# **Tomatoes and Tomato Products**

economic trends in production for the fresh and processing markets indicate increase in consumption of tomato products

**Sidney Hoos** 

The following article is based on a portion of a detailed report, Tomatoes and Tomato Products—Economic Trends and F.O.B. Price Relationships, by Sidney Hoos, Mimeographed Report No. 185, available on request addressed to Giannini Foundation, 207 Giannini Hall, University of California, Berkeley 4.

The complex structure of the tomato industry in California is affected by the multiple use of tomatoes in processing and by the interaction between the fresh and the processing markets. Furthermore, California growers and canners are concerned with potential influences from other major areas producing tomatoes for processing. In terms of value as well as volume, tomatoes and tomato products—as a group—comprise a leading vegetable grown and processed in California.

A significant aspect of the California processed tomato industry concerns the number of different products manufactured from tomatoes. The complete list includes about a dozen different products, the major ones being tomato paste, sauce, catsup, juices, canned whole tomatoes, and puree. Recently, frozen tomato juice concentrate has been introduced, indicating a further widening of the tomato products line; and tomato juice powder—crystals—is at an advanced stage of development for commercial distribution.

The total market for tomatoes in processed forms has increased substantially more than has the market for fresh tomatoes

During the war years, as compared with the prewar period, the percentages for juice, puree, and paste increased, while the percentage for canned whole tomatoes decreased sharply. Since the wartime developments, the canned whole tomato outlet has remained near 10%, juice at 13%, paste near 33%, but sauce and catsup have gained some percentage points. Puree, however, has declined sub-

stantially and in recent years has been under its prewar percentage level. The minor products—as a group—have remained stable at near 10%. Tomato paste remains the largest single outlet for California processing tomatoes. In recent years, paste and sauce together have accounted for nearly half of the total tonnage of California tomatoes that are processed.

## **Production**

During the past 15 years or so, a sharp upward trend developed in the national production of tomatoes but the trend increased much more sharply in California than in other producing states.

From 1939–1943 to 1949–1953 national production of tomatoes for processing increased by about 25% compared with about 130% in California. Production decreased in 1954–55 by some 500,000 tons for the national figure and by about 100,000 tons in California. In terms of proportions, California tomato production for manufacture into products accounted for 25% of the national tonnage in 1939–1943 compared with 45% in 1949–1953 and about 50% in 1954–55.

Tomato acreage—in both California and the nation—advanced to peaks in the period of the war and the immediate postwar years, then receded. This occurred relatively more sharply for the processed than the fresh outlets, reflecting the wartime acreage expansion. The processing tomato acreage decline has been relatively sharper in California than the country in general.

The continued upward trend in yield per acre has been one of the more outstanding developments in the commercial tomato-growing industry. But the upward trend has been much steeper in California, with an increase for the fresh market of more than three tons per acre between 1939-1943 and 1954-55 compared to about % of a ton increase for the country during the same period.

The state's 1954-55 yield for processing was about 142% above the average yield for 1939-1943; during the same period, the national yield increased about 86%.

The interaction between acreage and yield resulted in production changes. The national production of tomatoes for processing trended up from the late 1940's through 1948, then declined. A sharp rise to an all-time peak in 1951 was followed by declines in the next several years. Without the rising trend in yields during the past half-dozen years, national production would have declined more than it actually did.

In California, there was an upward trend in acreage of processing tomatoes from 1938 through 1947. Postwar adjustment was reflected in a sharp cutback, but suddenly in 1951 acreage reached an all-time peak after which there was another sharp cutback to near the 1948–1950 average.

California per acre yield of processing tomatoes had been persistently upward, influencing the long-term trend in production. The short-term trends in production have been influenced by the variable short-term trends in acreage.

The over-all average farm price levels
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**Products Distribution of California Tomatoes Processed** 

Annual average for indicated periods	Canned whole	Juice	Puree	Paste	Sauce	Catsup	Others	Total	
		% of tonnage processed							
1939-1943	. 19	10	8	30	11	12	10	100	
1944-1948	. 9	13	12	33	11	11	11	100	
1949-1953	. 10	13	5	36	13	13	10	100	
1954-1955	. 11	13	4	32	16	15	9	100	



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-gross returns per ton at the first delivery point-for tomatoes during wartime and postwar years exceeded those of the prewar years, reflecting expanded markets and inflationary tendencies acting on prices of most products. After the 1949-1953 period, state and national prices tended to decline for both fresh and processing tomatoes. The decline was more for processing tomatoes than for the fresh market and more in California than in the country at large. For the fresh market, California tomatoes return a higher farm price per ton and gross return per acre than the national average. In the processing outlets, California farm prices per ton average less than the national price; but California's gross return per acre exceeds the national figure because of the state's sufficiently higher level of yield.

Sidney Hoos is Professor of Agricultural Economics, University of California, Berkeley.

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