SIZING UP THE MARKET WINDS

by Russell Tronstad[1]

"Knowing what's happening in the marketplace is the difference between the farmer who makes it and the farmer who doesn't make it"

— specialty vegetable grower
Don Anderson, Santa Cruz, CA.

Farming in the 90s could be compared to hang gliding. The best hang glider skills in the world may not be enough to keep from crashing in a down draft. Also, strapping an individual into a top-of-the-line hang gliding harness that has had no instruction or training would likely bring tragedy, even if the wind currents are perfect. A successful hang glider is one that can assess good wind conditions before "take-off" and have the technical skills to glide for an enjoyable long safe flight. Similarly, mastering the best production techniques doesn't guarantee that your direct marketing operation will be a success. Just as good hang gliding skills are a valuable asset for avoiding disaster, they are by no means a guarantee for a safe flight. Having the technical skills to grow a beautiful looking and sweet tasting crop is no guarantee that you will make a profit or even "break-even." In fact, thunderstorm winds combined with the best hang gliding skills in the world often results in disaster. Market analysis could be likened to a hang glider assessing wind currents. That is, dynamic supply and demand relationships determine what the "wind currents" will be and much like the wind, these relationships are not always well understood or easy to predict. This section outlines some general considerations for better understanding some of the fundamental supply and demand relationships. First, some general consumer and industry trends are summarized.

Consumer and Industry Trends

General market trends are always a consideration even for the direct marketer. Consumer's food preferences can change over time and it is important to consider what changes might be more perception than reality. Per capita consumption patterns for wholesale fruits and vegetables are given below to analyze these changes. Although the numbers shown represent wholesale shipments and don't include direct marketing figures, they give a good synopsis for what is happening with consumers. Virtually all direct marketing customers are reflected in these wholesale figures. Per Capita consumption patterns are also useful for calculating what your potential market may be. Some herb crops are consumed in such small quantities that an additional 2 acres of production could double the US supply. Be conservative on estimating how many visitors and customers you can attract when starting out.

Table 1 gives the annual fresh fruit consumption estimates of the US from 1970 through 1992. Total per capita fresh fruit consumption has increased 19.42 lbs. since 1970 with an average annual increase of 1.09%. Not all fruits have increased consumption though. Total fresh citrus has actually declined by .3% during this period. However, grapefruit was the only citrus category with a negative consumption pattern. Limes posted a 9.02% annual increase. Thus, when looking at trends commodity specific data needs to be analyzed. Consumption pat-

Table 1. U.S. Per Capita Fresh Fruit Consumption, 1970 to 1992.

	Citrus fruit							Noncitrus fruit					
	Oranges	Tangerines	Tangelos	Lemons	Limes	Grapefruit	*Total 5/*	Apples	Apricots	Avocados	Bananas	Cherries	Cranberries
							--Pounds--						
Year													
1970	16.16	1.60	0.61	2.04	0.19	8.18	***28.78***	17.02	0.12	0.44	17.38	0.50	0.18
1971	15.72	1.78	0.70	2.24	0.18	8.52	***29.14***	16.42	0.13	0.83	18.06	0.67	0.19
1972	14.48	1.63	0.73	1.86	0.22	8.53	***27.45***	15.53	0.08	0.44	17.92	0.38	0.15
1973	14.44	1.69	0.61	1.93	0.22	8.54	***27.43***	16.13	0.09	0.83	18.16	0.73	0.19
1974	14.42	1.88	0.67	2.00	0.22	8.21	***27.40***	16.40	0.06	0.68	18.49	0.58	0.15
1975	15.88	2.00	0.99	1.95	0.24	8.32	***29.38***	19.49	0.08	1.16	17.64	0.69	0.14
1976	14.74	1.98	0.93	1.90	0.25	9.24	***29.04***	17.08	0.10	0.79	19.25	0.82	0.19
1977	13.44	1.84	0.94	2.10	0.25	7.70	***26.27***	16.52	0.09	1.27	19.21	0.63	0.18
1978	13.45	1.62	0.81	2.12	0.24	8.32	***26.56***	17.95	0.07	1.01	20.19	0.53	0.18
1979	12.61	1.75	0.68	1.90	0.25	7.26	***24.45***	17.14	0.08	1.22	20.98	0.68	0.13
1980	14.32	2.10	0.71	1.91	0.38	7.27	***26.69***	19.20	0.10	0.82	20.82	0.68	0.14
1981	12.37	1.33	0.81	2.00	0.39	6.63	***23.53***	16.85	0.10	2.13	21.48	0.53	0.21
1982	11.70	1.38	0.69	2.06	0.39	7.19	***23.41***	17.54	0.08	1.47	22.54	0.52	0.21
1983	15.03	1.52	0.73	2.31	0.59	7.80	***27.98***	18.27	0.08	1.91	21.25	0.73	0.14
1984	11.86	1.46	0.61	2.14	0.55	5.96	***22.58***	18.35	0.13	2.17	22.18	0.71	0.13
1985	11.59	0.96	0.55	2.29	0.65	5.51	***21.55***	17.26	0.16	1.84	23.48	0.42	0.13
1986	13.43	1.10	0.50	2.46	0.69	6.13	***24.31***	17.84	0.10	1.54	25.82	0.48	0.14
1987	12.81	1.29	0.49	2.47	0.62	6.31	***23.99***	20.83	0.08	2.31	25.01	0.71	0.13
1988	13.90	1.26	0.51	2.46	0.65	6.65	***25.43***	19.98	0.16	1.60	24.28	0.52	0.11
1989	12.58	1.29	0.49	2.49	0.78	7.50	***25.13***	21.48	0.10	1.41	24.71	0.64	0.20
1990	12.41	0.95	0.40	2.59	0.71	5.04	***22.10***	19.91	0.16	1.23	24.36	0.42	0.24
1991	8.34	1.00	0.42	2.64	0.75	6.77	***19.92***	18.74	0.13	1.43	25.27	0.41	0.26
1992 /6	12.90	1.40	0.50	2.50	1.00	5.90	***24.20***	19.30	0.20	2.10	27.30	0.50	0.30
Average Annual % Change	0.33%	1.00%	0.15%	1.16%	9.02%	-0.47%	***-0.30%***	0.90%	8.19%	17.17%	2.16%	4.81%	5.18%

	Noncitrus-continued													
	Figs	Grapes	Kiwifruit 2/	Mangos	Nectarines 3/	Peaches	Pears	Pineapples	Papayas	Plums and prunes	Strawberries	Miscellaneous fruit 4/	*Total noncitrus 5/*	*Total fruit 5/*
							--Pounds--							
Year														
1970	0.01	2.50	N.A.	0.05	0.58	5.82	1.90	0.70	0.12	1.47	1.73	0.09	***50.61***	***79.39***
1971	0.01	2.23	N.A.	0.07	0.61	5.66	2.54	0.64	0.10	1.28	1.83	0.09	***51.36***	***80.50***
1972	0.03	2.22	N.A.	0.07	0.82	3.88	2.28	0.78	0.11	1.08	1.67	0.08	***47.52***	***74.97***
1973	0.04	2.68	N.A.	0.10	0.72	4.26	2.57	0.92	0.14	1.14	1.58	0.08	***50.36***	***77.79***
1974	0.05	2.85	N.A.	0.11	0.95	4.34	2.48	0.90	0.16	1.50	1.83	0.09	***51.62***	***79.02***
1975	0.03	3.20	N.A.	0.15	0.89	4.98	2.74	1.03	0.16	1.33	1.80	0.09	***55.60***	***84.98***
1976	0.02	3.23	N.A.	0.16	1.00	5.14	2.84	1.15	0.20	1.25	1.66	0.07	***54.95***	***83.99***
1977	0.03	3.17	N.A.	0.13	1.25	5.09	2.38	1.36	0.25	1.55	1.91	0.04	***55.06***	***81.33***
1978	0.03	2.79	N.A.	0.14	- -	6.10	2.30	1.44	0.25	1.54	2.12	0.02	***56.66***	***83.22***
1979	0.03	3.13	N.A.	0.19	- -	6.67	2.30	1.46	0.17	1.63	1.90	0.01	***57.72***	***82.17***
1980	0.02	3.47	N.A.	0.23	- -	7.10	2.61	1.50	0.21	1.54	1.97	0.07	***60.48***	***87.17***
1981	0.01	3.74	N.A.	0.22	- -	6.87	2.82	1.56	0.26	1.71	2.17	0.10	***60.76***	***84.29***
1982	0.01	5.72	N.A.	0.31	- -	5.35	2.85	1.66	0.16	1.07	2.37	0.15	***62.01***	***85.42***
1983	0.01	5.59	0.02	0.44	- -	5.43	2.99	1.68	0.18	1.41	2.32	0.10	***62.55***	***90.53***
1984	0.02	6.09	0.15	0.39	- -	6.70	2.54	1.51	0.26	1.84	2.96	0.18	***66.31***	***88.89***
1985	0.01	6.84	0.18	0.40	- -	5.49	2.79	1.48	0.18	1.43	2.99	0.18	***65.26***	***86.81***
1986	0.01	7.10	0.21	0.48	- -	5.84	2.97	1.73	0.18	1.29	2.89	0.14	***68.76***	***93.07***
1987	0.01	7.05	0.28	0.55	- -	6.05	3.51	1.63	0.19	1.91	3.11	0.14	***73.50***	***97.49***
1988	0.01	7.78	0.27	0.37	- -	6.58	3.26	1.76	0.16	1.72	3.33	0.07	***71.96***	***97.39***
1989	0.01	7.96	0.39	0.40	- -	5.68	3.29	1.96	0.15	1.77	3.28	0.21	***73.64***	***98.77***
1990	0.01	7.96	0.48	N.A.	- -	5.52	3.20	2.05	0.18	1.50	3.25	N.A.	***70.47***	***92.57***
1991	0.01	7.28	0.41	N.A.	- -	6.26	3.30	1.92	0.17	1.48	3.60	N.A.	***70.67***	***90.59***
1992 /6	0.01	7.20	0.50	0.70	- -	5.90	3.10	2.00	0.20	1.80	3.50	N.A.	***74.61***	***98.81***
Average Annual % Change	9.17%	5.64%	17.66%	13.75%	12.91%	0.97%	2.83%	5.26%	4.71%	2.94%	3.65%	37.03%	***1.85%***	***1.09%***

N.A.= Not available.

1/ All data are on calendar-year basis except for citrus fruits, October or November; apples, August; grapes and pears, July; prior to years indicated. 2/ Reported separately beginning 1983. 3/ Included in peaches beginning 1978. 4/ Includes olives, persimmons, pomegranates (until 1990), kiwifruit (until 1983), and other fruit. 5/ Some figures may not add due to rounding. 6/ Preliminary.
Source: Commodity Economics Division, ERS, USDA.

