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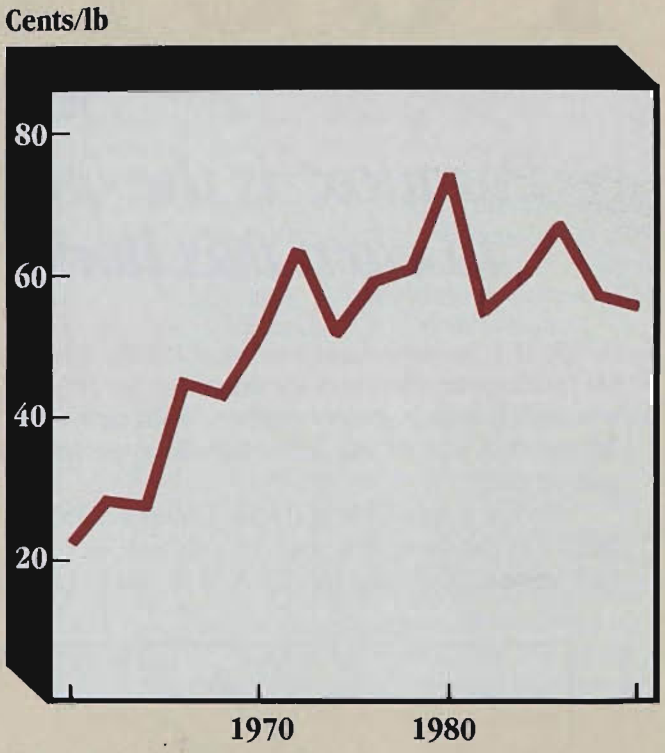
Will The 'Real' Prices Please Stand Up?

C. W. "Bill" Herndon

Nominal Cotton Farm Prices



Communications about changes in prices and budgets are often confused. One reason is because what a dollar buys changes over time. Thus, it is important to recognize the difference between 'nominal' prices (like those reported on the market news page of our newspapers) and 'real' prices (nominal prices adjusted for inflation). A look at nominal and real cotton prices illustrates this difference. It provides insight into why some farmers who are experiencing financial stress today did not do so 15 years ago—even though nominal cotton prices were a lot lower than they are today.

Prices received by farmers and ranchers in 1985 were on average, over twice as high as they were in 1970. Cotton prices received by farmers were 54.80. In 1970 they were 21.98 suggest that farmers and ranchers should be financially better off today than they were 15 years ago. However, reports of bankruptcies and foreclosures contradict this conclusion.

The explanation for this seeming contradiction relates to changes in what a dollar will buy. A dollar won't buy as much today as it did in years gone past. In fact, adjusting nominal cotton prices for the purchasing power of the U.S. dollar shows that real cotton prices in 1985 were actually less than they were in 1970.

Nominal Cotton Prices Up in the 1970's; Down in the 1980's

There were two distinctively different trends since 1970 for farm prices. They went up in the 1970's and declined in the 1980's.

Strong worldwide economic growth coupled with the low value of the U.S. dollar increased the demand for U.S. farm exports and caused cotton prices to increase. The nominal season average price received by farmers for cotton rose nearly 240 percent from 21.98 in 1970 to 74.70 In contrast, cotton prices have been declining in the 1980's. This gradual downward trend in prices is associated with decreased levels of U.S. cotton exports, resulting from burgeoning debt problems in developing nations and (until recently) the high exchange rate of the U.S. dollar in terms of currencies of importing countries. U.S. farm cotton prices fell 27 percent from their high in 1980 to 1985. The rise in 1983 was a result of the government's Payment-in-Kind farm program that withheld large amounts of land from production in that year.

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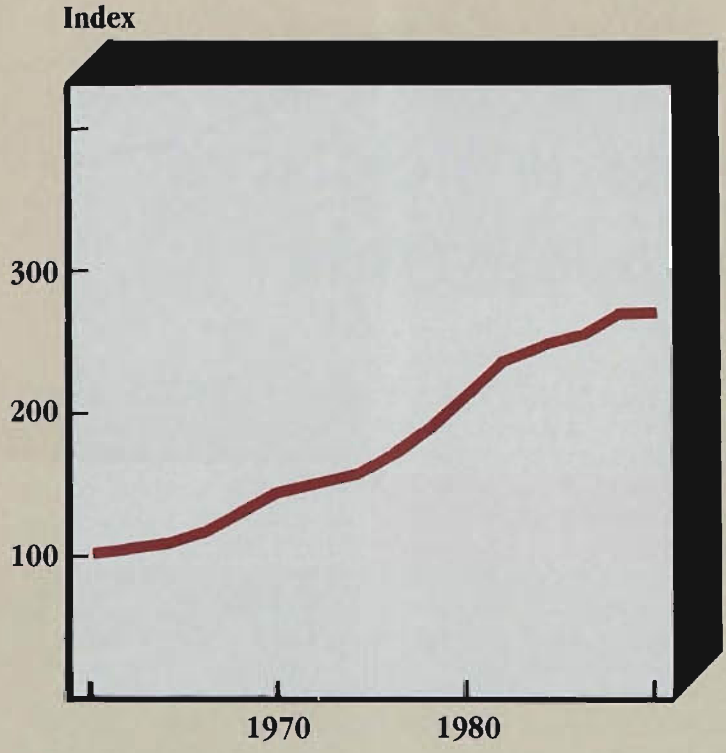
Consumer Price Index (1970=100)



