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Lynn Selzle-Wolters South Dakota State University

Burton Pflueger South Dakota State University

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## 1988 Drought Effect on the Economy

Lynn Selzle-Wolters
Research Assistant
and
Burton Pflueger
Extension Economist

Although the 1988 drought has had a fairly large impact on U.S. agriculture, the nation's economy as a whole was affected only slightly. Some analysts predict a mild slowdown in the economy, small increases in the consumer price index, and small shifts in total income and wealth. This newsletter examines the impact of the drought on consumers and the agricultural sector.

### Effect on the Agricultural Economy

The drought affected both the crop and livestock segments of the agricultural economy. Corn was hit particularly hard because of its high water needs. An October projection showed corn production to fall from 7.1 in 1987 to 4.6 bil. bu. in 1988. Set aside acreage requirements are responsible for part of the decrease, however.

The drought affected range-fed cattle more than other livestock enterprises. Producers lacking extra capital were forced to sell their breeding herds because they could not afford to buy crop forage to replace what they lost. Buying supplemental feed or replacement feed is out of the question financially for many of them.

Agricultural markets were also affected. News of the drought caused futures prices and production in the southern hemisphere to increase. Cash prices also increased as firms and other countries tried to buy as much as possible at the lowest possible price.

#### Effect on CPI

If a drought causes higher agricultural prices, a problem for the economy can result, namely, inflation as reflected in a higher consumer price index (CPI).

The CPI is composed of many items, including food which is the most widely reported inflation rate statistic. An increase in food prices will show up in the CPI and may have a short-run effect on inflation. The drought may push 1989 food prices up by 6-7% according to late June estimates, about a 2 %age point increase from the initial projection. In the long-run though, this one time increase in price should have no lasting impact on inflation. That I gives a historic perspective on price trends after three droughts in the 1970s and 1980s.

#### Effect on the General Economy

The general economy was also affected by the drought, with impacts on general the prices and income. The value added by the farm sector to the overall economy is only about 2.2% of GNP. The drought-related reduction in agricultural production is estimated to be about 8%. This translates into only a 0.17% decrease in GNP.

An average family spends about \$100/wk for food. A 2% increase in food prices may result in a \$6 to \$10 billion decrease in purchasing power for this group. These consumers have a choice of funding this increased food expenditure by dipping into savings and/or reducing other household purchases.

If increased food costs are funded totally from savings, we could see a decrease in savings and an increase in interest rates. Private savings may drop by as much as 1.5%. The resulting minute increase in interest rates, however, would have only a small impact on the economy.

|                    | Year before drought   | Year of drought     |               | Year after drough |
|--------------------|---|---------------------|---------------|-------------------|
| •                  |   | First 2 quarters*** | Entire year   |                   |
| 1974 Drought       | (73 02-74 02)   | (74 Q2-74 Q4)       | (74 Q2-75 Q2) | (75 Q2-76 Q2)     |
| Background economy | 1st oil shock & subsequent recession; high inflation; weakening dollar; low carryover grain stocks; growing food exports                |                     |               |                   |
| % change in*       |   |                     |               |                   |
| Farm prices**      | 3.3   | 18.4                | 2.1           | 4.8               |
| CP1-food           | 15.6  | 10.7                | 8.1           | 4.4               |
| CPI-all items      | 10.6  | 12.6                | 9.7           | 6.1               |
| 1980 Drought       | (79 Q2-80 Q2)   | (80 Q2-80 Q4)       | (80 Q2-81 Q2) | (81 Q2-82 Q2)     |
| Background economy | 2nd oil shock; high inflation; back-to-back recessions; dollar hits bottom; food exports peak, turn down; normal carryover grain stocks |                     |               |                   |
| % change in*       |   |                     |               |                   |
| Farm prices**      | -8.4  | 23.7                | 9.6           | 0.2               |
| CPI-food           | 7.0   | 11.4                | 9.0           | 4.7               |
| CPI-all items      | 14.5  | 9.2                 | 9.8           | 6.8               |
| 1983 Drought       | (82 02-83 02)   | (83 Q2-83 Q4)       | (83 Q2-84 Q2) | (84 Q2-85 Q2)     |
| Background economy | Beginning recovery; dollar strong & rising; inflation low & dropping; carryover grain stocks high; food exports weak                    |                     |               |                   |
| % change in*       |   |                     |               |                   |
| Farm prices**      | 3.9   | -1.0                | 5.0           | -7.8              |
| CP1-food           | 2.2   | 0.7                 | 3.3           | 2.5               |
| CPI-all items      | 3.3   | 4.2                 | 4.3           | 3.7               |

Source: Chicago Fed Letter, The Federal Reserve Bank of Chicago, No. 14, October 1988.

<sup>\*</sup>All percent changes are based on the differences between the beginning and ending quarterly averages for the quarters indicated.
\*\*Figures shown for the 1974 drought are based on the index of prices received by farmers for all farm products. For the 1980 and 1983 droughts, the figures are based on the index of prices received by farmers for food commodities.
\*\*\*Percent change in this column are at an annualized rate.