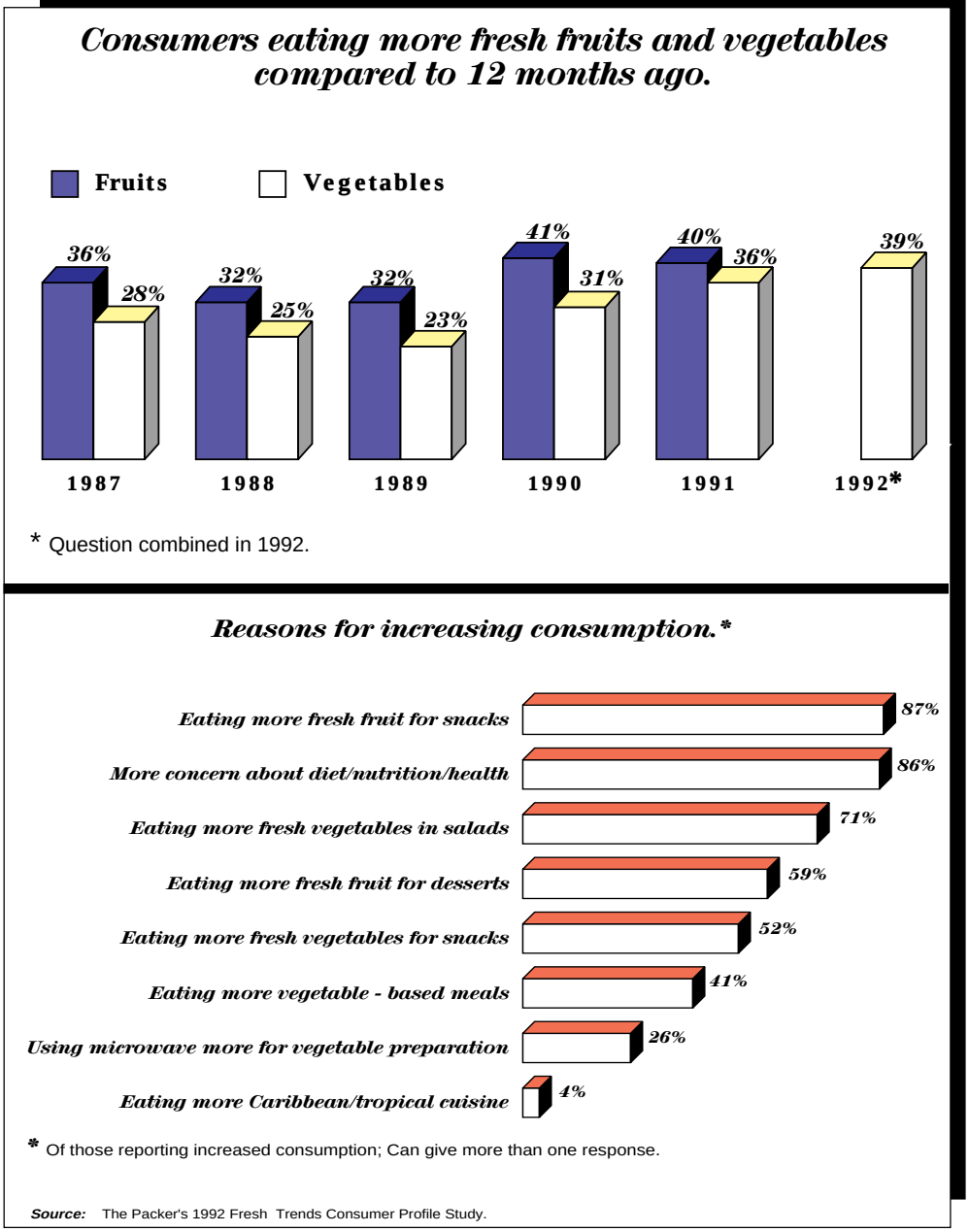
terns for many fresh fruits also coincide with seasonal production. For example, fresh strawberries have a limited shelf life and more than 50 percent of their annual consumption is during the two months of April and June (Brown and Suarez). Strawberry prices are at their low point of the year during these two months as well. Seasonal factors are often present in produce and tourism data and great care should be taken at analyzing seasonal impacts for your location. Market window analysis focuses on taking advantage of seasonal price opportunities.

Non citrus fruits have increased per capita consumption by an annual average of 1.85% since 1970, or a whopping 24 lbs. per person. Some strong percentage gainers have been fruits relatively new to the US like mangos (13.75%), kiwi (17.66%), and avocados (17.17%). Apricots, cranberries, figs, grapes, and pineapples all increased on average over 5% annually. Apples (.90%) and peaches (.97%) posted the smallest increases for non-citrus fruits, and no non citrus fruits had a negative consumption trend.

More recent history, from 1987, indicates that citrus and non citrus fruit consumption has been rather flat. Could it be that consumers have plateaued in their fruit consumption? Figure 1 shows the results of consumers surveyed by the Packer's 1992 Fresh Trends Survey. About 30% to 40% of all consumers indicate that they have increased their fresh fruit consumption since 1987. But aggregate measures don't show much of an increase, if any. Demographic results show that young consumers, those between 18 and 29 years of age, have increased their fruit and vegetable consumption more than other age groups. Seniors, those in the 60+ age group, appear to be stable purchasers of fruits and vegetables.

For those that reported they have increased consumption, popular answers for why they are eating more produce are; use more fresh fruit and vegetables for snacks, eat more fresh salads and desserts, and diet/nutrition/health concerns. You may

Figure 1



be able to find ways to exploit these concerns and ideas in your direct marketing of produce. If a bed and breakfast is your business, you might include fresh produce in snacks for your customers.

Figure 2. U.S. Shares of Processed and Fresh Fruit for Citrus and Non-Citrus Consumed from 1970 to 1992.

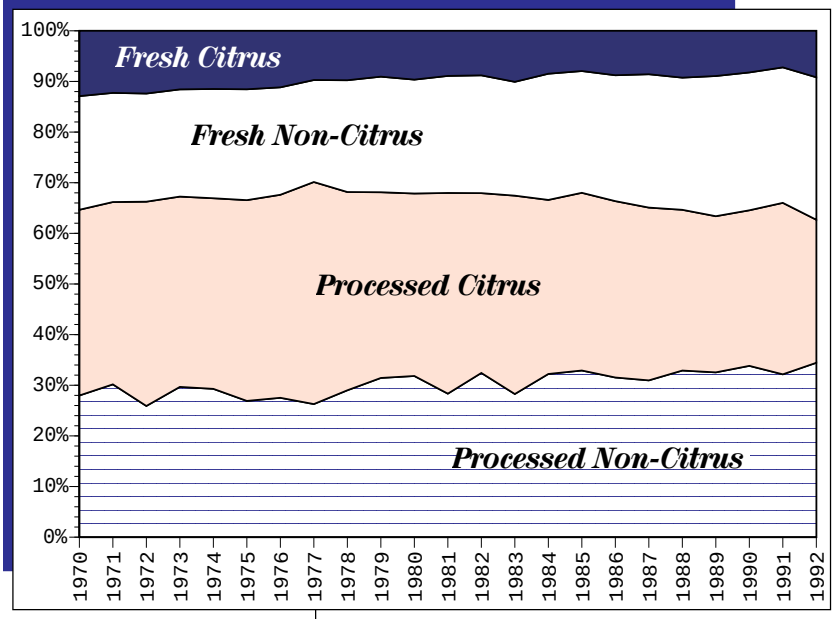
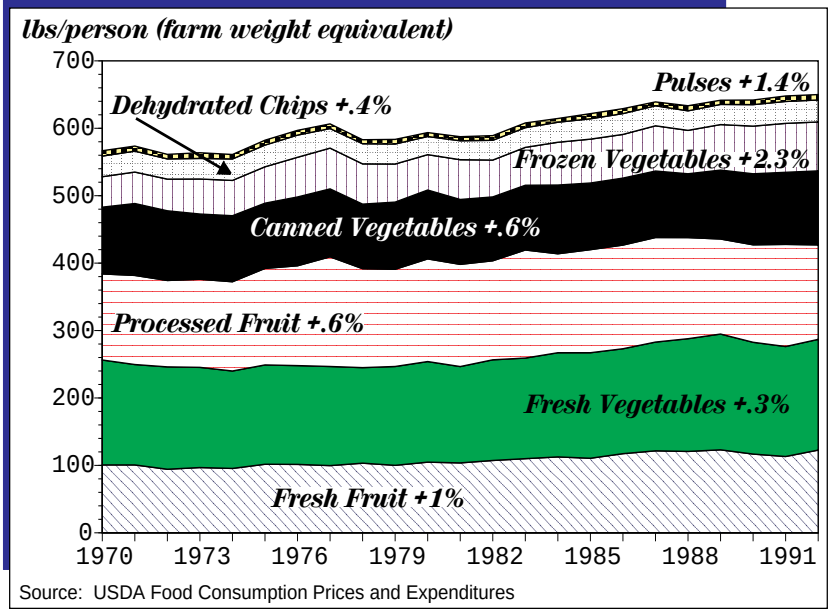


Figure 3. US Per Capita Consumption of Fruits and Vegetables with Average Annual Percentage Change from 1970 to 1992.



Source: USDA Food Consumption Prices and Expenditures

Figure 2 graphs the shares of processed and fresh fruit for citrus and non-citrus between 1970 and 1992. The graph portrays how the share of fresh citrus consumed has declined relative to non-citrus fruit. Processed citrus products have also declined relative to non-citrus products as well. Even though processed products have lost some "market share," they can be very important for increasing the value added of your produce and extending your marketing season. As shown in Figure 3, per capita consumption of processed fruits and vegetables has increased in the last two decades and some categories have done relatively well. Refer to the section of "Opportunities for Adding Additional Value to Your Products," for ideas on how processed products might fit into your operation.

Fresh vegetable consumption trends are given in Table 2. US consumers have increased their consumption of fresh vegetables at an annual rate of .39% between 1970 and 1994. This rate appears lower than that for fresh fruit, but if one excludes potatoes the average annual percentage change is .99%, comparable to the 1.09% rate for all fresh fruit. Similar to fresh fruit, vegetable consumption has been rather flat since 1988. Some exceptions are onions, bell peppers, and leaf/romaine lettuce which have shown a fairly steady increase in recent years. In looking at annual trends since 1970, broccoli has been the largest percentage gainer at 8.80%. Garlic is not far behind with a 8.51% average. Honeydews have increased more than watermelons or cantaloupes. Honeydews have increased 3.80%, whereas cantaloupes and watermelons have averaged an annual increase of 1.30% and .54%, respectively. Escarole and Endive have shown the largest percentage decline at -3.61%. Their annual per capita consumption has dropped from .6 lbs. in 1970 to only .2 lbs. in 1993. Other percentage decliners have been cabbage (-1.31%), fresh potatoes (-.78%), sweet corn (-.73%), and celery (-.44%).

Table 2. U.S. Per Capita Fresh Vegetable Consumption, 1970-94.

