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# Parity—a yardstick for purchasing power

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## Quick Facts

- The term "parity" is frequently not understood by the general public.
- The concept of parity often is expressed as a ratio between the price farmers receive for their goods and the price they pay to produce them.
- Parity has some basic policy and decision-making disadvantages.
- The indexes used to calculate parity are averages and do not indicate individual situations.
- The base period of 1910-1914 is an arbitrary selection made by Congress and has all the imperfect attributes of any arbitrary selection.
- The parity price of a commodity gives the specific purchasing power of that commodity during any base period.
- The parity ratio does not take into account the changes in production efficiency and technology on the farm.
- The concept of parity has been the foundation of national farm price and income policy for 41 years and is used as a tool for measuring the purchasing power of farmers.

today are to prices in the base period in terms of purchasing power.

The concept of parity often is expressed as a ratio between the price farmers receive for their goods and the price they pay to produce them.

A ratio of 100 percent, as in the previous example, implies that the same relationship between prices paid and prices received exists as during the base period.

Likewise, a 67-percent parity ratio indicates two-thirds of the base period purchasing power and 125 percent means that the farmer's ability to buy goods and services exceeds the base period by 25 percent.

## How Parity is Calculated

Parity is calculated by using two basic indexes: the *index of prices received* by farmers from the products they sell and the *index of prices paid* by farmers for the inputs that they use for production.

The prices-received-index is calculated by the U.S. Department of Agriculture by using the monthly prices for 56 crop and livestock commodities. (The \$5.02 example used for wheat is just one of the commodities.) The reporters—some 4,500—who relate these prices are predominately farmers and agribusiness sector representatives.

The prices-paid-index is compiled by USDA from a list of expenses farmers normally incur in the production of agricultural products. The list includes interest, taxes, wages, fuel costs, family living expenses, machinery costs and many more. These expenses are collected from a mail survey that USDA conducts with various merchants each month.

Once the index of prices received and index of prices paid are computed, the following formula is used to calculate parity. This is the percent of parity obtained by dividing the index of prices received by the index of prices paid. For the parity ratio, both the indexes use the 1910-1914 base. The index should appear as follows:

$$\text{Parity ratio} = \frac{\text{Index of prices received}}{\text{Index of prices paid}} \times 100$$

<sup>1/</sup>William Spencer, CSU extension associate professor, economics (3/15/78)

With discussions of farmer strikes, the farm cost/price squeeze and other agricultural issues, the term "parity" is frequently not understood by the general public.

If the current "parity price" of wheat is \$5.02 per bushel, it means that wheat would have to be \$5.02 a bushel in today's market in order to have the same purchasing power as one bushel of wheat in the parity base period of 1910-14.

This base period was selected by Congress because the period was judged to represent a balanced relationship between farm prices and nonfarm prices.

For example, if a wheat producer in the 1910-14 base period sold a bushel of wheat and with the proceeds could buy a pair of gloves, then the same bushel of wheat sold today at 100 percent parity also should buy a pair of gloves of equal quality. Thus, the parity price is a yardstick for measuring how close prices received by farmers

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Parity has some basic policy and decision-making disadvantages. These include: 1) the indexes are averages and do not indicate or site situations for individuals or even groups of farmers; 2) the base period is an arbitrary selection made by Congress and has all the imperfect attributes of any arbitrary selection (for example, if 1977, a year of low prices, were used as a base period, all future years would have high parity ratios not giving an accurate relationship of purchasing power); 3) the parity price of a commodity gives a specific purchasing power of that commodity during any base period

(commodities change in their appearance and usefulness over time and for that reason the expression of purchasing power may not be precise); 4) the parity ratio does not take into account the changes in production efficiency and technology and, thus, increase in yields and efficiency on the farm.

In summary, the concept of parity which has been the foundation of national farm price and income policy for 41 years is a tool for measuring the purchasing power of farmers, but it is just one tool among many that can be used in determining the economic well-being of agriculture.