

Farmers' markets— myths and realities

Robert Sommer

Some customers are needlessly skeptical about quality of produce, cost savings, and the time and trouble necessary to buy directly from farmers.



In 1977, the California Department of Food and Agriculture began a program to certify farmers' markets. The program provides the consumer with a guarantee that the seller of produce is the grower, a member of the grower's family, or an employee of the grower. In November 1978 there were 25 certified farmers' markets throughout California. Of this number, ten were roadside stands adjacent to a grower's field selling only the produce of that grower. The remainder were public markets at which any local growers could sell their produce. Three of the markets (in Davis, San Diego, and San Francisco) operate year-round; the rest are seasonal.

Certified markets were created to meet several needs. First and foremost, they were expected to offer the consumer lower prices and the grower more returns by eliminating the middle levels in the marketing system. Second, they would provide outlets for small producers who were largely excluded from conventional marketing channels. As one local melon grower put it, "If I drove to (chain store) with a truckload of melons, they'd laugh at me." There was also the hope that farmers' markets would provide fresher and tastier produce. Certain social benefits were expected from direct contact between farmers and consumers, including an educational role on both sides. Farmers' markets were expected to provide outlets for labor-intensive specialty crops not suited to mechanized handling.

On the debit side, some customers were

skeptical about the quality of the produce, cost savings, and the time and trouble necessary to buy directly from farmers.

A recent survey conducted by the USDA, which included 1300 household food shoppers from different regions and social strata, estimated that 16 percent of the households purchased produce during the past 5 years at a farmers' market or city market where farmers sell their own food products from trucks or stalls. Some of the chief sources of consumer resistance to direct marketing identified in this survey were travel inconvenience, inconsistent product quality, lack of variety, price, and dislike of crowds.

The possibility of price savings for consumers brought farmers' markets to the attention of the UC Davis Center for Consumer Research. The Center was founded in 1976 to research consumer issues. The proximity of three certified farmers' markets in Dixon, Davis, and Woodland—in Yolo and Solano Counties—made this a feasible research undertaking. (We hope to expand the geographical study area soon.)

During summer and fall 1978, Center staff conducted interviews and made customer counts at the three certified markets and undertook price and flavor comparisons of produce offered at the farmers' markets and supermarkets. We are currently seeking to expand the scope of the research to other certified farmers' markets in the state and also to other types of direct market operations, including "farm trails,"

"U-pick," the Consumer Hotline (run by the State Department of Food and Agriculture), and certified roadside stands. Although this research is continuing, we have learned enough to dispel some of the myths about *certified* farmers' markets. We have observed farmers' markets elsewhere but have not undertaken systematic studies. It should be noted that all of our generalizations apply only to certified markets and not to roadside stands or other enterprises bearing the name "farmers' market" without certification. With these qualifications in mind, we will attempt to sort fact from fancy regarding the following generally-held beliefs.

Belief #1: The farmers' market is crowded, with masses of people picking over the items. This seems more true of urban farmers' markets than the smaller local markets we studied. The most populous of the three local markets was in Davis on a Saturday in September when we counted 1553 customers over the entire morning the market was in session. The maximum number of customers present at any given time was 176. We have also counted a maximum of 25 produce suppliers at the Davis market. This does not include non-produce suppliers who are regulars at the Davis market such as plant and flower sellers, people who sell baked goods, and so on. Population peaked at the Davis market about an hour after it opened. After that, customers had plenty of room. Crowding is a problem at urban markets we have visited,

such as Seattle's Pike Place Market or the San Francisco Farmers' Market, which has been in operation since 1943, and claims average Saturday crowds during the summer months between 30,000 and 40,000 people.

Belief #2: There are long delays at the farmers' market, with lines of people waiting to pick out and pay for produce. This is an erroneous view, based on observations of a few suppliers of unusual specialty items. Lines of any sort are infrequent at a farmers' market. Shopping time at the farmers' market can be as brief or extended as the customer desires. It is possible to shop and run, and many customers do. Others, for whom the social aspects of the market are important, may spend fifteen minutes talking to a small producer about shelling almonds or raising bees.

