

# Orange Industry Trends

changing economic relationships and technology affect returns and marketing practices of California growers

Sidney Hoos and J. N. Boles

*The following article is based on the more detailed report by the same authors, "Oranges and Orange Products, Changing Economic Relationships," Bulletin No. 731, available without charge by addressing a request to Agricultural Publications, 22 Giannini Hall, University of California, Berkeley 4.*

**More oranges** are produced and consumed—when all forms are included—in the United States today than ever before.

Less than 15 years ago over 90% of the nation's annual orange crop went into the fresh market, but today nearly one third of the nation's orange production goes into frozen concentrated orange juice—a market outlet not in existence a few years ago.

These changes in the orange industry—increased over-all production and an increased proportion going into processing—have affected grower returns in California.

Until recent years, the on-tree returns to California growers from Valencias used fresh averaged higher than the returns from navels used fresh. During the past several years this situation has been reversed and on-tree returns from fresh navels have averaged higher than those from Valencias. Valencias are more adaptable for processing and in that outlet yield higher returns than do navels. But the fresh market yields higher returns to the California grower of Valencias as well as navels. Since navels are mostly shipped fresh, their returns in recent years have held up better than the returns from Valencias.

## Causes of Changes

There is demand competition between fresh oranges and orange juice products. Recent developments in frozen concentrated orange juice have had a much greater impact on the fresh orange markets than did the earlier developments in canned single-strength orange juice. The competition is much more severe now because frozen concentrated orange juice is a stronger competitor with fresh oranges than was or still is the canned single-strength orange juice.

The better packs of frozen orange juice concentrate more closely approximate—in taste, flavor, and body—fresh orange juice, than canned single-strength orange juice does. And, because of the storability of the frozen concentrate a widely acceptable substitute for fresh orange juice is available year round.

Formerly Florida oranges competed with California winter oranges, mostly navels. But now, Florida oranges processed into frozen concentrate compete through the year with California oranges. California fresh summer oranges—mostly Valencias—now must compete with frozen concentrate. Also, through their frozen concentrate, Florida producers can now compete in areas which were not economically accessible to them with their fresh oranges.

The increased consumption of frozen orange juice concentrate has had a greater effect on California Valencias.

Navels usually are used for eating rather than for drinking as juice, while Valencias are used more for juice. Thus, navels have not been faced with a new competitive product—frozen concentrate—as much as Valencias. In addition, navels have long been accustomed to the competition of fresh fruit from other areas; but for Valencias, frozen concentrate appeared as a new type of competition.

## Problems of Competition

The marked growth in the use of frozen orange concentrate has brought a new situation to be faced by many California growers. The meaning of the new situation is not clear to many people.

It means another major market outlet for oranges has been established, although not one which will displace entirely earlier outlets.

It means that a larger proportion of the orange crop is being marketed as a manufactured product where nonprice as well as price competition is important.

It means that aggressive competition and merchandising on the parts of each of the segments of the orange industries—fresh shipments, frozen concentrate, canned single-strength orange juice—will be necessary to hold or to increase their relative volumes.

It emphasizes that the orange industries are subject to the impacts of technological and marketing developments and the changing economic relationships which follow them as well as precede them. As frozen concentrate has come on

the scene and is leaving its mark, so other types of orange products may be developed.

Under present conditions the interdependence among the markets for fresh oranges and orange products is such that operations in one market affect the returns from another. Market conditions for fresh oranges are not independent of the processed markets, a fact which requires recognition by growers as well as shippers. Also, sales of fresh oranges are relatively more responsive to price changes now than formerly—because of the greater competition from frozen concentrate and other juice products.

## Industry Decisions

Because of changing economic relationships the orange industries of California face the problem of whether significant industry decisions are to reflect the operation of agreements under the jurisdiction of governmental agencies, or, whether industry operations are to reflect the independent actions of individual growers, shippers, and processors. The history of the recent fresh market pro-rate agreement, as well as the current experience without it, reveal significant lessons to be learned by the industry.

The growing supply pressure of oranges and orange products, interacting with the competitive demand relations, oblige greater attention than ever toward possibilities of increasing yield per resource inputs and decreasing costs per volume outputs.

The pressure of cost reductions follows from the need for increasing returns to large segments of the California orange industries.

The earnings from use of the land and other resources in the production of oranges, and their comparison with expected earnings from alternative uses of those resources, determine the future course of the California orange industries.

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

*J. N. Boles is Assistant Specialist in Agricultural Economics, University of California, Berkeley.*