	Asparagus	Broccoli	Carrots	Cauli-flower	Celery 1 /	Sweet corn	Lettuce	Onions	Tomatoes	Cabbage	Spinach	Cucumbers
	-- Pounds, farm weight --											
Year												
1970	0.4	0.5	6.0	0.7	7.3	7.8	22.4	10.1	12.1	11.4	0.3	2.8
1971	0.4	0.7	6.1	0.7	7.3	7.5	22.4	10.7	11.3	11.2	0.3	2.8
1972	0.4	0.7	6.5	0.8	7.1	7.8	22.4	10.7	12.1	10.4	0.3	3.0
1973	0.4	0.8	6.7	0.8	7.6	7.9	23.1	10.2	12.5	11.0	0.3	2.7
1974	0.4	0.8	6.9	0.8	7.4	7.7	23.5	11.2	11.8	9.0	0.3	3.0
1975	0.4	1.0	6.4	0.9	6.9	7.8	23.5	10.5	12.0	9.1	0.3	2.8
1976	0.4	1.1	6.4	1.0	7.4	8.0	24.2	11.0	12.6	8.5	0.3	3.1
1977	0.3	1.2	5.3	1.1	7.0	7.6	25.8	11.1	12.4	8.6	0.4	3.5
1978	0.3	1.0	5.3	0.8	7.2	6.6	25.1	10.9	12.9	8.7	0.3	3.8
1979	0.3	1.2	5.9	1.1	7.2	6.5	25.1	11.4	12.4	8.2	0.4	3.8
1980	0.3	1.4	6.2	1.1	7.5	6.5	25.6	11.4	12.8	8.1	0.4	3.9
1981	0.3	1.7	6.1	1.4	7.4	6.2	24.9	10.7	12.3	8.2	0.5	4.0
1982	0.4	2.0	6.6	1.3	7.6	6.0	24.9	12.2	12.5	9.2	0.5	4.2
1983	0.4	2.0	6.5	1.4	7.2	6.1	22.4	12.2	13.5	8.5	0.5	4.5
1984	0.4	2.5	6.7	1.8	7.3	6.4	24.9	13.1	14.3	9.0	0.5	4.7
1985	0.5	2.6	6.5	1.8	7.0	6.4	23.7	13.6	15.0	9.2	0.7	4.4
1986	0.6	3.0	6.5	2.2	6.6	6.1	21.9	13.7	15.9	8.2	0.6	4.6
1987	0.6	3.1	8.3	2.1	6.7	6.3	25.7	13.4	15.8	8.0	0.6	5.1
1988	0.6	3.8	7.2	2.2	7.2	5.7	27.0	14.5	16.8	8.0	0.6	4.8
1989	0.6	3.8	7.9	2.3	7.5	6.4	28.8	14.8	16.8	7.9	0.6	4.8
1990	0.6	3.4	8.0	2.2	7.2	6.5	27.8	15.1	15.5	7.8	0.8	4.7
1991	0.6	3.1	7.5	2.0	6.8	5.7	26.1	15.7	15.4	7.5	0.8	4.6
1992	0.6	3.4	8.6	1.9	6.7	6.7	25.9	16.1	15.2	7.7	0.8	5.2
1993	0.6	2.8	8.4	1.7	6.2	6.3	24.6	15.7	15.9	8.4	1.0	5.5
1994f	0.6	3.1	8.0	1.8	6.4	6.2	24.9	16.2	16.0	7.9	0.9	5.4
Average % Change	2.22%	8.80%	1.59%	4.94%	-0.44%	-0.73%	0.61%	2.10%	1.27%	-1.31%	5.86%	2.98%

	Arti-chokes 1/	Snap beans	Eggplant 1/	Escarole/ Endive	Garlic 1 /	Bell pep-pers1/	Leaf/ romaine	Fresh Potatoes	Water-melon	Canta-loupe	Honey-dews	All others 2/	***Total***
	-- Pounds, farm weight --												
Year													
1970	0.4	1.5	0.3	0.6	0.4	2.2	- -	61.8	13.5	7.2	0.9	0.8	***171.4***
1971	0.4	1.5	0.3	0.6	0.3	2.3	- -	56.1	13.0	6.8	0.9	0.9	***164.5***
1972	0.4	1.5	0.4	0.6	0.4	2.4	- -	57.9	12.3	7.0	1.0	0.8	***166.9***
1973	0.4	1.4	0.4	0.6	0.5	2.5	- -	52.4	12.7	6.1	1.1	0.9	***163.0***
1974	0.4	1.4	0.4	0.5	0.7	2.7	- -	49.4	11.3	5.3	1.0	0.8	***156.7***
1975	0.4	1.4	0.4	0.5	0.7	2.5	- -	52.6	11.4	5.2	1.1	0.9	***158.7***
1976	0.4	1.4	0.5	0.5	0.5	2.7	- -	49.4	12.6	5.3	1.0	0.9	***159.2***
1977	0.4	1.3	0.4	0.5	0.6	2.8	- -	50.1	12.6	5.8	1.1	1.0	***160.9***
1978	0.3	1.3	0.5	0.5	0.7	2.8	- -	46.0	11.9	6.6	1.6	0.9	***156.0***
1979	0.5	1.3	0.5	0.5	1.0	2.9	- -	49.3	11.4	6.1	1.6	1.0	***159.6***
1980	0.4	1.3	0.5	0.5	0.9	2.9	- -	51.1	10.7	5.8	1.4	0.9	***161.6***
1981	0.6	1.3	0.5	0.4	0.7	2.8	- -	45.8	11.7	6.1	1.5	1.0	***156.1***
1982	0.6	1.3	0.5	0.4	0.8	3.0	- -	47.1	12.5	7.7	1.8	0.8	***163.9***
1983	0.5	1.2	0.5	0.4	1.1	3.3	- -	49.8	11.3	6.5	1.8	0.8	***162.4***
1984	0.6	1.3	0.5	0.4	0.8	3.6	- -	48.3	14.4	7.7	1.8	0.8	***171.8***
1985	0.7	1.3	0.5	0.4	1.1	3.8	3.3	46.3	13.5	8.5	2.1	0.8	***173.7***
1986	0.6	1.3	0.5	0.4	0.8	4.0	2.4	48.8	12.8	9.4	2.4	0.8	***174.1***
1987	0.7	1.2	0.5	0.3	1.2	4.2	2.5	47.9	13.0	9.1	2.2	0.7	***179.2***
1988	0.6	1.2	0.4	0.4	1.2	4.5	3.2	49.6	13.5	7.9	2.3	0.8	***184.0***
1989	0.7	1.2	0.4	0.3	1.1	4.7	3.6	50.0	13.6	10.4	2.5	0.9	***191.6***
1990	0.6	1.1	0.4	0.2	1.4	4.5	3.8	45.8	13.3	9.2	2.1	0.9	***182.9***
1991	0.6	1.1	0.4	0.2	1.6	5.1	4.0	46.4	12.8	8.7	1.9	0.8	***179.4***
1992	0.6	1.4	0.4	0.2	1.7	5.6	4.7	48.9	14.2	8.3	2.0	0.8	***187.6***
1993	0.5	1.6	0.4	0.2	1.6	5.9	4.9	51.9	14.2	8.5	1.6	0.8	***189.2***
1994f	0.6	1.4	0.4	0.2	1.5	5.6	5.0	49.1	14.3	8.3	1.8	0.8	***186.4***
Average % Change	3.56%	-0.01%	1.81%	-3.61%	8.51%	4.09%	5.78%	-0.78%	0.54%	1.30%	3.80%	0.49%	***0.39%***

-- = Not available. f = ERS forecast.
1/ Includes fresh and processing. 2/ Includes radishes and brussels sprouts.
Source: Economic Research Service, USDA.

Total US per capita consumption (farm weight equivalent) of all fruits and vegetables from 1970 through 1992 are described in Figure 3. Total consumption has increased at an average annual rate of .64% from 1970 to 1992. All categories have shown growth in the last two decades. Frozen vegetables have been the biggest gainer, increasing from 45.2 lbs. in 1970 to 72.6 lbs. in 1992. Much of this increase is undoubtedly due to the increase in demand for prepackaged and frozen convenience foods as more women are working outside the home. Convenience should be a major consideration of any on-farm processing efforts. Pulses include dried peas, lentils, and edible beans. Although this market is relatively small with only 8 lbs./person consumed in 1992, a steady increase in Hispanic and ethnic populations has kept this market strong. Mexico's annual consumption of edible beans is around 50 to 60 lbs. per person, almost 10 times US per capita consumption.

References

Brown, Richard N. and Nydia R. Suarez, "U.S. Markets for Caribbean Basin Fruits and Vegetables: Selected Characteristics for 17 Fresh and Frozen Imports, 1975-87." USDA, ERS, Statistical Bulletin #821.

The Packer Fresh Trends, A Profile of Fresh Produce Consumers, Vance Publishing Corporation, 1992 and 1994.
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FROM:

Direct Farm Marketing and Tourism Handbook.

PRODUCT POSITION

by Russell Tronstad[1]

The one who aims at nothing generally hits nothing.

Product position refers to what the consumer thinks of your product (e.g. lowest price, best service, freshest produce, "certified residue free," easy access, etc.) when they are making a purchase decision. A concept often related to product position but different is niche marketing. Large retailers like Wal-Mart, Best, and Target have taken a product position of low prices, but none of these are niche marketers. A niche market refers to a small segment of the total market that is being ignored by others. Two items are involved with developing a market niche; 1) identifying the wants of a small group of consumers that are being ignored by others, and 2) taking a product position that meets the wants of these consumers.

In a broad sense, direct farm marketing to consumers could be referred to as niche marketing since so little produce is sold directly to consumers. But to be a niche marketer of direct farm products you really need to be unique from other competitors. Growing ethnic vegetables could be an example of niche marketing, provided that no other local grower is selling ethnic vegetables. If someone is already selling ethnic vegetables, organic ethnic vegetables might be a niche market. But as you can see, the market potential eventually becomes so small that an economically viable operation is not possible.

Should I look for a market niche or take a product position of low prices and large volume sales? Answers to these questions will vary depending on the goals of your firm, local competition, and resources available so that no generalized answer can be given. But the importance of some quality issues, food safety, rural appeal of consumers, and location considerations are given below as an aide for selecting a product position and possibly identifying a niche market.

