

Lemon Industry in California

economic objectives and operation of state marketing order for lemon products analyzed in terms of its effectiveness

Sidney Hoos

The following article is the fourth of a series on the economic situation and marketing problems of the California lemon industry.

After five years of experience with the California state marketing order for lemon products—since March 10, 1951—the effectiveness of the order can be evaluated in light of its objectives.

In broad and general terms, the objectives of the order are: to improve marketing conditions for lemon products; to prevent loss of income due to unstable markets; to provide benefits of industry-supported research; to conduct common sales promotion and market development programs; and to eliminate unfair trade practices within the industry.

The administrative structure and operation of the lemon products order are under the Lemon Products Advisory Board, composed of appointees by the California Director of Agriculture from industry nominations.

The Board has or can have firm control over the volume of California lemons processed in total or even in specific products. Yet, such control is limited to California lemons. Lemons for processing in or from other states, or imported processing lemon stock are beyond the control of the Board.

Stabilization, Free Tonnage

At the beginning of each marketing season and periodically thereafter, the California Lemon Products Advisory Board is required to examine the economic and marketing conditions affecting lemons and lemon products. On the basis of such information, a proposed statement on marketing policy is prepared. The statement includes a recommendation as to the percentages of lemons acquired by processors to be designated as free-pool and stabilization-pool tonnages, respectively. The total of the free and stabilization percentages equals 100%. Once the free-tonnage volume is established—through approval by the Director—it cannot be reduced for that marketing season.

Free-tonnage lemons acquired by a processor may be disposed of in any way he desires. But stabilization pool lemons acquired by a processor are held for the account of the Board and are subject to

restriction of the order, in the form of fresh lemons or in processed form if the latter has been approved by the Board.

At the beginning of each marketing season and from time to time thereafter, the Board considers what products are to be approved and what portions of the available stabilization pool tonnage are to be used for the respective products.

From October 1 to a fixed date between March 1 and May 30, the Board may authorize lemons to be sold—at prescribed prices—from the stabilization pool for use as free tonnage. The Board may extend the period, if—in its opinion—the price stability of lemons or lemon products is not unduly affected. However, no lemons from the stabilization pool may be authorized for sale by the Board at any time if free-tonnage lemons are available on the open market at equal or lower prices. An exception is that lemons may be sold from the stabilization pool at a lower price for manufacturing into lemon oil, pectin or other peel or pulp products, and such restricted use of the juice as the Board may require.

The Board may, at any time, set or change the price for stabilization pool tonnage, although the order specifies that Board action with respect to changing the price should not endanger the price stability of lemons or lemon products.

In addition to aggregate volume control, the Board may recommend the setting or changing of minimum grade or size regulations for lemons acquired by processors, or for the stabilization pool, or for any particular lemon products. Here, as for other provisions, final decision is with the California Director of Agriculture.

In 1951–52, the first full year of the order, the stabilization pool percentage was initially set at 65% and by steps reduced to 31% at the end of the season. In 1952–53 the stabilization pool percentage began at 35% and the season ended with no stabilization tonnage. In 1953–54 the stabilization was set and maintained at 40%. In 1954–55 the stabilization pool tonnage was originally set at 75% and lowered to 58% by the end of the season. In the 1955–56 season, the beginning percentage for the stabilization pool was 42.5% and by December, 1955, was dropped to 30%, and reduced again to 27% in April, 1956.

The operating provision of the lemon products order—that the free-pool volume, once established, cannot be decreased during the marketing season—may have been a guard against a situation where the Board might increasingly restrict the flow of lemons into processing as the season progressed. Such a view has validity if the Board—at the beginning of the marketing season—has an accurate projection of the season's over-all supply and demand situation. However, due to miscalculations in the size of the crop and to variations that can exist in the volume shipped fresh, the Board and industry do not have—at the beginning of the season—accurate projections of the total tonnage to be processed.

That same provision may encourage the Board to set the initial stabilization percentage conservatively with the view that necessary adjustments can be made as the season progresses. That, in effect, is what happened during three out of four past full marketing seasons.

The language of the order stresses price stability but the Board has direct control over the stabilization pool prices only and simply indirect or partial influence over other prices.

In comparison with other manufactured food products, consumer prices of lemon-juice products have been rela-

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AVOCADOS

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biotin. The sum of moisture and fat in most of the samples was fairly constant—about 91%—so that the differences in vitamin content may be considered valid even though total solids varied.

Avocados as a source of thiamine compare favorably with nearly all fruits and vegetables, with fish, milk, and eggs, and with all meats except pork. Avocados are exceeded in thiamine content chiefly by the whole grains.

As a source of riboflavin avocados are exceeded in concentration chiefly by evaporated milk, cheese, liver, and other organ meats. They are equal or superior to most other fruits, vegetables, meat, fish, cereals, and legumes.

