



Business Trends

Prepared in the Research Department of the
FEDERAL RESERVE BANK OF CLEVELAND
 Serving the Fourth Federal Reserve District

NEW STORY OF SOYBEANS

Soybean prices in recent weeks have been at the highest level in nearly four years, which is a matter of some interest to many farmers of western Ohio. At the same time, open interests in soybean futures have established new highs at the Chicago Board of Trade. Such rising prices and unusual activity in futures are fostered by the fear on the part of buyers that the supply of beans may not prove ample throughout the current marketing year.

The circumstances surrounding this bit of drama are not the result of a crop failure, as might be at first assumed. Rather, the 1960 soybean crop was the second largest of record, 50 percent larger than the 1955 crop and nearly double production of 10 years ago. In fact, over the past decade, production of soybeans has advanced at a much faster pace than output of corn and wheat. Yet, while surplus stocks of corn and wheat are at record levels, government stocks of soybeans are at the lowest level in several years, representing only about 1 percent of annual production. The reason for the apparent shortage is that consumption of soybeans has increased in spectacular fashion.

Carryover from the record crop of 1958 enabled utilization last year to be above 1959 production. If current consumption trends are to continue, however, production must expand since carryover stocks are now at a minimum. What has happened to bring about the present unusual demand-supply situation for soybeans?

Domestic Consumption Increased. Nearly 70 percent of the farm soybean harvest is processed into soybean oil and meal. Valued, in 1959, the 46-pound yield of meal from a crushed bushel of soybeans accounted for 59 percent of its total value, while the yield of 11 pounds of oil was responsible for the remaining 41 percent.

Soybean meal is valuable chiefly because of its high protein content. Most of the domestic consumption is in the form of livestock feed, with a small amount being used in the production of glues, adhesives and several food products.

Crude soybean oil is refined and used primarily in the production of food products such as vegetable shortening, margarine and cooking and salad oils. A lesser quantity is consumed industrially in the manufacture of paints, varnishes, resins and other nonedible products.

The largest single use of soybean oil in the United States during 1960 was in the manufacture of shortening. Last year, 1.2 billion pounds of soybean oil, or 27 percent of production, were utilized in the processing of this food product, as shortening consumption reached an all-time high of 12.6 pounds per person. Although increasing quantities of lard are currently being used in shortening production, soybean oil is the largest ingredient, accounting for 51 percent of total fats and oils used in shortening.

Broadcast by Robert E. Cogan, Assistant Economist, Federal Reserve Bank of Cleveland, over WGAR, Cleveland, with Charles Day, News Editor, WGAR, Sunday, February 5, at 10:15 p. m.

Another 26 percent of the soybean oil produced went into the manufacture of margarine. Two factors in the margarine industry have brought about an increasing demand for soybean oil. In the first place, per capita consumption of margarine has been on the rise, in addition to the increase in demand which has been brought about by a growing population. In 1950, the consumption of margarine per person was 6.1 pounds; by 1959 per capita consumption had increased 56 percent to 9.5 pounds. The increased consumer demand for margarine can be attributed to the removal of restrictive legislation and to a favorable margarine-butter price ratio over the last decade.

Soybean oil is now the principal oil used in margarine production. Before World War II, cottonseed oil was the chief vegetable oil ingredient, with only small quantities of soybean oil being used. Last year, however, soybean oil represented 85 percent of the vegetable oils used in this food product. In fact, the increased consumption of margarine has been possible only by a sharp growth in the domestic output of edible vegetable oils, chiefly soybean oil.

Increased use of cooking and salad oils by U. S. homemakers also adds a positive touch to the demand for soybean oil. Civilian consumption of these oils has doubled since 1947. Eighteen percent of the 1959 soybean oil crop was channeled into these uses. Increases in per-person consumption of mayonnaise and salad dressing, along with a growing commercial use of cooking oils in the production of potato chips, frozen french fries and other prepared foods are the primary reasons.

In contrast, use of soybean oil in industry is on the decline. Competition of plastics in the manufacture of protective coatings has been an important factor. Industrial use of soybean oil last year accounted for only 8 percent of its production.

Demand for soybean meal is expected to continue strong through the remainder of the current feeding year due to a rise in the rate of proteins fed per animal unit, a record number of cattle and calves on feed, and an expanding broiler industry.

Soybean Exports Advance Sharply. The United States is not only the world's largest producer of soybeans, but also the largest exporter. Since 1954, exports have more than doubled while production increased 56 percent. A growing foreign outlet for soybeans has been the most important factor in enabling the American farmer to dispose of his increased production.

The increase in exports can be attributed mainly to the growing acceptance of soybean oil and soybean products for human consumption in Europe and a rising standard of living in Japan where soybeans are an important source of protein in the diet. Due to a reported decline in production in Communist China, the world's second largest exporter, foreign demand is expected to be especially high this year.

Last year, a record 142 million bushels of soybeans, or 25 percent of production, were exported as whole beans. In addition, the equivalent of 86 million bushels were exported as oil. It is significant that last year an increase in oil exports was a result of larger physical quantities of sales, suggesting that this product is competitively priced in the world market. Although less than 10 percent of the meal produced is shipped abroad, meal exports have been increasing. Last year, a record 1.3 billion pounds were exported, due in part to the heavy buying of European countries to replenish drought-stricken feed supplies.

In summary, a sharp expansion in markets abroad together with increased consumption at home have afforded soybean growers a favorable price situation despite rapid expansion of production.