Belief #3: Farmers' market prices are lower. This is fully supported by our data. Matched item for item, the farmers' market price was lower 90 percent of the time; and the supermarket price was lower 10 percent of the time. Averaged over all items, the supermarket price was 71 percent higher than the farmers' market price for the same item. These results are similar to those of researchers who studied food fairs held in 22 towns and cities in Tennessee and Alabama during the summer of 1977, in which farmers could sell only food that they had raised themselves. Tabulations showed a 50 percent average savings to the consumer on produce under the retail cost. A comparison made of food prices at Seattle's Pike Place Market with the prices at five Seattle supermarkets showed that the farmers' market prices were lower 61 percent of the time, approximately equal 23 percent of the time, and higher 16 percent of the time. The average price for produce items at the Pike Place Market was 19 percent lower than the supermarket price. Because the price savings at all these markets were not spread evenly over all items, careful shopping is necessary to maximize the savings in direct marketing.

Belief #4: Quality at the farmers' market is more variable. This is true. Small producers selling from the back of a pickup truck do not cull their produce as extensively as supermarkets. This is a deliberate and considered policy. The underlying philosophy is that there is a market for any produce that is not rotten, spoiled, or totally unusable. Someone will be interested in an overripe melon or blemished tomatoes if the price is right. Greater variability and occasional spottiness also mean less waste and lower prices.

Belief #5: Produce sold at farmers' markets tends to be seconds that the farmer



wasn't able to sell through commercial channels. Generally, this is false. For the small producers, direct marketing is a major outlet. However, we did come across a few instances of growers bringing to the market items that remained in the fields after the commercial picking was completed. These items included culls as well as items not ripe when the mechanical harvest was made. Because culls are occasionally included, this belief has some substance, but only to the extent that it represents a small percentage of produce sold at the market.

Belief #6: Farmers' market produce is more nutritious. This assertion is largely untested and unproven. There is little evidence available as to the nutritive value of farmers' market produce compared with produce from supermarkets. Further research on this issue is necessary.

Belief #7: Farmers' market produce is tastier and more flavorful. Evidence on this issue is also sketchy. We have made flavor comparisons on two produce items: tomatoes and bell peppers. Comparable produce was obtained from three farmers' market suppliers and from three local supermarkets. Produce was selected by a researcher according to a prepared random system in which the researcher decided beforehand to select items in specific locations. The second experimenter who did not know the origin of the produce conducted taste comparisons at the Food Service and Technology Laboratories at UC, Davis. Two test procedures were used. In the first

procedure, the subject was presented with a single section of tomato or bell pepper and asked to give a rating along a scale which ranged from *dislike very much* to *like very much*. In the second procedure, the student was presented with two sections of tomato or bell pepper, one from a farmers' market supplier and the other from a supermarket, and asked to express a preference between them. Forty-five students served as subjects in the tomato trials and twenty-one served as judges in the bell pepper tests. The results showed that bell peppers from the farmers' market were rated more flavorful than those from the supermarkets. The basis for the preference lay in the perceived greater sweetness of the farmers' market bell peppers. However, there was no difference in the perceived flavor of the tomatoes from the two sources. We expect to continue these flavor tests using a wider range of produce and of judges to make the ratings.

Belief #8: Produce at the supermarket looks better. On the average, this is true. Produce at the farmers' market varied more in appearance. Appearance ratings of tomatoes made during our flavor trials confirmed this impression. On an aesthetic rating scale which ranged from "dislike very much" (0) up to "like very much" (18), the supermarket tomatoes averaged 8.2 in over-all appearance. (This difference was highly reliable in statistical tests.)

Belief #9: Farmers' market food is sold under unsanitary conditions. Not true.

Some customers confuse blemishes, worms and bugs, and dirt spots with unsanitary conditions. While a restaurant serving a mud-spotted tomato or corn containing a worm would not be considered very sanitary, it is not clear that this analogy fits marketing operations. Assuming that produce from any source that is not peeled or skinned must be thoroughly washed before it is eaten, there is no evidence that food at the farmers' market is less sanitary than food offered through commercial outlets.

Belief #10: Farmers' market food is fresher. This is true. Many small producers have no cold storage facilities and harvest their produce early in the morning of market day or the night before. The availability of cooperative cold-storage lockers which would be in the interests of the producers would lessen the difference in freshness between farmers' market and super-market produce.

