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# Harvest of Waste

## The Marketing Order Program

Thomas M. Lenard and Michael P. Mazur

**U**NDER EXECUTIVE ORDER 12291, signed by the president on February 1981, executive branch agencies have to submit their rules for review to the Office of Management and Budget (OMB). Many agencies yearn to be excused from this review, but only one program of one agency has ever succeeded in getting Congress to give it an exemption. From the usual rhetoric in the debate over OMB's powers, you would think the exempted program would be some crucial venture in health, safety, or environmental regulation that commanded wide public and editorial support. But in fact Congress has chosen to give this special dispensation to one of the most blatant of all self-seeking special interest programs: the agricultural marketing order system.

Beginning in November 1983, Congress each year has used a legislative rider to prohibit OMB from spending any money to review

*Thomas M. Lenard is special assistant to the director of the Bureau of Economics, Federal Trade Commission, and was formerly deputy division chief for economic regulations, Office of Management and Budget. Michael P. Mazur is an economist at OMB. This article was written before Lenard joined the FTC staff.*

marketing orders. Since 1980, Congress has also prohibited the Federal Trade Commission from monitoring marketing orders. Yet the underlying controversy will not go away. Since the 1970s, the marketing order program has come under ever-growing criticism from economists, reformers in federal agencies, consumer groups, and increasingly some regulated growers as well.

### Why Beer and Chewing Gum Cost More

Despite serious concerns about the system of marketing orders for milk, OMB concentrated its efforts on reforming the system of federal marketing orders for fruits, vegetables, and "specialty crops" such as hops and spearmint oil. There are now forty-seven such orders, covering crops valued, in all, at more than \$5 billion annually. Kiwi fruits were recently added to the list.

The procedures governing marketing orders are set by the Agricultural Marketing Agreement Act of 1937. The secretary of agriculture at his discretion issues a formal rule establishing an order and defining its powers and

procedures. The order must then be ratified by a referendum of producers. Thereafter, within the terms of the order, a special administrative committee representing primarily producer interests periodically develops implementing regulations which, if the Department of Agriculture (USDA) approves, are published in the *Federal Register* and take legal effect. These implementing regulations are the ones that OMB reviewed from 1981 until 1983 when Congress upset its kiwi cart.

The orders authorize the department to impose a variety of controls on request of the administrative committees. Some are primarily technical and have aroused relatively little controversy. Others severely restrict the flow of crops to market, curtailing supply and driving up prices. OMB's concerns focused on four of these supply restrictions:

(1) A *producer allotment* system forbids a producer from selling more than a fixed maximum quantity. The quantity is derived by assigning each producer an "allotment base" and multiplying it by an annually determined allotment percentage. The spearmint oil board, for example, maintained a total allotment base of 1,459,083 pounds of "class 1" oil for the 1983-84 marketing year. The board recommended (and USDA agreed) that 714,951 pounds, or 49 percent of allotment, be allowed to be sold in the 1983-84 season. Thus a producer could sell 49 pounds of spearmint oil for each 100 pounds of base he held.

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narily can only be done by buying it from an incumbent producer. Typically, incumbents obtained their allotment by virtue of having been in operation when an order was established. Only four relatively small crops now come under producer allotments—hops, spearmint oil, cranberries, and Florida celery—and only in the hops and spearmint oil orders does allot-

ment base currently command a price above zero; in the other two orders output is not held below the free-market level.

(2) *Market allocation* provisions shunt output from "primary" markets (typically produce sold fresh in stores or produce used domestically) to "secondary" markets (processed foods, exports, and nonfood uses). For example, for 1983-84 the walnut marketing board recommended (and USDA agreed) that 76 percent of the crop was needed to satisfy "domestic needs," the effect of which was to prevent the remaining 24 percent from being offered on the domestic market. (Instead it was made available for export.) Market allocation is used in four orders: almonds, filberts, walnuts, and raisins.

(3) *Reserve pool* schemes require all producers to place a specified portion of their crop into storage. (In some instances, they may satisfy this requirement by destroying the specified amount.) Later, all or a fraction of the set-aside may be released for unrestricted sale or for sale into a secondary market. Reserve pools are authorized in seven orders: tart cherries, almonds, walnuts, raisins, prunes, hops, and spearmint oil.