General Price Level Up, Up, and Value of Dollar Down, Down

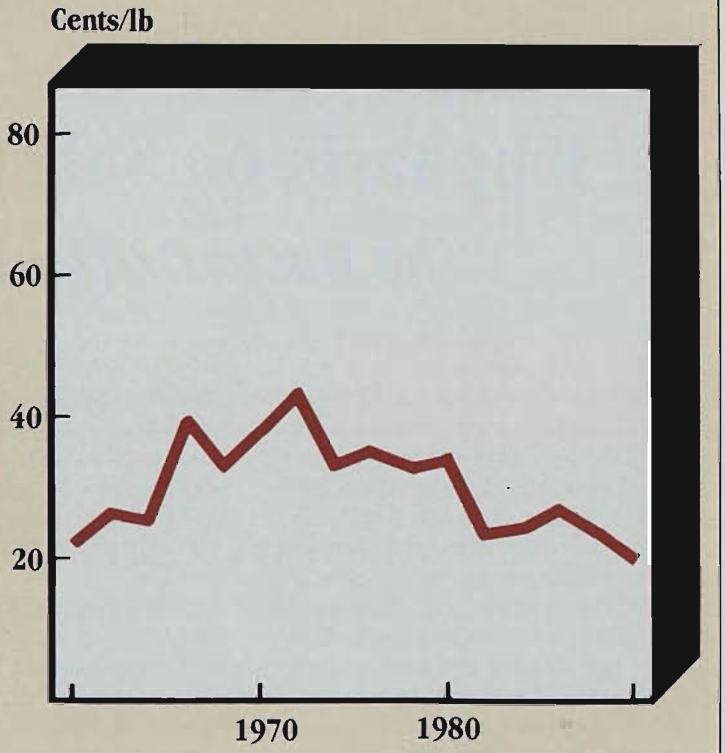
We're all acquainted with inflation. And we know what it does to the purchasing power of a dollar in our economy.

From 1970 to 1985 the general price level nearly tripled. The inflation rate was especially severe in the late 1970's. For example, the producer prices increased over 11 percent in 1979 and in 1980 by more than 13 percent. By 1980 the index of consumer prices was 112 percent above the index for 1970 and by 1985 174 percent above.

These increases in the general price level meant a lower value for the dollar. One can imagine a farmer spending $10,000 for a basket of goods and services in 1970. By 1980 that same basket would have cost $22,120 and by 1985 $27,390.

Another way to describe the same phenomena is to visualize that in 1985 $10,000 would buy only one third of the basket of goods and services it bought in 1970. The general price level had gone up and up, and in turn the value of the dollar went down and down.

Real Cotton Farm Price



Real Cotton Prices Up and Then Down

Adjusting nominal prices for inflation gives "real" prices. This adjusting is done by dividing the nominal prices by the index of the general price level. In this case we used the index of consumer prices (CPI).

With the index of consumer prices set at 100 for 1970 the "real" cotton prices for that year is the same as the nominal price. Adjusting the 74.70¢, 1980 cotton price for the fact that the general price level had increased 112 percent (from 100 to 112) gives a real 1980 price of 35.20¢ per lb. Similar calculations for 1985 indicate a 1985 real cotton price of 20.01¢ per lb., a price lower than the 1970 price. This 20.01¢ reflects the decline in nominal cotton prices from 1980 to 1985, plus the continued increase in the consumers price index. Note that the peak in real prices came in 1976 not 1980.

Thus, nominal prices tell a story of a threefold increase of cotton prices in the 1970's and a drop of over 25 percent in the 1980's. The real price story is different. Instead of tripling in the 1970's, real cotton prices doubled from 1970 to 1977. It was downhill from there to a 1985 price 9 percent below the 1970 price.

Because we can get an erroneous story with nominal prices, analysts, government officials, and newsmen often refer to real prices and real budget numbers. When they do, it alerts us to the fact that they are using numbers that have been adjusted for inflation to give us the real story. C