Quality Issues

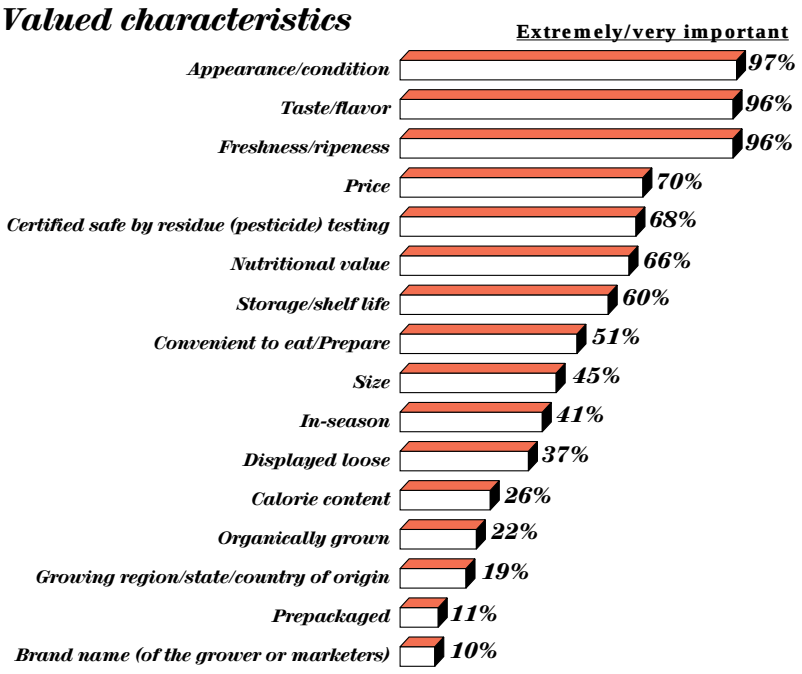
Figure 1 shows the importance of some quality characteristics as identified by the Packer's 1992 Fresh Trends Profile Study. Items of appearance/condition, taste/flavor, and freshness/ripeness were indicated as extremely or very important items to at least 96% of all respondents. This result suggests that special care should be taken to ensure that you can adequately meet these top three quality items for your consumer when marketing produce. Even though you may have taken a market position for always having the "lowest price," minimum standards for appearance/condition, taste/flavor, and freshness/ripeness should be set.

The next most important items identified were price, certified safe (pesticide residue testing), and nutritional value. About 65% to 70% of all respondents indicated that price, residue testing, and nutritional value were extremely or very important quality characteristics to them. It is interesting to note that only 22% of the respondents indicated that organically grown was extremely or very important to them but 68% indicated that "certified safe" was important. Brand name ranked

Figure 1. Quality Components.

Source: The Packer's 1992 Fresh Trends Consumer Profile Study.

Figure 1. (cont.)



Source: The Packer's 1992 Fresh Trends Consumer Profile Study.

the lowest with only 10% of the survey participants indicating this as an extremely or very important characteristic. How consumers relate buying in one produce outlet to buying in another may not be the same as brand name acceptance though. The decision of which store to shop in is generally different than what produce items to buy. Thus, the reputation and customer satisfaction attained at your business probably has more of a residual effect than that demonstrated for brand name.

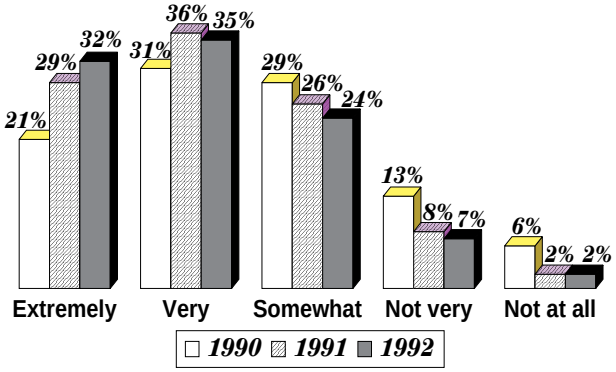
If you want to be known as having the "freshest produce," try to find varieties that mature at slightly different times. For example, you don't want to have all your blackberries come ripe in one week (see article entitled," **Geyers' Specialty is Marketing Small Fruits"**). The 1993 Produce Services Source book gives a post harvest life for blackberries at 2-3 days. Know what the post harvest life of your produce is along with proper storing temperatures and relative humidity. Produce products with a short post harvest life (e.g., sweet corn, 4-6 days; strawberries, 5-10 days; and raspberries 2-3 days) can be a great opportunity for local growers in meeting freshness requirements demanded by consumers. It may be tempting to put two week old sweet corn on display since it looks good, but a bad experience can do more harm to future sales than the current sale. Recognize that spoilage and waste will be greater for highly perishable products and don't advertise or display as "freshest produce" if you know it isn't.

Food Safety

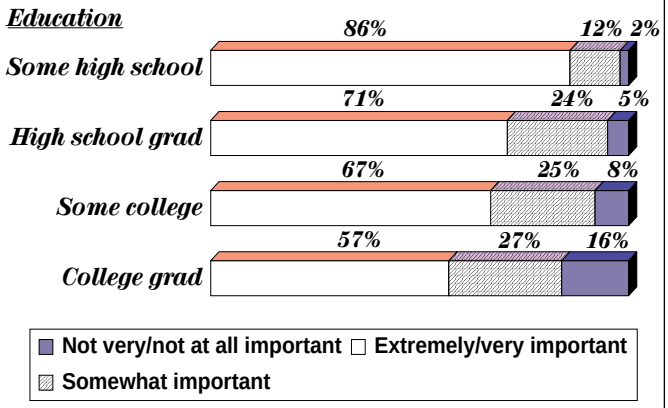
How important of a concern is food safety? The Packer's 1992 survey addressed this issue. Years of 1990 through 1992 were compared and these results are shown in Figure 2. In 1990, 21% indicated that "certified safe" residue testing was extremely important and this percentage increased to 32% by 1992. In looking at education demographics, the concern for residue testing decreased with higher education levels. An extremely important rating was given by 86% of high school

Figure 2. Food Safety.

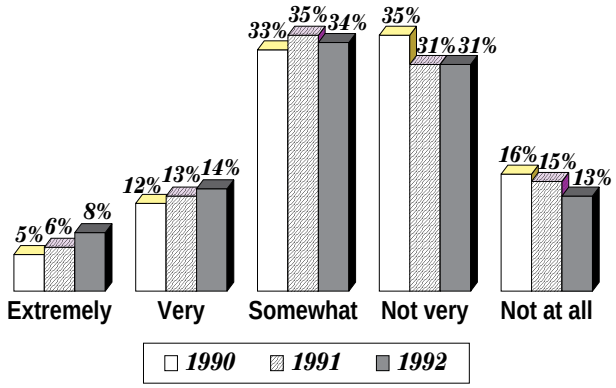
How important is certified safe by residue testing when selecting a specific produce item?



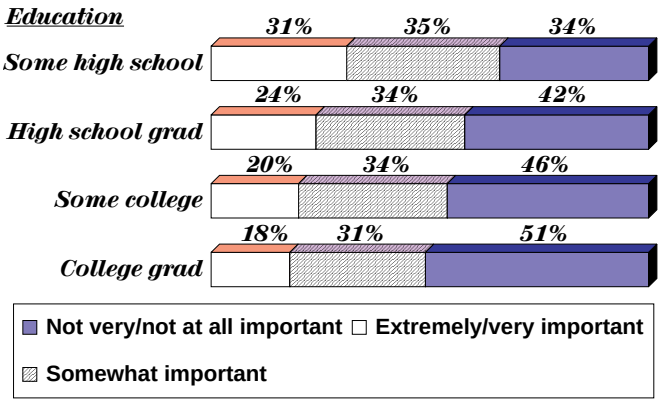
Demographic breakdown - importance of certified safe, 1992.



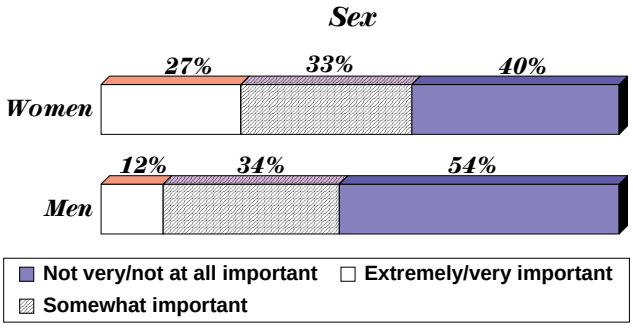
How important is organically grown when selecting a specific produce item?



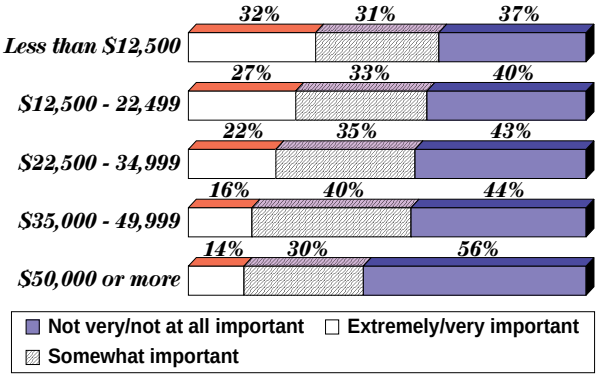
Demographic breakdown - importance of organically grown, 1992.



Sex

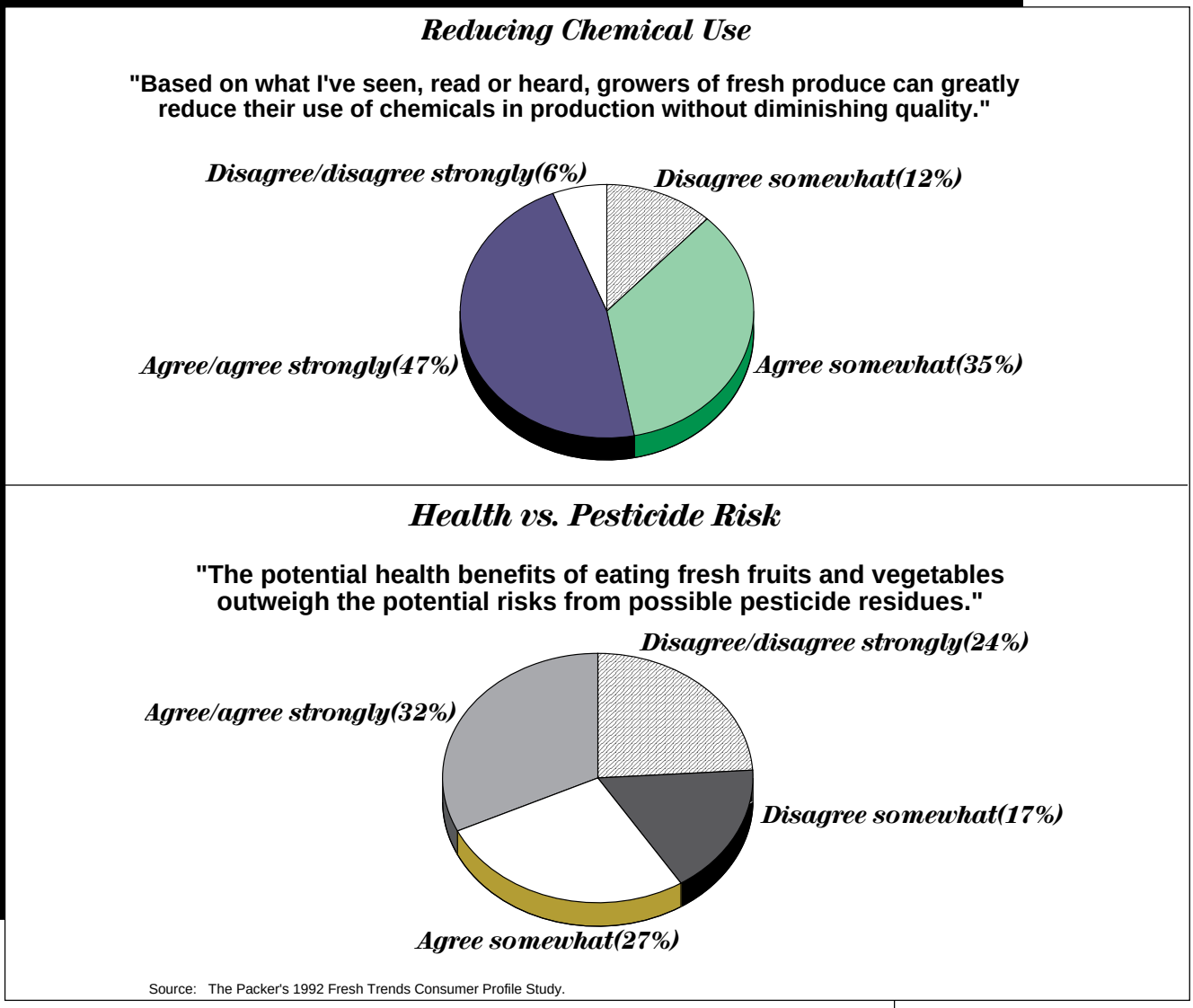


Income



Source: The Packer's 1992 Fresh Trends Consumer Profile Study.