(4) *Prorates* limit the quantity of produce a handler may ship to primary markets during a particular time period, typically a week. For example, a USDA regulation published on October 12 of last year stipulated that growers could ship no more than 200,000 cartons of fresh California-Arizona lemons to market during the period from October 14 to October 20. Similar announcements are published weekly. The excess produce must be held for later shipment or sold to secondary markets.

Prorates are used in the three California-Arizona citrus orders, covering crops worth over \$400 million at 1982 farm prices. Moreover, the citrus prorates are extended through the entire growing season, which means that, just as in the case of the market allocation orders, some of the crop is never allowed to reach the primary market. Incidentally, most marketing orders apply not directly to growers but instead to handlers—the intermediaries, sometimes part of grower cooperatives, who receive the crop from the growers, pack it, and market it.

A number of orders also authorize a minor form of volume control known as *shipping*

*holidays*, under which shipments to the market may be restricted for brief periods, typically around calendar holidays. In addition, most marketing orders, including those with volume control provisions, set *quality standards* affecting the grade or size of the crop, and *container and packing standards*. They also authorize mandatory assessments on growers to fund *research and advertising*.

### How Competition Withers on the Vine

All four major types of volume control deploy the legal powers of the government to manipulate supply in an effort to increase grower profits. Only in the producer allotment system is this cartel of the classic textbook variety, in which the cartel restricts the total amount sold. Under the prorate and market allocation systems, anyone may become a grower and may grow any given amount of a crop.

This does not mean that prorate or market allocation orders fail to raise the prices producers receive. It only means that they do so through price discrimination rather than output restriction. Economics textbooks show that it is possible for a cartel of producers to gain higher revenue by selling their product at different prices to different markets. To succeed in increasing their revenue, they should restrict supply and raise prices in the markets with less elastic demand, while transferring the excess to the markets with more elastic demand. For example, the western orange orders restrict sales of the fresh product in grocery stores, for which demand is relatively inelastic, and increase sales to orange juice processing, for which demand is elastic because processors can easily buy Florida oranges. The result of this price discrimination is that identical products are sold for different prices.

The prorate orders also achieve what economists call inter-temporal price discrimination. While all oranges of a particular variety mature at about the same time, they can be stored ripe on the tree for some months. The prorate enhances prices in the early months of the season by delaying early shipments. This practice also indirectly restricts the total supply of quality fresh fruit because some oranges deteriorate when they are held on the tree for extended periods.

Perhaps the most significant difference between the ordinary cartel and these price-discriminating marketing orders is that, in the latter case, production is artificially high instead of artificially low. Because the price-discrimination scheme yields higher average producer prices, existing growers find it profitable to expand their output, while new entrants begin growing the crop. This piles one inefficiency on another: not only are oranges diverted to juice when consumers would rather enjoy them fresh, but resources are unproductively diverted to growing juice oranges because doing so entitles a grower to share in the profits from fresh ones.

Reserve pools sometimes work to enforce price discrimination as well. This occurs because not all the crop held back in the reserve pool is always released later for unrestricted sale. Instead, some or all of it can be diverted into a lower-price secondary market or even destroyed, much as happens under the prorate and market allocation system, and resulting in much the same sort of price discrimination. The reserves simply serve as way stations to the eventual disposal of the diverted crop.

Although OMB's review program focused primarily on the four major volume-control provisions, quality standards also serve as a potentially important way of limiting supply. A quality standard that is set high enough to exclude products that consumers are willing and eager to pay for can artificially constrain the available supply of the product. In addition, since imports must meet the same standards as domestic crops covered by marketing orders, marketing boards can sometimes use quality standards to screen out foreign competition. (For an account of how the filbert marketing board tried to do this, see "Dispatch from the Nut Wars," *Perspectives, Regulation*, January/February 1982.) Thus, even if marketing boards lost the power to impose direct volume controls, they might turn to quality standards to accomplish the same goals.

