probably the most common and economically important cattle disease we face today."

Bovine virus diarrhea is characterized by symptoms which initially are of a respiratory nature, says Searl. They include nasal discharge, coughing and elevated temperatures. Also, infected animals may lose their appetites and become gaunt.

Searl says that Triangle-1 need be administered only in a one-shot dose to animals previously vaccinated with one of the MLV vaccines for BVD. A single booster dose is then required only once a year. For cattle never vaccinated for BVD, a 2-dose series is recommended, followed by an annual booster. 

Not One, But Two Angus Bulls Enter Australia

Information received at the ANGUS JOURNAL that Virginia Polytechnic Institute and State University's VPI Lord Patriot 9025 was the first Angus bull to arrive at Australia's Cocos Island (that nation's new quarantine station) was incomplete. Further information indicates that there was another Angus in the same shipment—Summitcrest Farms' Summitcrest Power Play M032. For the record, these two bulls were the first Angus to be sold and exported to Australia. 

National Beef Cook-Off Adds Plate and Shank

Two new cuts of beef, the plate and shank, have been added to the chuck, round, rump, brisket and ground beef as eligible for use in the National Beef Cook-Off. Another change in the contest's rules bars entry by any person who has owned beef cattle in the 12 months preceding Oct. 1, 1982. Prize money has increased greatly—first place is now \$5,000; second place, \$2,500; third place, \$1,000; and five honorable mentions are now \$300 each. A copy of the official rules for this year's cook-off is available on request from the Beef Industry Council of the Meat Board, 444 North Michigan Ave., Chicago, Ill. 60611. 