Figure 2. (cont.)



Source: The Packer's 1992 Fresh Trends Consumer Profile Study.

graduates versus 57% of college graduates. Of the high school graduates, only 2% said that residue testing was not very important compared to 16% of college graduates.

Most consumers don't feel that organically grown is that important for food safety, although most consumers are concerned about pesticide residues. The future and growth of organic foods is still uncertain. Organically grown foods account for about $1 billion of the $3 billion natural foods market. Organics are less than .2% of the $600 billion spent annually on food. The Food Marketing Institute's annual consumer survey found that 1% of US consumers said they ate more organics in 1992 than the previous year. This is down from the 2% of consumers who said they ate more organic foods than the previous year in 1989, 1990, and 1991 (McKinney). The importance of organically grown does vary by education, sex, and income. Consistent with residue testing, organics are believed to be less important for more educated individuals. Are most of your purchase customers men or women? Women rate organics more important than men. More than twice as many women rate organics as extremely/very important than men (27% versus 12%).

Although most consumers don't feel that growing organically is extremely/very important most consumers feel that "growers of fresh produce can greatly reduce their use of chemicals in production without diminishing quality." Over 80% of all consumers agree somewhat or strongly with this statement. Thus, it is important to be sensitive to the consumer and in your use of chemicals. If you use pesticides in your operation, some education on how much and when you spray might be good public relations and ease some of the concerns of your customers. Be able to describe how long and how the chemicals that you have applied break down.

The 1994 Fresh Trends survey asked individuals if they recalled hearing about the "National Academy of Sciences report on the effect of pesticide residues on produce on children and infants." Sixty-five percent of the respondents said they had heard of the report. Of these respondents 52% said they have altered their behavior. Washing produce more thoroughly before eating was the biggest change in behavior. Having a place where consumers can wash their produce to their level of satisfaction could be a low cost attraction for increasing sales. If consumers experience how sweet and fresh tasting that newly purchased apple or peach is before they leave your produce outlet, they may buy more.

Rural Appeal

The importance of having a rural experience or farm attraction appears to be very important and growing in importance all over the country. Gary Tehrune, who offers classes, farm tours, U-pick, or already picked apples and peaches from his New Jersey orchard says, "The main attraction for people coming here is the farm itself. People come here rather than to the supermarket because they enjoy the farm experience." Eric Gibson in Sell What You Sow describes other entrepreneurs like Al Bussell who operates a California U-pick. Al says, "rural recreation offers more income potential than food farming because consumers can never get too much of it! We're in the entertainment business now." The Agricultural Tourism in Cochise County survey also revealed that what local and non-local respondents liked most about their visit to farm outlets was a rural or farm experience. This ranked ahead of "freshness" and "quality" of produce. Thus, developing a rural attraction out of the "farm encounter" consumers have at your business may be the most important product position decision you make.

Some activities like nature or farm trails, antique displays, and petting zoos can be more "self-guided" so that you can develop these activities in the off-season when labor is available. Other activities like hay rides, and guided education tours require more labor during the busy season. An advantage to having "guided tours" though is that they can be an effective public relations and promotional tool for your products. The section of "Opportunities for Adding Additional Value to Your Products" offers several ideas for making a "farm experience." Some produce outlets might specialize in "children" activities while other specialize in "adult education." The type of activities selected or not selected determine your product position in the marketplace and the goal of marketing as the "best produce" in the State may not be enough.

Location

A critical but sometimes overlooked aspect of any marketing mix is location. Place is one of the 4P's often referred to in a marketing mix. It is placed on the same level as the other 3P's of product, price, and promotion in the marketing mix. Place involves all the people and activities that move the product from the producer to the consumer. Location to the direct marketer is definitely more crucial than for the wholesale grower since as a direct marketer you have to meet all the marketing functions that are generally carried out through a series of middle-

men that move your product to the consumer.

As a direct marketer, recognize that your potential market is probably more limited. Some direct marketers have overnight express mail delivery so that they are able to ship all over North America, but these opportunities are the exception rather than the rule. Studies that have been done in the mid-West (Courter and Stutzman) suggest that 75% of all customers live within a 20 mile radius. However, almost 80% of the visitors to farm outlets in Southeastern Arizona in 1993 had traveled over 80 miles. Thus, there is no clear cut rule for how far one should use when estimating a market. Rather determine what your competition is and size up your consumer. If individuals have no close alternative, they will undoubtedly travel a much greater distance. Also, if your consumers want the rural experience more than fresh produce, they are more likely to travel for the "get-away" feeling. A woman called Nita Gizdish in Watsonville, California looking for pumpkins. Nita suggested a place near the lady's location and she said, "Oh no, I want to go out to a farm." So Nita suggested another place that was a 15 mile drive and that was fine. Other tourist attractions in your area may be a locational asset for you in attracting customers. Travelers on the freeway may be enticed to stop for a break at a produce outlet that has convenient freeway access and rest room facilities, but this market is generally limited. Most travelers are out to reach their destination in a hurry and have little time to explore or cooler space for storing produce on the road.

When sizing up your local competition, assess your location to others. Before picking a site ask, "Will everyone exit off the freeway and drive by 10 other farm outlets before they reach my outlet? If this is the case, a better traffic location should be explored. If you are already committed to a site that is out-of-the-way, you will have to promote with good road signs and adds with detailed maps that pinpoint your location. The most common suggestion for improving farm outlets from the Agricultural Tourism study for Cochise County was related to improving road signs. Identify shining aspects of your location compared to competing outlets, like more beauty, solitude, spring water, or charm. Then you might use a combination of words like say, "Charming Farms Fresh Produce" for promoting your produce. Identify your location and product as having desirable aspects that set you apart from other competitors. Names are commonly used to identify a produce outletand they can imply more personalized service, but they are generally more difficult for individuals to recall if a friend told them about your outlet in conversation than a more familiar descriptive name. An easily recognized name will also do more harm for your business if customers feel that your products don't fit your name. If your outlet is named "Charming Farms Fresh Produce" you should at least have clean rest room facilities, a shaded area with picnic tables and chairs, and a few flowers around.

Evaluate county and on-farm road conditions before picking a site. Better roads was right next to better road signs in the most frequent suggestions offered for improving farm outlets in Cochise County. Although group efforts are generally required for improving county roads, on-farm road improvements may also be a wise investment. Reducing the dust from nearby gravel roads through sprinkling water on heavy traffic days, applying appropriate oil treatments, or planting trees can also make a better experience for customers. If you have good paved roads up to your farm and to your parking lot, a name like "paved road farms" would convey to consumers the message that your outlet is readily accessible. This could be a draw for many elderly and disabled individuals.

Determine if any zoning regulations might prohibit you from locating where you want to. Also check into easement rights that might apply for a nearby freeway, telephone line, or power line. It would be a

shame to have to move or tear down a produce stand, or outlet store due to an old easement right.

The product consumers are looking for goes beyond the price and quality components of a bag of apples that sell for say $.20/lb. Consumers are evaluating services offered, location, and their overall experience associated with their rural outing. Because consumers have different preferences, it is virtually impossible to develop a product position that has appeal for everyone. Develop a product position that is consistent with your goals and resources available that will identify a market niche for your business. Mike Horton in Phoenix Arizona developed a market niche of delivering fresh lettuce to resorts. His operation started with three acres of leased land in the city of Phoenix that is minutes away from several resorts. Mike developed a thriving business by identifying a target market and matching the necessary resources to give his business a good market niche. He tried several products other than just lettuce at first, but now concentrates on delivering fresh leaf lettuce that is packaged and ready to serve. Note that he first identified his market and then determined his product position before he grew any produce. Identifying a target market, securing the resources needed to exploit the market, and continually adapting to an evolving market are the steps necessary to develop and maintain a successful product position.

References

Courter, John W. "Estimating the Trade Area and Potential Sales For a Pick-Your-Own Strawberry Farm." Cooperative Extension Service, Horticulture Facts, HM-6-82.

McKinney, Luther C. "Workable Food Safety Regulation." Choices, Second Quarter 1994, pp. 10-14.

Stutzman, Curtis. Farming Consultant with the Rural Innovation Center in Amana, Iowa.

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FROM:

Direct Farm Marketing and Tourism Handbook.

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GEYERS' SPECIALTY IS MARKETING SMALL FRUITS

Thornless blackberries have become a profitable item for the Geyers of Virginia

Photos: Tim McCabe, USDA

Charles and Anne Geyer manage Westmoreland Berry Farm and Orchard, Oak Grove, Virginia. One of their most profitable berries is a thornless blackberry developed by USDA researchers at Beltsville, Maryland.

When it comes to successfully marketing fresh berries and fruit, Anne and Charles Geyer say there is no substitute for hard work, careful planning and research. The Geyers rely on these three elements to keep Westmoreland Berry Farm and Orchard operating profitably.

The Geyers have managed Westmoreland Berry Farm since 1983. That's when Alan Voorhees hired them to establish a berry operation and orchard on his 1,600-acre farm near Oak Grove, Virginia. The farm's 200 tillable acres were previously planted in corn and small grain. Voorhees decided to change the makeup of the farm after he noticed that berries were a popular and profitable crop at farmers' markets.

The Geyers had the production expertise to establish a productive berry farm and orchard, but they had no marketing experience. They overcame this obstacle with careful planning. Before they planted the first 20 acres of strawberries, raspberries or blackberries, they contacted wholesale buyers in the Washington, D.C. and Richmond areas, and they visited local farmers' markets to learn which crops had the greatest economic return.

By the end of 1986, the Geyers had gradually expanded Westmoreland's berry and fruit line to include strawberries, blackberries, red and black raspberries, tayberries, blueberries, pumpkins, peaches, apricots, tart cherries, plums, table and wine grapes, and apples.