### In Search of an "Orderly" Market

The purpose of the marketing order system, according to the 1937 law, is to establish "orderly" marketing conditions. Although this concept is not well defined, either in the 1937 act

or elsewhere, it must presumably have something to do with reducing the risk associated with market swings. The argument sometimes runs as follows: (1) Marketing orders help stabilize prices between good and bad crop years and during the season, which (2) allows growers to earn more stable and predictable profits, which (3) makes it cheaper to raise funds for planting, since potential investors are risk-averse. This lower cost of capital, passed on to consumers, outweighs any conventional welfare loss that may result from supply restriction. There are problems with all three links in this chain of reasoning.

First, there is no convincing reason to believe that marketing orders in fact stabilize prices, or even are usually meant to. It would be consistent with a stabilization objective to slow down the flow of crops to market in bumper-crop years but then take off the restrictions in years of normal or scanty crops. In fact, prorated and market allocation provisions are used in good and bad years alike—suggesting that their purpose is simply to raise prices, not smooth them out. (Incidentally, stabilizing prices would not in itself necessarily leave consumers better off, since they are unlikely to prefer a uniform high price to an alternation of high and low prices.)

Second, even if marketing orders did reduce fluctuations in prices they would not

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necessarily reduce fluctuations in grower profits. If prices held steady through good and bad years alike, producer profits would plunge in the bad years when they had little crop to sell. Allowing prices to gyrate, on the other hand, helps to stabilize profits by letting producers make up on unit profit some of what they are losing on volume and vice versa.

If the orders did succeed in stabilizing profits, it is possible that more investment would be forthcoming, though it is unlikely that the effect would be very great, since most investors can already reduce their risks by di-

versifying their holdings. We may doubt, however, that the orders are guided by any intent of passing along such risk reductions in the form of lower prices to consumers. The producer allotment provisions actually forbid willing investors the opportunity to invest in new production on any terms.

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are often predictable and need not represent any sort of market failure. Fresh asparagus, raspberries, and oysters are expensive or unavailable through much of the year, but producers make a profit on all three even without marketing orders. Hotel rooms are an example of an entirely unstorable (and often highly seasonal) commodity whose prices manage to clear without government help. Trying to smooth out the fluctuations by setting a "fair" uniform price for such goods throughout the year would probably deprive consumers of the benefits of the months of abundance, without succeeding in making the goods available during the months of scarcity.

Furthermore, most of the commodities subject to volume controls are in fact storable for relatively long periods, including both of the crops covered by binding producer allotments, hops and spearmint oil. But what is most relevant is that marketing boards have fought hard against innovations that would make their crops more storable. The lemon committee has been blocking the introduction of shrink-wrap technology that could make lemons storable for six months or more. In the milk marketing order program, which operates an elaborate price-discrimination scheme, USDA has blocked the introduction of a storage technology, reconstitution of milk, that

would help to even out seasonal fluctuations in supply. (See "A Reconstituted Threat to the Milk Cartel," Perspectives, *Regulation*, May/June 1983.)

Storable crops should in general be held back in bumper years for use in seasons of scarcity, and growers and handlers of unregulated crops already have every pecuniary incentive to do so; it is the familiar process of speculation in hopes of higher prices. Reserve pools are meant to accomplish the same goal, but there is no reason to believe that the administrative committees that operate the pools are better able to determine the optimal amount and timing of storage than individuals with their own money at risk.

### The Prorate Orders

The most detailed form of volume control is the prorate, which specifies how much product each handler may ship to the fresh market during each week of the season. The theory behind prorates is that, without centralized regulation, the uncoordinated decisions of individual producers would cause a glut at supermarkets one month, and a shortage the next, followed by another glut, and so on. During the glut, prices would be ruinously low, which would discourage all the handlers at the same time from shipping any more product. Shipments would drop precipitously, which in turn would lead to a shortage in which the only fruit available was that left over from the glut and decaying on supermarket shelves. The high prices during the shortage would prompt too many shipments, followed by a new glut, and so on in a vicious circle.