Avocados contain more niacin than most fruits and vegetables, milk, cheese, and eggs, but less than most meats, fish, whole grains, and some legumes. The fruit appears to be in the middle range of all foods as a source of folic acid, but data are not numerous or consistent enough as yet to make valid comparisons. This is true also of pantothenic acid, vitamin B., and biotin.

It is plain that the avocado is in the superior group of foods as a source of both pantothenic acid and vitamin B.₆. The fact that the fruit is eaten uncooked adds to its value as a source of the water-soluble B vitamins.

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cations for each of the plants. However, if all ice-packing plants were consolidated in a single location, additional economies might be realized. These have not been evaluated but could occur in the better integration of such operations as lidding, and ice and crate distribution facilities.

Consolidation in a few plants should also improve the opportunity for continuous employment which would be attractive to labor and thus help provide a fairly reliable labor supply. Also, contractual arrangements in regard to minimum hours and crew organization could be more easily met.

Certain administrative problems do arise with consolidation. Questions of labeling, coordinating field and house operations, decisions as to whose lettuce

and how much of it will be packed in a given day, require considerable administrative skill. It is assumed that any increased administrative costs would be relatively small and more than offset by the indicated savings through consolidation.

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LEMONS

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tively stable. And, in terms of f.o.b. prices, those of lemon-juice products also compare favorably with other processed fruits. Yet, at both the consumer and f.o.b. levels, the prices of lemon-juice products have not been markedly more stable than those of other processed juices, excepting—perhaps—processed orange juice.

In the legislation on which the state lemon products order is based, one may interpret the term, price-stability, as pertaining primarily to grower prices and returns from processed lemons. During several of the years of the order's existence, grower on-tree returns from processed lemons were at higher than previous levels. However, the extent to which that was due to the order itself or due to the introduction and rapid market penetration of a new product—such as frozen lemonade concentrate—cannot be wholly untangled. Yet, it is likely that the effects of the order were substantial. Although higher grower on-tree returns from processed lemons were attained—if not maintained—substantial price stability to growers was not introduced. During that past five or six years, the relative variation in on-tree grower returns from processed lemons has not—on the average—been markedly less than in earlier periods.

Whatever the reason, significant price stability to growers for processed lemons has not been a result of the lemon products order. But the validity of price stability as a goal in itself might be questioned, because price stability—itsself—often can be attained only through the creation of other and less attractive types of uncertainty.

To growers, processors, and distributors, a more rational goal than price stability is income maintenance and growth. It is true that—when oriented to price—the order's operation does have an impact on income. However, with income maintenance and growth as a direct rather than indirect orientation, a more basic objective is established.

In the question of interrelations between the stabilization pool percentages and prices, the stabilization percentages by themselves tell only part of the story. The actual tonnages, resulting from the application of the percentages, are more meaningful as influences on product prices and the flow of lemons into processed products.

During the first year of the order, there was a rough tendency for the stabilization pool percentages and prices to trend in opposite directions; but such tendency did not continue. In the following years no unique or consistent pattern of relationship prevailed between the stabilization pool percentages and prices.

Supply and Price Effects

Control over both stabilization pool percentages and prices gives the Board a different type of influence than if only the percentage or only the price were controlled. Yet, if the Board can change the percentage, or price, or both simultaneously, it has the burden of maintaining some appropriate relationship between the percentages—and corresponding volumes—and prices of the pool.

When the stabilization pool percentage is decreased—with no revision in the projected crop or total volume available for processing—the effect is to ease the supply situation in lemons for products. This increased supply, by itself, tends to depress the market value of processing lemons and, in more or less time, the market value of lemon products. But if the pool stabilization price is increased, while the stabilization percentage is decreased, the price effect tends to dampen the supply effect.

Since the stabilization pool percentage can only be decreased or maintained at its initial level, lowering the stabilization percentage eases the short-run—within the marketing season—supply situation. However, the order does permit the Board to raise or lower the stabilization pool price. Raising the pool price tends to raise the market value of processing lemons. Lowering the pool price tends to lower their market value. But the effectiveness of the stabilization pool price—with respect to its impact on market developments—depends not only on the availability and current market price of free tonnage of California lemons but also of lemons from other states and imported supplies. Only when the Board does, in fact, regulate the flow of lemons into processing, does the stabilization pool price have full meaning and impact.

Every permissible combination of stabilization pool percentages—and corresponding volumes—and prices is unique in its actual or potential impact on market prices. In view of the practical oper-

ating difficulties of setting appropriate relations between stabilization pool volumes and prices, alternative procedures have been indicated. One is that if the Board decreases the stabilization percentage, and thereby makes available an increased volume of processing lemons, they could be sold to the highest bidder. Thus the Board would—through its control of the stabilization percentage—affect only supply directly and could then accept the price resulting from the supply and demand situation.

Several years ago, when the demand for processing lemons was strong and the supply situation was very tight, unsatisfied sources of demand viewed the operation of the stabilization pool as the basic root of difficulty. During the past year or so, with a more or less comfortable supply situation, criticism of the supply control provisions of the lemon products order has been less prevalent.