Westmoreland's success hinges on a five point marketing plan that includes wholesale, U-pick, municipal farmers' markets,

an on-farm retail market, and a mail order business.

Although direct marketing was a cornerstone of their marketing plan, the Geyers' first step was to contact wholesale buyers. Anne says buyers gave them helpful hints on packaging, pricing and quality standards.

Charles and Anne Geyer sell preserves at their on-farm market and through their mail order business, which was started in 1986.

"When we first organized the farm, we planted a wide variety of each berry to cover the early and late seasons," Anne says. "We believe that diversifying our crops and extending the season from May to September is one of the reasons we got off to a good start. One year after we planted our first berries, we had some cash flow that allowed us to expand into other fruits."

In 1984, Anne and Charles planted six acres each of peaches and grapes, and they expanded the berry crops with new varieties that increased production early and late in the season. They also planted apple trees in 1985 that will bear fruit in 1988.

Currently, about 30% of the 350,000 pounds of berries and fruit produced at Westmoreland Farms is sold to wholesale buyers. Anne says another 30% is sold at their U-pick operation and on-farm market, and 35% is marketed at municipal farmers' markets. The remaining 5% is marketed as preserves through Westmoreland's mail order business.

Direct Marketing

Westmoreland's mail order business is the most recent addition to their marketing plan. This aspect of the business was started in 1986.

"We started making jams in 1985, and they were well received at the farmers' markets in Washington, D.C. and Richmond, Virginia and at our on-farm market," Anne says. "Once we were satisfied with the quality of the blackberry, raspberry and tayberry preserves, we ordered pint and quart harvest baskets with an early American stain. We include an attractive card with our logo, which makes an excellent gift."

The Geyers designed a one-page mail order form that customers can pick up at the farm. The mailer is also sent to people who have visited the farm and left their addresses or who have left names of relatives or friends as referrals. They did not consider buying a mailing list. They developed their own list exclusively from contacts made at the farm and their farmers' market outlets.

The mailer advertises six different varieties of preserves packaged in several containers. Prices range from $2.50 for a six-ounce jar up to $14.25 for a wooden harvest basket that contains three 11-ounce jars.

"We could expand the mail order business if we allocate more fruit and berries to preserves, and if we advertised," Anne says. "But we are not pressing the mail order business because we want to concentrate on the farm market first. We are expanding the on-farm market and building a new jam kitchen in the hope of doing more business with products such as shortcakes, ice cream sundaes and other fresh berry or peach toppings."

The Westmoreland Berry Farm is located in a historical region in Virginia near the Rappahannock River. George Washington's birthplace and Robert E. Lee's home are within twenty miles of the farm. This region attracts people from several metropolitan regions. Many visitors who stop for the U-pick berries also buy other Virginia farm products at Westmorelands' on-farm market.

In addition to selling their own berries, fruits and preserves at the farm market, the Geyers sell melons, a wide variety of vegetables and peanuts that are produced locally. They also sell Virginia honey and cider products.

Research Pays Off

Anne says marketing research helped them start the business and point them in the right direction. They also pay close attention to new berry and fruit research taking place at USDA and land grant colleges. New varieties are helping them extend their marketing season and expand their preserve line.

Anne says that improved varieties of blackberries and strawberries developed by USDA's agricultural research service (ARS) plant geneticist Dr. Gene Galletta are good examples of how they have improved the operation with new plant material. The Geyers got acquainted with Galletta and his research several years ago when they were working for the University of Maryland on a cooperative project with ARS in Beltsville, Maryland. They now have four acres of blackberries that were developed by Galletta and 15 acres of strawberries that include three ARS varieties.

"Dr. Galletta's Chester and Hull thornless blackberry varieties are two of the highest profit items on the farm,'' Anne says. "The varieties are very similar in shape and taste so customers can't tell the difference. But the Hull variety matures much later in the season, and we needed this kind of variety to extend our marketing season.

"The outcome is that we have a greater selection of berries during the season, and the new varieties are more productive. That adds up to greater profits. We harvested between five and seven tons per acre of these varieties in 1987."

The thornless blackberries used in their preserves were developed by Dr. Gene Galletta at USDA's Beltsville, Maryland research facility.

Editor's note: *For more information, you can contact Anne and Charles Geyer, Westmoreland Berry Farm and Orchard, Rt. 637 Box 1121, Oak Grove, VA 22413 or call (804) 224-9171. You can contact Gene Galletta at USDA-ARS, Fruit Laboratory, Bldg. 004, Room 111, Beltsville Agricultural Research Center, Beltsville, MD 20705.*

FROM:

Direct Farm Marketing and Tourism Handbook. Article and photos were excerpted with permission from the Spring 1988 issue of the ***Rural Enterprise*** magazine. The magazine temporarily suspended publication with the Summer 1992 issue.

QUALITY KEEPS CUSTOMERS COMING BACK TO THIS FARM

by Eric L. Gibson

"The housewife is a busy lady, and we like to have our products ready-to-use."
—Nita Gizdich
Owner Gizdich Ranch

As the visitor turns off Peckham Road, about five miles outside of Watsonville, California and into the parking lot of the Gizdich Ranch, he or she is apt to exclaim: "Oh, I didn't know it was like this!" Nita Gizdich attributes the common reaction to what she calls the "covered wagon" effect: all the buildings—apple-juicing barn, produce sales room, pie-shop, antique store and gift shop—are barn red, and they circle around the parking lot area like covered wagons.

Situated in the "core" of Watsonville's apple country, the 85-acre Gizdich Ranch is about as American as apple pies, apple juice, apples and pick-yourself berries. While none of these activities is unique to the Gizdiches, this third-generation farming clan has polished their operation to near-perfection. "On a farm, you learn to support yourself and work hard," says Nita. "Everyone has chores, even young children." Nita speaks from experience, as she was born and raised on a Watsonville farm. Nita's husband, Vincent Gizdich, Jr., is the official Apple Pie Taster, and along with their two grown sons, Vince and Mitch, grows the crops, maintains the shipshape buildings and grounds, and designs and builds much of the farm machinery.

Sell Farm Direct

The Gizdiches sell directly from their farm as much as possible. Inside the barns, jams, berries, apple juice and apples wait to be consumed by eager customers, or taken home. Customers can pick the berries themselves from May through June, or the apples from September through October. Wedges of warm apple, raspberry, strawberry or olallieberry pie a la mode are a fitting end to a visit, and you can ask them to package up whole pies as a take-home treat.

"Each of our activities could stand on its own," claims Nita, and as we walk into the sales room from the gift shop, she points to the collection—39 in all—of antique apple peelers that hang from the ceiling.

The current new model is one of the bestselling items in the store. "Nobody likes to peel a whole box of apples for pies," explains Nita—yet it does basically the same operations as did the 1889 model: peel, slice and core.

As we walk into the antique shop, Nita comments: "This is what I do in my spare time. I enjoy collecting, and just came from a Goodwill store. A lot of people today are into collecting," she continues. "Items that you sell don't necessarily have to be old, just collectible." Some of the items in the antique shop, such as cast-iron stoves, pots and pans or dishes, may be only a generation-old, causing such visitor-reactions as: "Oh! I just threw something like that away, now see how much she's getting for it!"

Nita Gizdich of Watsonville, Calif., says hard work is the backbone to a successful operation. Here, Nita examines the pumpkin display at the Gizdich Ranch.

When the roadside market closes down, the Gizdiches use up the apples in making cider. They run a weekly route for their cider, which includes 120 outlets from deli's to bakeries, restaurants and groceries, in an 80 mile radius. Referring to the prominent signs on their delivery truck, Nita says: "People ask us; 'Do you have a fleet of trucks? I saw your truck yesterday in Gilroy, and the day before in Santa Cruz!' They don't realize (our one truck) gets around."

Experience has made Nita Gizdich an ardent advocate of direct-marketing. "I was raised to think you had to sell through a broker," she says. "Every day, my dad would call our broker, and he'd say I sold your corn for $1.00 a box, your melons for $2.00, and your tomatoes for $1.50 a box. Some of those prices were so low, he might as well have junked the produce!"

Personal Public Relations

Over the years, Nita has led many tours of the ranch to garden enthusiasts, church groups, senior citizens, and school children. She notes that many shoppers pluck produce from plastic grocery bins without knowing how it was grown or delivered to market. As many as five classes of school children may come by in a day, each paying 50 cents for the tour, an apple and a glass of juice. This is not a lot of cash income for the farm, but each of the children goes home with a flyer and warm memories, and many return with their moms and families.

The Gizdiches have enjoyed moderate returns from small display and classified ads placed in local newspapers, all within

the 40-60 mile radius from which most of the customers come. Nita feels small display ads placed in the food section are her most cost-effective advertising. The only people who see the classified ads, she explains, are the ones looking for a specific product. But wouldn't that attract the canners and freezers, the customers who might want produce in a larger volume? "Not so many people are canning nowadays," explains Nita. "The housewife is a busy lady, and we like to have our products ready-to-use."

The fun promotion, however, is the twice-annual Apple Butter Festival, when three Mennonite families come out to the ranch to cook up an enormous batch of apple butter in a thirty-gallon copper kettle. The Mennonites work all day, and take some of the jars back home with them. But mostly they put on demonstrations, to show people Mennonite customs. The Mennonites make the event special including visitors in the apple peeling, butter stirring and general bantering. "People just love them," says Nita.

The weekend event usually draws more than a thousand people, who are treated also to country crafts, the balloon man, who gives the kids balloons that, when blown up, look like various kinds of animals, or the collection of early-day gas engines, hooked up to run various implements, such as an old washing machine, or a machine to grind corn, saw wood, mill flour, sharpen pencils or pump water. "People are fascinated by the old farm operations," says Nita.

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Direct Farm Marketing and Tourism Handbook. Article and photos were excerpted with permission from the Spring 1991 issue of the ***Rural Enterprise*** magazine. The magazine temporarily suspended publication with the Summer 1992 issue.

TASTE PREFERENCES OUTWEIGH APPEARANCES OF APPLES

When it comes to apples, West Virginians will respond to taste over beauty. And, in recent supermarket tests, the apples many picked as best-tasting were those grown right here in the Mountain State.

Those are some findings from marketing studies conducted earlier this year by West Virginia University and the state Department of Agriculture. The studies were designed to test ways to increase sales of russeted Golden Delicious apples grown in West Virginia.

"We investigated two promotional strategies: one associating russet with superior flavor and one appealing to state pride," says Tara Baugher, WVU horticulture extension specialist and a member of the seven-person research team.

Why care about Golden Delicious? It's a popular variety, both for eating fresh and for processing into apple products such as pies and juice. More than 1.5 billion pounds of Golden Delicious apples are grown in the United States annually, including 47.3 million pounds in West Virginia.

Ironically, however, Golden Delicious apples grown in West Virginia do not sell as well as those grown in Western states. The reason, it appears, is appearance. West Virginia's humid climate causes the apple's skin to freckle, or russet, and consumers seem to prefer smooth skins over speckles.

The WVU study team wanted to see if a sales display could change that preference. The researchers also wanted to see how the West Virginia apples fared in taste tests when the origin of the apples was not revealed.

