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SCIENCE

Rising Food Prices: Who's Responsible?

Twice in recent days, once in Hartford, Connecticut, and again in Los Angeles, I have watched television newsmen interview the women who organized the consumer protest and boycott over rising meat prices. In both cases the commentator asked the women who they thought was responsible for the price rise, whom their message was designed to reach. In both instances the women had difficulty with this question. They were not certain that the supermarkets were to blame, nor that it was entirely the farmer's fault, and they were not sure who was the middleman.

What they had never stopped to ask was whether they, as consumers and parents, might in any way be responsible for the soaring meat prices. As average American consumers, we have increased our per capita beef consumption from 55 pounds per year in 1940 to 117 pounds per year in 1972. Meanwhile, as parents, many of us have borne far more children than needed to replace ourselves, expanding our population by 57 percent during this same period. Altogether, our national beef consumption tripled, making us the leading world importer of beef.

During the 1960's, the world food problem was viewed primarily as a race between food and people. Now, in addition to continuing growth of the global population, we are witnessing the emergence of affluence as a major new claimant on world food resources.

The northern industrial countries—stretching from Ireland and the United Kingdom through Scandinavia, Western Europe, Eastern Europe, the Soviet Union, and Japan—now have income levels and dietary patterns that more or less correspond to those in the United States in 1940. In these countries, which contain two-thirds of a billion people, increases in purchasing power translate into rising consumption of livestock products, particularly beef.

We face constraints on the expansion of protein supplies in three important areas. Efforts to expand beef supplies are constrained by our inability to devise a satisfactory commercial technique for obtaining more than one calf per year per brood cow. For every animal that enters the production process, one adult animal must be fed and maintained for 1 year. Beyond this, it is difficult to substantially increase the carrying capacity of some of the world's principal grazing areas.

World fisheries are in deep trouble. From 1950 to 1968, the world fish catch expanded nearly 5 percent per year, which greatly increased the per capita supply of marine protein. Since 1968, however, the catch has been fluctuating rather unpredictably. Many marine biologists now feel that the global catch of table-grade fish is very close to the maximum sustainable level.

A third constraint is the inability to achieve a breakthrough in yields of soybeans, now a leading global source of high-quality protein. Since 1950, soybean yields in the United States have increased about 1 percent per year, in contrast to corn yield gains of about 4 percent per year. Being legumes, soybeans are not as responsive to the use of nitrogen fertilizer as are cereals. The fourfold increase in U.S. soybean output since 1950 has come largely from expanding the area planted. With 1 acre in every 7 of U.S. cropland now in soybeans, this expansion must eventually come to an end.

Short-term factors such as the disappearance of the anchoveta off the coast of Peru for several months and the crop shortfall in the Soviet Union may be obscuring a more fundamental transformation of the world food economy. Rapid growth in the global demand for high-quality protein and the above-mentioned constraints on expanding production may cause supply to lag behind demand. We may be witnessing the transformation of the world protein market from a buyer's to a seller's market, much as the world energy market has been transformed over the past 2 or 3 years.—LESTER R. BROWN, *Overseas Development Council, 1717 Massachusetts Avenue, NW, Washington, D.C. 20036*