Exactly why this is a danger only for three crops is not evident. A vast array of other perishable items, including other fresh fruits and vegetables, seems to reach the consumer in good time without benefit of prorate. Sometimes it is claimed that citrus crops require special rules because they can be stored on-the-tree for several months after they ripen—as if this greater flexibility were especially likely to lead growers into suicidal errors. Other citrus fruits, however—such as limes, tangerines, grapefruit, and oranges from other states—come to market successfully without the use of season-long prorates.

It is worth noting that when the marketing orders system was established in the 1930s, fresh oranges and lemons were generally shipped by train and sold at auction markets or by commission agents. Growers sometimes found that the price they received when their fruit was finally sold was quite different from the price at the time of shipment. But this concern, whether or not it is relevant to the original rationale for the program, is out of date. Modern communications bring distant market information to growers very quickly, and today about 90 percent of the crop is sold at a price determined before shipment.

Whatever the effect of the prorate on week-to-week stabilization, the scheme has clearly not succeeded—in the case of oranges at least—in evening out the flows to the fresh market between one season and the next. For the six years ending in 1982, the year-to-year percentage swings in the supply of navel oranges to the fresh market were -23, -5, +54, +9, and -9. The corresponding figures for valencia oranges were +7, -24, +48, -26, and 0. It is always possible that the fluctuations might have been even greater without a prorate order, but it is evident at least that the prorate, at best, fell well short of its professed goal of stabilization.

The establishment of mandatory prorate systems for western citrus crops followed the failure of attempts by the dominant cooperative to enforce similar marketing restraints on a voluntary basis. Beginning in the 1920s, the California Fruit Growers Exchange (the predecessor of Sunkist, Inc., which still dominates the industry) tried to regulate shipments by its member growers to the fresh market. It was stymied, however, by "free rider" problems. Independent growers outside the cooperative could increase their profits by refusing to go along with the agreement and shipping all their crop to the high-price market. Members of the exchange, meanwhile, had an incentive to quit the cooperative and do the same thing. Predictably, the exchange found its share of the high-price market falling. When it began pushing for the establishment of mandatory prorate for oranges and lemons, it faced opposition from most of the independent growers—opposition that continues today.

Citrus growers and marketing board officials have at times been strikingly candid about

the real purpose of the orders. In its 1969-70 annual report, the valencia orange board stated that the order it administers "is designed to aid growers in achieving maximum returns. . . . The basic means used to aid in maximizing returns is the control of the fresh oranges shipped weekly." Board officials have made no secret of the fact that they use econometric models of their markets to determine the revenue-maximizing allocation of the crop between different markets. In 1974 the California-Arizona Citrus League reported to the Cost of Living Council on the operation of the navel orange order:

There has been developed through study of economic analysis of 17 years of navel marketing results, a regression equation which forecasts with remarkable and proven accuracy the level of regulated shipments which will produce the maximum on-tree dollars for a given crop. . . .

In recent years, prorate supporters have become more circumspect in their language, usually claiming that the system is operated for the benefit of producers and consumers alike. Nonetheless, the boards go on using the revenue-maximizing models in making prorate decisions.

### The Effects on Quality

Marketing orders are most often involved in public controversy when crops covered by such orders are deliberately destroyed or used as cattle feed. In 1981, a bumper year for California oranges, an outcry arose when photographs of oranges rotting in parking lots appeared in the press. Prorate supporters sometimes claim that the produce involved in such cases is below the quality acceptable to the fresh market, that virtually all fruit of high enough quality to be consumed fresh is eventually allowed onto the fresh market, and that only substandard fruit is being processed into juice or fed to cattle.

If this is true, it implies that the average quality of California-Arizona citrus has been declining steadily, since less and less of the crop has been found worthy of shipment to the fresh market since the establishment of mandatory prorate. In the 1920s and 1930s, before the mandatory system, more than 90 percent

was shipped fresh; the figure has fallen below 70 percent in recent years. What is ironic is that West Coast oranges are in fact not well suited for processing into juice. Navel oranges, in particular, produce marketable orange juice only when combined with varieties of orange better suited to juice production.