For the promotions experiment, russeted Golden Delicious apples grown in West Virginia were displayed next to smooth Golden Delicious apples obtained from the Pacific Northwest. The price was the same for both kinds.

Four types of treatment were tested in four randomly assigned days. In one treatment, both types of apples bore the same generic label. In another treatment, the West Virginia apples were identified as such with a sign and stickers. The third treatment used a display urging shoppers to "Taste a Real Apple," emphasizing flavor over color perfection for the russeted apples. The fourth treatment combined the two promotional strategies of taste and state pride.

"Whenever the 'Real Apple' poster was displayed, the russeted apples out-sold the smooth ones," Baugher says. "With-

Photos: West Virginia University

West Virginia horticultural extension specialists and the state's department of agriculture studied how a sales display and taste tests could change the preferences of buyers when purchasing apples.

out the poster, the russeted apples sale averaged 47 percent of the total; with the poster, that average increased to 62 percent."

The study found insufficient evidence to indicate that the appeal to state pride boosted sales. Taste appeared to be the critical factor.

The taste test pitted the West Virginia-grown Golden Delicious against the same variety of apple grown in the state of Washington. The judges—150 customers at a Morgantown supermarket—tasted unlabeled slices of both apples and ranked them for texture, sweetness, juiciness and taste.

"The consumers ranked the West Virginia apples higher than the Washington apples on all four characteristics," Cheves reports. "On a scale of one to five, the average overall rating of the West Virginia apples was 4.1, compared to 3.5 for the Washington apples."

The lowest, average rankings were given to the sweetness and taste of the Washington apples, while the highest ranking was given to the taste of the West Virginia apples.

The taste test results suggested another promotion possibility: letting customers try before they buy.

"It appears that customers might respond positively to samples of high-quality West Virginia apples," Cheves observes. "Results of the display experiments also suggest that consumers respond favorably to the idea that an apple with an imperfect appearance may taste better than one that is more appealing cosmetically."

Morgantown, W. Va.—

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SELLING ORGANIC PRODUCE POSES NEW CHALLENGES

by Jennifer Morgan and Bruce Barbour

Produce retailers and wholesalers, both experienced and inexperienced in selling organic produce, reported in a recent survey that consumer concern about health and environmental risks associated with conventional agriculture practices has spawned a market niche for organic produce in their New Jersey establishments. Although the organic produce market currently represents only a small percentage of the overall produce market, it has exceptional growth potential. Further, this recognition could lead to the establishment of separate organic produce sections in major supermarkets.

Survey results indicate that the total value of organic produce sold in New Jersey during 1988 was $1 to 3 million, representing 0.6% of the estimated $500.7 million wholesale produce marketed (i.e., sold to retailers) in the state. Follow-up interviews with organic produce retailers and wholesalers indicated that more than 90% of the organic produce sold wholesale in New Jersey was imported, primarily from California and other western states. Thus, the total dollar value of locally grown organic produce sold wholesale makes up no more than 10% of the $1 to 3 million, or $100,000 to 300,000 of produce sold wholesale in the state.

Couple that with the fact that more than 96% of the experienced organic produce sellers surveyed indicated that they plan to continue selling organic produce, and almost half of the inexperienced sellers indicated that they were “somewhat” or “very interested” in doing so, the growth potential for this market is remarkable. Additionally, numbers show that, should inexperienced sellers enter the market, the numbers of organizations selling organic produce in New Jersey would double.

Reasons to Sell Organic Produce

Among survey respondents selling or interested in selling organic produce, health and environmental concerns were perceived to be significant reasons to do so,

whether retailers themselves are concerned and/or perceive their customers to be concemed. Among experienced respondents, “lower health risks” topped the list of all reasons for selling organic produce. More than 75% cited this reason as one of the three most important. The second leading reason was “better for the environment.”

Health and environmental concerns were superceded only in the inexperienced group, and only by the “customers want organic produce” selection. This group also reported “expanded produce selection” and “provides a competitive marketing tool” high on the list of reasons for selling organic produce.

Although both groups reported that their customers will pay a premium for organic produce (a higher than 25% price premium average was reported by both groups; higher at natural food stores than supermarkets), it is generally not perceived to be more profitable than conventionally grown produce.

It’s true that sales of organic produce will generally lead to higher net sales (revenue minus cost of goods sold), assuming that the sale of organic produce can maintain the same volume sold per square foot as does conventionally grown produce. That is because organic produce is sold at a higher price. However, increased management costs and waste associated with handling organic produce may erode the higher income otherwise generally attributable to its sale.

Obstacles to Market Expansion

Several obstacles inhibit expansion of the organic produce markets. The most significant obstacles concern supply, price and distribution. Respondents from both the experienced and inexperienced groups agree that the two most significant obstacles to further expansion of the organic produce market are the relatively high price and lack of supply of such produce.

Unlike the market for conventionally grown produce, the organic-grown produce market is characterized by undersupply, particularly of locally-grown organic produce. New Jersey retailers and wholesalers specifically demand locally-grown organic produce, reinforcing the proposition that there exists a market opportunity for local growers in the organic produce market.

Both experienced sellers, at 67.9%, and inexperienced sellers, at 46.2%, cited “not enough organic produce is grown locally,” as an obstacle to expansion. Because the distance from farm to market is shorter, locally-grown organic produce will generally have longer shelf life, appear fresher and have greater nutritional value. New Jersey growers can displace organic produce currently imported into the state and, New Jersey growers can help fill the currently unmet demand. In short, the current lack of supply appears to provide a very favorable market condition for those New Jersey growers who can bring a product to market. Sellers also noted that an organic certification program would certainly help them market organic produce. They cited “lacks legitimacy” as one of three most important problems associated with selling organic produce. It is such a problem in fact that New Jersey organic produce marketers would pay a fee ranging from $10 to $2500 ($145 average) in order to sell organic produce certified as such by the state of New Jersey.

Conclusion

Generally speaking, organic produce offers the same gross profit margin as conventionally grown produce. However, while organic produce may yield the same profit margins (or lower due to increased management costs),it nevertheless may yield higher net income as long as sales volume per square foot of retail space remains on a par with conventionally grown produce. Organic produce represents a more expensive product line.

Growers also need to examine the cost of production for organic produce on a per crop basis. For some crops, the cost of off-farm organic inputs combined with the additional labor requirements may well exceed the approximately 30% premium at which such organic produce can be sold. Analyzing the costs as well as the methods of organic production poses one of the most challenging and significant areas for future research.

Nevertheless, supply and price constraints on retailers and wholesalers pose several marketing opportunities for growers of organic produce. From the growers perspective, the current limited supply of organic produce should be directed toward those market outlets yielding the highest price premiums, that is, natural food stores and selected supermarkets willing to pay high premiums, not "mass market" supermarkets. However, selling through small-volume, high-end markets again underscores the need for improved local distribution because growers will have difficulty selling small quantities to numerous locations.

As stated above, reasons other than net income—e.g., use as a competitive tool, to expand produce selection, to maintain customer confidence and loyalty—merit the marketing of organic produce. Whatever the impetus for growth, the organic produce market appears to be increasing, thus presenting opportunities for the growers who decide to enter it.

—Jennifer Morgan is Director of Sustainable Agriculture Project, Stony Brook-Millstone Watershed Association, Pennington, NJ and Bruce Barbour is the County Agricultural Agent, Rutgers Cooperative Extension of Sussex County, NJ.

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THE ORGANIC MARKET: RESULTS FROM A TUCSON STUDY

Julia Kidwell and Gary Thompson[1]

Although the public has expressed environmental and health concerns regarding the use of pesticides on produce, few consumers have elected to buy organically grown produce rather than conventionally grown produce. The organic sector was expected to flourish in the 1990's, but currently less than three percent of American consumers purchase primarily organically grown produce.[1]

Many consumers claim that they do not purchase organically grown produce because it is too expensive relative to conventional produce. Growth in the organic sector may also be slow because consumers refuse to buy produce of inferior cosmetic quality. Organic produce is often perceived as having poorer appearance than conventional produce. However, few studies have evaluated cosmetic quality differences between organic and conventional produce.

Because such a small percentage of consumers purchase primarily organic produce, analyzing the demographic and socio-economic characteristics (factors such as education, income, age, and gender) which explain or predict organic produce purchases may be helpful for marketing purposes. Organic retailers could use this information to identify favorable markets for organic produce.

A study has been conducted in Tucson, Arizona, to provide a better understanding of the organic produce industry at the retail level. The three major objectives of this study include:

1) determining if differences in cosmetic defects between organic and conventional produce exist at the retail level,

2) measuring retail price differences between organic and conventional produce,

3) determining which demographic factors and socio-economic characteristics, if any, cause consumers to be more likely to purchase organic produce rather than conventional produce.

Data Collection

Data concerning the price, cosmetic quality, and consumption of organic and conventional produce items were collected at two retail outlets in Tucson, Arizona. Data were gathered on Monday and Tuesday afternoons during a twelve week period between February 7 and April 26, 1994. The two retail stores were chosen as sites for data collection and consumer surveying because they stocked both organic and conventional produce on a regular basis. One of the stores used for data collection was a regional chain specialty grocery store, and the other was a local cooperative.

The produce items that were examined include *red delicious* apples, broccoli, carrots, green leaf lettuce, and tomatoes. These items were selected because the two retail outlets supplied both organic and conventional items on a fairly consistent basis, and because these items ac-

[1] Cook, R. "Consumer Demand for Food Safety-Oriented Marketing Labels: Implications for Sustainable Agriculture." Paper presented at the International Agricultural Economics Association Meeting, Tokyo, Japan, August 1991.

Table 1. Average Number of Cosmetic Defects.

	Apples	Broccoli	Carrots	Leaf Lettuce	Tomatoes
Conventional					
Average	.500	.246	.673	.381	.439
Observations	230	216	110	186	230
Organic					
Average	.309	.175	.422	.483	.445
Observations	230	212	230	223	200

count for a large portion of the produce consumed in the United States.

Weekly price data of the five produce items, both organic and conventional, were collected to estimate the price premia[2] for the organic items. Data regarding the cosmetic quality of the produce were also collected. The Agricultural Marketing Services' (AMS) standards for grading produce were used as a benchmark for determining what was to be considered a "cosmetic defect." Because AMS inspectors grade produce at the wholesale level, a few adjustments regarding the data collection process at the retail level in this study were necessary. The AMS grades a certain percentage (approximately 1%) of the fruits or vegetables at the wholesale level. In grading produce at the retail level for the present study, the five commodities were graded by randomly selecting a sample of ten individual fruits or vegetables for inspection. Only visible quality defects were scored; the defects listed in the score sheets received equal weight when evaluating the quality of produce.

In addition to inspecting produce items during the weekly store visits, consumer surveys were also administered to collect data concerning shoppers' demographic and socio-economic characteristics. The interviewer approached shoppers in the produce section of the grocery once they had completed their shopping for fresh produce items. The consumers were asked if they would complete a brief, one page survey about the produce that they were purchasing that day. The survey asked the consumer if he had purchased any of the five fresh produce items of interest in this study, and, if yes, if the items were organic or conventional. Several questions concerning the respondents demographic and socio-economic characteristics were also asked. Information concerning the consumers' household, education, income, age, gender, and distance from the store to their home was elicited.