If the supply situation were sufficiently tight, without the control features of the order operating, the burden of supply deficit would be distributed among the industry participants as if no order were in existence. In such a supply context, the order in its supply control provisions would be sterile or neutral. But when a relatively tight supply prevails—through the effect of the order's stabilization pool features—the distribution of the impact from the created supply situation is related to the total acquisitions of processing lemons by the respective firms. In such a case, firms bear the burden proportionately to the total California lemon tonnage which they have been able to acquire unless they draw upon supplies from other areas.

Interlocking Markets

In economic operation and effects, lemon products and fresh lemons—in terms of supply and demand—are interdependent parts of the same industry. What occurs in one sphere of the industry has carry-over effects to the other sphere, either in the short run or in the long run.

However—for legal and institutional reasons—the fresh shipping part of the California-Arizona lemon industry operates under a federal marketing order, inaugurated in 1941, while the California lemon products part of the industry operates under a state marketing order that went into effect 10 years later. The language of the two orders may be presumed to have the same objectives only by stretching their interpretation. Yet, from the view of the California lemon industry at large, the economic objectives and operations of the two orders should be consistent with each other.

Within the present framework of operations, the federal fresh lemon marketing

order prorate committee surveys the California-Arizona lemon crop prospects, investigates economic conditions and prepares a season marketing policy setting forth the expected total crop and planned fresh shipments therefrom. As the season progresses and the size of the crop becomes more certain, and as economic conditions develop, the marketing policy statement is revised. Weekly prorates are authorized to respective shippers, with the intention that the sum of the weekly prorates during the season will aggregate to the planned seasonal total to be shipped fresh.

Although movement into products channels is considered, the prime attention of the fresh lemon prorate committee is directed to the flow of fresh market shipments, their prices and returns. Prices and returns from lemon products are considered only indirectly. The fresh lemon prorate does not directly grapple with the problem of allocating the total seasonal supply of lemons between the fresh and processed markets so as to attain clearly specified objectives of price and income returns from the entire crop.

Because the market demand for fresh lemons tends to be inelastic—within the range of usual operations, smaller total shipments bring higher gross f.o.b. or on-tree returns than do larger shipments—the fresh lemon prorate committee has authorized for shipment to market seasonal totals less than the entire crop. Such policy and practice are followed—basically—to increase seasonal total gross income from the fresh market.

In the prewar and immediate postwar years, when the products market was dominated by low-value lemon products, returns were negligible from the products. But beginning in 1950, as the higher valued juice products—frozen concentrated lemonade and single-strength lemon juice—grew in volume, product returns rose to record levels.

The California lemon products order put the products part of the industry in control of the flow of California lemons available for processing and that control was oriented toward the higher valued juice products to prevent breaking the market price. However, the evidence is not clear whether such regulation was effectuated so as to bring the maximum return from processed lemons. Market experience and resulting data for the higher valued juice products are not yet adequate to provide the necessary base for testing statistically the nature of the economic outcome.

Allocations of the fresh lemon prorate have resulted in somewhat stable year-to-year seasonal fresh shipments. But this has occurred in the face of expanding national population, production, employment, and income; thus, in relation to the changing economic status of the

country at large, fresh lemon consumption has lagged behind. On the other hand, the growing availability and consumption of lemon-juice products manufactured from California and other domestic lemons as well as imported lemon stock—when added in equivalent units to fresh lemons—reflect an expanding per-capita consumption of lemons and lemon juice products.

Basic Problems

Because the lemon products outlet must absorb in some way the crop residual not shipped fresh, the lemon products order committee is faced with a very complex situation. The products Board has no complete control over the volume of processing lemons available, nor any control over imports or domestic supplies from outside California. Thus the Board is faced with tailoring the flow of California processing lemons into juice products under a highly unstable situation. If the flow of California lemons into juice products is restricted—to enhance their price and returns—importations of lemon-juice stock are encouraged and domestic plantings are promoted. On the other hand, if supply regulation of products manufactured from California lemons were not practiced, product price returns would likely sag; and—although importations and new plantings would be discouraged to an extent—the potentially lower priced lemon-juice products would generate even greater consumption competition with fresh lemons.

The nature of the situation—in the institutional and economic context within which the lemon products order operates—is such that it is subject to scrutiny. But destructive criticism—by itself—only results in adverse effects on industry relations and operations which are not of long-run benefit to those concerned. What is needed is more constructive consideration of the basic problems facing the lemon industry.

These basic industry problems include: 1, recognition of the interlocking of the fresh and products markets; 2, the corresponding operation of the two orders—in terms of economic objectives and effects, if not in administrative and legal terms; 3, utilization of the crop and its allocation between outlets to approach maximum income returns from the total crop; 4, effects of imports and their potential growth; 5, effects of new plantings in virgin and established areas; and 6, the long-run output and income position of the industry, in light of the nation's growth and economic expansion.

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The fifth and last article in this series will appear in the December issue of California Agriculture.