Sales of California-Arizona navel oranges more than doubled in the past two decades, as the last column of the accompanying table shows. This expansion was stimulated by a variety of factors, including low-cost irrigation water, the tax advantages of investing in citrus groves, and of course the prorate itself, which artificially increased the profitability of entering the market. In order to keep this increased output from depressing fresh prices, the marketing board had to shunt a larger and larger fraction of the crop into secondary markets. This trend is apparent in the table's first column, which shows a steady and marked decline in the percentage of the total crop that was sold to the domestic fresh market. Valencia oranges and lemons exhibit similar patterns.

Since the stated purpose of the prorate is to maximize grower returns, it may seem surprising, at first, that some member growers vehemently oppose each of the three western citrus prorates. As they see it, the prorate is meant to increase the income of the *average* grower not only at the expense of the consumer, but also at the expense of the grower that

DISPOSITION OF  
CALIFORNIA-ARIZONA NAVEL ORANGES  
(annual averages)

	Domestic Fresh	Export Fresh	Processed	Total
1963-68				
Carloads	23,622	1,045	5,517	30,833
Percent of total	76.6	3.4	17.9	100
1968-73				
Carloads	28,728	1,607	10,045	41,719
Percent of total	68.9	3.9	24.1	100
1973-78				
Carloads	34,272	3,559	12,484	51,560
Percent of total	66.5	6.9	24.2	100
1978-83				
Carloads	39,425	5,128	19,804	66,041
Percent of total	59.7	7.8	30.4	100

**Note:** Each figure represents an average over five seasons; that is, 1963-68 refers to the five seasons 1963-64 through 1967-68 inclusive. The first three columns do not sum to the fourth column, which also includes other minor uses such as charitable donations. Oranges that are grown but not harvested are not included in any of the four columns of this table.

**Source:** U.S. Department of Agriculture.

could prosper by producing better quality fruit or by marketing it more effectively. In other words, it makes "the strong carry the weak." They point out that since the proportion that growers and handlers may sell to the lucrative fresh market is fixed by fiat, not competition, they cannot hope to capture a larger share of the fresh market by improving the quality or marketing of their crop. The system protects the growers of inferior fruit, but only by removing the major incentive to improve fruit quality. Thus even if some of the parking-lot oranges were substandard, their low quality might be partly due to the prorate system itself. (Another reason for low quality is that the orange prorates tend to prolong the marketing season beyond what it would be under a free market, so that more oranges deteriorate on the tree.)

### Wasted Fruit, Wasted Money

Less publicized, but perhaps more significant, is the waste that occurs when fruit is grown but never harvested. This waste is most apparent in the case of the lemon order, which encourages up to 25 percent of the crop to be left to rot in the orchard under official sanction. Lemons that are "certified on tree" never leave the orchard, but still entitle the handler who controls them to a bigger prorate share just as if they had been picked and delivered to him. It pays the handler to have crops he controls certified on tree whenever secondary market prices (driven down by the effect of prorate)

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fall below the costs of picking and delivering the crop to the secondary market. In 1982-83 the volume of certified-on-tree lemons was about 23 percent of the total crop and actually exceeded the total volume of lemons sold to the fresh market.

The orange prorates establish similar incentives to abandon fruit in the orchard, but

use a different system under which a crop need not be officially certified in order to be profitably abandoned. Hence we have no data on how many oranges are left to rot in the groves. Dissidents have alleged that some orange groves are maintained for the sole purpose of entitling the affiliated handler to a larger prorate; the crop, they claim, is never harvested and was never intended to be.

In economic terms, the harmful effects of the prorate include the wastage of fruit, the distortion of consumers' decisions between fresh and processed fruit, and the costs of overproduction. It is not possible to measure with great accuracy how much these inefficiencies cost the economy. To do so properly, we would have to know by how much the system has driven up prices in the primary market compared to the secondary market. It is easy enough to measure the gap between the two prices, but much harder to know how much of that gap is due to price discrimination and how much to the difference in quality between the fruit going to the two markets. Economist Sheldon Kimmel of the Department of Justice has dealt with this problem, using a procedure that computes a lower bound for the costs of prorate. He calculates that in recent years the value of resources wasted in unnecessary processing as a result of the navel and valencia orange prorates was \$72 million annually in 1983 prices.