Belief #11: Produce sold at certified markets is "organic." By and large, this is false. There is no requirement that fruits and vegetables sold at certified markets must be organic. At one market, 14 out of 25 sellers described their farming operations as *organic* or *somewhat organic*. The latter description referred to a minimum use of

pesticides. The ambiguity of the term *organic* is evident. While a significant percentage of small producers will claim to grow organically, the customer at the farmers' market has no assurance of what this means without specific discussion with the grower.

Belief #12: Small producers selling at farmers' markets are primarily hobbyists. True in some cases, not in others. Some small producers are retired people who do not depend on farming for a living. They are not particularly concerned about doing more than breaking even. However, this is not the attitude of the young farmer whose livelihood is farming or who expects it to be. Although financial returns for the new young farmer often have to be supplemented by outside jobs, most hope to expand their farming operations to the point where farming will provide a satisfactory livelihood. Most of these young producers are seriously committed to farming as a long-term vocation.

Belief #13: Farmers' markets attract only middle class shoppers who view it as a social experience. Our observations do not support this. Although it has not been possible for us to determine the income levels of people at the farmers' markets, our impres-

sion is that their incomes reflect a cross section of the community. There seem to be, however, a disproportionate number of older and retired people: when the market first opens early in the morning, white heads are particularly evident.

The Woodland market attracts many of the city's Hispanic population. Attendance counts on three successive market days showed Hispanic customers comprising 13.7, 16.8, and 18.3 percent of customers. The presence of students from Asian and African nations is particularly evident at the Davis market. For wives of foreign students, often tied to home and young children and not fluent in English, the public market is a familiar institution in a strange land.

Belief #14: People come to the farmers' market to watch the action. True to a point. It is also true that many of the growers enjoy selling at a public market. Throughout the world, people have considered market days to be a festive occasion. This is hardly a criticism of direct marketing operations. Farmers would not continue to bring their produce to such markets if customers were not buying.

Robert Sommer is Professor of Psychology and Director, Center for Consumer Research, UC, Davis.

Climbing cutworms: early-season pests of grapes

John E. Dibble □ Johannes Joos □ Paul LaVine □ Susan Haire □ Bruce E. Bearden

Tests show that several treatments are effective against two major pests of grapes—the climbing and the variegated cutworms.

The variegated cutworm, *Peridroma saucia*, and the spotted cutworm, *Amathes c-nigrum*, are two climbing cutworm species that feed primarily on swollen grape buds. Less common is the presence of four to five other species. Damage results from nocturnal feeding in the spring during a two-week bud-crack period, negating or deforming growth of fruit-yielding canes. Temperature may lengthen or shorten this period.

An extremely wide host range dispersed throughout California's widespread plantings of grapes causes these pests to be ubiquitous and very serious early-season pests. Cutworms may occur in light to heavy numbers and are normally sporadic as to years, areas, and field site infestations. Populations start from a ground source and the in-

sects move up the vine trunk to feed at night. The variegated cutworm retreats to the ground and the spotted cutworm stays in the grapevine during the day in the North Coast grape growing area. The major cutworm pest in the San Joaquin Valley, the variegated cutworm, also commonly stays hidden under bark during the daylight hours.

Baits applied to the ground may work well in one area, but are of less value in another. With the loss of Dieldrin and the slow demise of Chlordane sprays, tests were necessary to find replacement chemicals. Field plots were set up in a number of vineyards after close daily observations determined population density was sufficient for test evaluations. Depending on the number of cutworms present and the consistency of

vine row infestations, 6 to 50 vines were used per plot with three to six replicates of each treatment. Applications were made by high-pressure handgun in small plots and by inverted "U" over-the-vine spray booms in the larger plots. Sprays were directed at the vine trunk, arms, and soil base. Baits were broadcast over the vines or placed within an 18-inch circle around the trunk base. Performance counts were made in some tests by counting the total number of damaged (feeding injury) buds per vine at one, two, and three weeks after treatment. A second method was also used where the total number of dead cutworms was counted on the clean soil under the vines. The latter technique usually required an early post-treatment count, as wind and preying birds influenced cutworm recovery.