One quantifiable social cost of the lemon prorate is the waste of resources that have been used to produce the lemons abandoned in the orchard. Gary Benoit of the University of California-Riverside and Roger Fox of the University of Arizona have estimated the costs of producing lemons in the 1982-83 season at \$2,672 per acre. Multiplying this by 16,824 acres (23 percent of the total acreage covered by the order in 1982-83) indicates that the cost of producing the abandoned lemons was \$45 million. As in the case of oranges, this figure represents only a portion of the welfare costs of the prorate.

### Reformers in the Pits

Economists have been eager to reform marketing orders for a decade now. Early interest came from the antitrust agencies, and although the FTC was rewarded for its efforts by a statutory

ban on doing research in the area, the Justice Department continues to take an interest in the subject.

During the inflationary 1970s, when many anti-competitive programs began to come under pressure, the Cost of Living Council succeeded for a while—until it reportedly lost White House support—in getting more navel oranges released to the market than the marketing board had recommended. Later, at the direction of President Gerald Ford, an interagency task force chaired by USDA investigated marketing orders and found that a number of them had “price enhancing” effects or “potential.” Inflation fighters in the Carter administration also addressed the subject, but their major initiative was an unsuccessful effort to end the effective ban on reconstituted milk under the milk marketing order program.

When the Reagan administration came along, change again seemed to be in the wind. The Presidential Task Force on Regulatory Relief, chaired by Vice President George Bush, quickly targeted marketing orders for review and possible reform. In response, USDA undertook a fairly detailed review of the marketing order programs. While its report, published in November 1981, did not reach conclusions on the overall desirability of marketing orders, it recognized the efficiency costs of provisions that restrict supply and it identified volume-control provisions as the worst culprits in creating economic inefficiency. Seven specific orders were named as likely contributors to inefficiency: hops, spearmint oil, California lemons, navel oranges and valencia oranges, and perhaps walnuts and filberts.

As a result of its review, USDA announced new marketing order guidelines on January 25, 1982. While the guidelines were in many respects ambiguous, they did suggest that USDA intended to make pro-competitive changes in the way it administered the orders. But after a contentious year of working with the guidelines, it was clear to most observers that virtually no reform had taken place. Only two relatively minor marketing order decisions were altered, both as direct results of OMB's intervention. The budget office blocked a proposed increase in quality standards that would have kept out imported filberts and thwarted the tart cherry board's 1982 proposal for a 20-percent reserve.

The Reagan administration's position on marketing orders was still unclear. And when the subject came before the full cabinet in the spring of 1983, the result was again inconclusive: a “reaffirmation of administration support for the marketing order concept” combined with a commitment “to rely more fully on free market forces.” In addition, Secretary of Agriculture Block announced three reforms of volume-control orders: (1) prohibitions on new entry in allotment programs would be phased out over five years; (2) market allocation and reserve pool programs would have to release to primary markets a quantity equal to at least 110 percent of recent years' sales in those markets; and (3) USDA would provide for “greater flexibility” under prorated programs. While the first two of these reforms may seem precise, OMB and USDA were soon embroiled in a dispute over the interpretation of both. The dispute ended when Congress ejected OMB from the marketing order field.

If USDA were to follow through on Secretary Block's commitments—and it has ample opportunity—significant reform could still be accomplished. The department, however, is letting some valuable opportunities slip by. After extensive hearings on the navel and valencia orange orders, it issued a decision last year that left the prorated little changed. At about the same time the department approved the establishment of a new marketing order for kiwi fruit. Neither of these decisions encourages optimism about the outcome of hearings held last year on the lemon and hops orders. In late January 1985, on the other hand, the department overruled the objections of the Navel Orange Administrative Committee and suspended the navel orange prorated—a virtually unprecedented step. While this action came as a response to an unusually severe shortage, it probably would not have happened without the policy debate of the previous four years.

For the time being, at least, the OMB review process seems to have done its worst (or best). The next impetus for reform may be legal challenges to the way in which the department approves marketing order regulations. The courts may be reluctant to overturn procedures that have been in use for almost fifty years. But some branch of government will have to take the initiative if this Depression Era relic is to be finally relegated to the history books. ■