Cosmetic Quality Differences Between Organic and Conventional Produce

The first objective of this study is to determine if organic produce contains more defects than conventional produce at the retail level, as has frequently been suggested. The average number of defects, and the number of observations, for the five items is reported in Table 1. The observance of defects for this study indicates that for only two of the five items, lettuce and tomatoes, the average number of defects was higher for organic produce than conventional produce. Organic apples, broccoli, and carrots actually had fewer defects, on average, than their conventional counterparts. The differences in the average number of defects between the organic and conventional varieties of each commodity are illustrated in Figure 1. Each commodity has unique, specific applicable defects and each defect recorded receives equal weight. Therefore, the average total defects can only be compared for organic and conventional varieties of the same commodity; the defects cannot be compared across all the items.

[2] The price premium is the additional amount of money (per pound) that a person must pay to purchase organic produce rather than conventional produce.

Tests were conducted to determine if the average number of defects was significantly different for organic and conventional produce. For the three commodities in which the average number of defects was greater for the conventional items than the organic items - apples, broccoli, and carrots - there was a statistically significant difference in the number of average number of defects. In the case of tomatoes, the difference in quality between organic and conventional tomatoes was statistically insignificant. The only commodity that displayed a statistically significant higher number of defects for the organic item compared to its conventional counterpart was leaf lettuce.

In this study, organic produce did not necessarily possess more defects than conventional produce at the retail level. In fact, organic produce often has fewer cosmetic defects than conventional produce. Whether or not major differences in the quality between the two varieties exist at the wholesale level is beyond the scope of this study. Also, it is not certain whether or not more intensive culling practices are used in supermarkets for the organic bins than the conventional ones. However, this study does conclude that consumers do not have to sacrifice cosmetic quality for the absence of pesticide use. Quality differences may exist between organic and conventional produce from week to week, of course, but these differences may favor the organic produce as well as the conventional produce.

Price Differences Between Organic and Conventional Produce

Price data were collected for both the organic and conventional varieties of the five produce items each week. The average prices, and the maximum and minimum prices, for both varieties are located in Table 2.

Figure 1. Average Number of Defects.

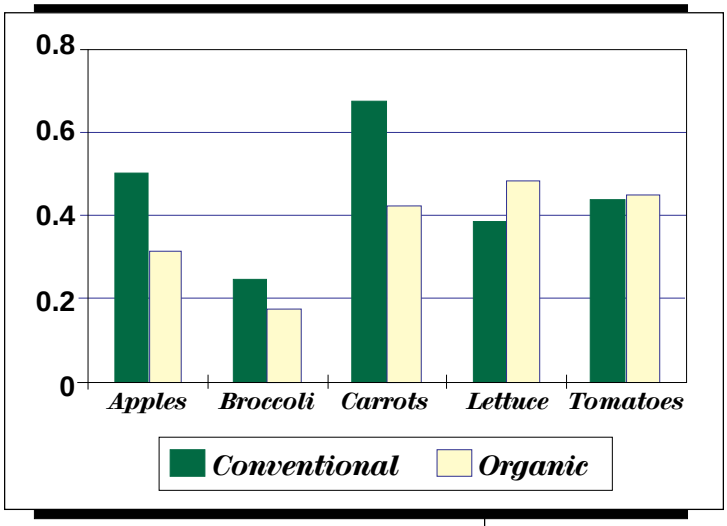

Table 2. Produce Price Comparisons.
(dollars per pound)

	Conventional	Organic	Aggregate
Apples			
Average price	1.04	1.49	1.26
Minimum price	.79	.99	.79
Maximum price	1.39	1.99	1.99
Broccoli			
Average price	.90	1.65	1.27
Minimum price	.79	.99	.79
Maximum price	.99	2.09	2.09
Carrots			
Average price	.45	1.21	.84
Minimum price	.39	.79	.39
Maximum price	.50	1.49	1.49
Leaf Lettuce			
Average price	1.00	1.89	1.45
Minimum price	.52	1.45	.52
Maximum price	1.58	3.18	3.18
Tomatoes			
Average price	1.39	2.01	1.69
Minimum price	.69	1.49	.69
Maximum price	2.49	2.99	2.99

The organic price premia were estimated for each item using price analysis. This price analysis was also used to explain how produce prices may vary in relation to certain quality characteristics. The regression results indicated that the method of production (organic or conventional) and the choice of store significantly affected the prices of the items. Prices were consistently higher if the items were organically grown, and if the items were sold at the specialty grocery store rather than the cooperative. The average number of defects and the timing of the weekly data collections had a negligible influence on the prices.

The estimated organic price premia were relatively high for all of the items, ranging from $.44 per pound for apples to $.90 per pound for leaf lettuce. The premia estimates are located in Table 3. The price premia are also expressed as a percentage of the average conventional price for each commodity in Table 3. The premia ranged from 37% for tomatoes to 171% for carrots.

The large organic premia suggest that the real trade-off for buying organic produce rather than conventional is the relative price increase. The findings of this study indicate that a consumer does not have to sacrifice quality, but he or she will have to spend more money to purchase the organic variety.

Identifying Common Characteristics of Organic Produce Consumers

Determining if certain socio-economic or demographic characteristics cause consumers to be more likely to purchase organic produce would be helpful for the marketing of organic produce. Because organic produce represents only 1% of the produce marketed in the United States, detecting a target market could be beneficial for organic produce producers and retailers.

The potential influence that a consumer's personal characteristics have upon his or her choice of organic versus conventional produce was examined using the survey information describing the respondent's produce purchases and his or her socio-economic and demographic characteristics. In addition to the consumer questionnaire data, information concerning the prices and quality of the produce and the store in which the item was purchased were also examined as potential factors affecting consumers' purchase decisions. A model was estimated for each of the five produce items examining which of the above factors significantly influenced a person to buy organic produce. The results indicated that the only factor that consistently had a significant effect on a consumer's decision to purchase organic produce was the choice of store. The analysis indicated that people who shopped at the specialty grocery store were less likely to purchase organics than the shoppers at the cooperative.

A choice-based sampling technique was used for the collection of data — the two stores were specifically chosen as interview sites because they both offer conventional and organic produce. Choice-based sampling suggests that the choice

Table 3. Organic Price Premia.

	Organic Price Premia (dollars per pound)	*Average Conventional Price* (dollars per pound)	*Premia as a Percentage of Conventional Price*
Apples	.44	1.04	42%
Broccoli	.70	.90	78%
Carrots	.77	.45	171%
Leaf Lettuce	.90	1.00	90%
Tomatoes	.51	1.39	37%

of store could also be explained by a consumer's personal characteristics. Therefore, a two equation model was designed to examine the factors influencing both store choice and the purchase of organic or conventional produce.

This model examined if the choice of store could be explained by a consumer's level of education, income, age, or gender. The only factor that was significant in explaining choice of store was income. Consumers with higher incomes were more likely to shop at the specialty grocery store than the cooperative. It should be noted that affluent customers may choose to shop at the specialty store not only because organic produce is available, but because many other specialty items - which are often relatively expensive - are also offered.

Price and quality differences between the organic and conventional produce items, a consumer's age, gender, whether or not he or she has children, and his or her choice of store were examined as factors that could potentially explain a consumer's decision to buy organic produce. A separate equation had to be estimated for each of the five items; therefore, it is possible that a factor could be significant in explaining a person's purchase for some of the items, but not the others. This is the case for the variable reflecting whether or not the consumer has children younger than 18 years old living in the household. This variable was significant in the cases of carrots and lettuce, indicating that the survey respondent's with children were more likely to buy the organic variety of carrots and lettuce than were consumers without children. Because the variable was significant for the purchasing of organics for two of the five items, it is difficult to draw a definite conclusion regarding the impact that shopping for children has upon a person's decision to buy organics.

The regression results showed that the variable representing the price ratio of the two varieties (organic price/ conventional price) was significant in the cases of tomatoes and broccoli, indicating that as the organic price of an item increased relative to its conventional counterpart, the consumer was less likely to purchase the organic variety. Tomatoes and broccoli had the highest average displayed prices of the five organic items observed, at $2.01 and $1.65 per pound, respectively.[3] Consumers may be more price sensitive as the price for produce reaches a certain level. To illustrate, some consumers may not wish to pay over $2.00 a pound for any produce item. Once the organic item surpasses that cost, consumers may favor the cheaper alternative of conventional produce. This may indicate that the future growth in the organic market may be greater for lower priced commodities.

While the price variable had a significant influence upon consumers' produce purchase decisions (for the higher priced items), the level of defects for the two varieties of produce had little effect on purchase choices. The variable reflecting the difference in the average number of defects (organic - conventional) was significant only in the case of broccoli. For all other items, this variable was insignificant in affecting the consumer's decision to purchase organics. The fact that the difference in defects was rarely significant in affecting the consumer's decision to purchase organics may stem from the fact that, in general, there was little difference in the average number of defects between the two commodities. These differences may have been fairly negligible to the consumer.

Overall, the choice of store was the most significant variable in explaining consumers' produce purchases. The results indicate that shoppers of the specialty grocery store were less likely to

[3] Although the average per pound price of organic lettuce was 1.89, as indicated in Table 2, the *displayed prices* for lettuce were per head. The lettuce was weighed and converted to per pound prices for this study. The displayed prices for lettuce were much lower - usually $1.19 or $1.29 per head.

purchase organic produce than the shoppers at the cooperative. The store variable was significant for four of the five items - apples, broccoli, carrots, and lettuce. Therefore, the primary indicator of an organic produce shopper, at least in the case of Tucson, is the choice of store by the consumer.

The price analysis indicated that the specialty store had higher produce prices than the cooperative. Thus, produce shoppers — particularly organic shoppers, who must pay a premia — wanting lower produce prices may be more inclined to shop at the cooperative rather than the specialty store.

Although some of the demographic factors were significant in explaining produce purchase behavior, no well-defined target market for organic produce consumers was identified using consumers' demographic and socio-economic characteristics. Age and gender had no effect on a person's choice of store nor his or her choice of organic versus conventional produce. However, this study concludes store selectivity to be a highly relevant factor for identifying prospective organic produce consumers: produce shoppers were more likely to purchase organic produce at the cooperative than at the specialty grocery store. This result is perhaps not surprising given that sales of organic produce have been relatively low in the larger, chain supermarkets in the 1990's. The environment of the cooperative resembles that of a health food store, where the organic market has experienced greater success in recent years.

The current study indicates that consumers' demographic and socio-economic characteristics have, overall, little effect on their decisions to purchase organic produce. A study focusing more on lifestyle characteristics could possibly identify a target market. When surveys were conducted at the two retail outlets, the interviewer observed that many of the respondents were interested in physical fitness, and many were vegetarians. Further research focusing on aspects such as these may reveal that there is a target market for organic consumers according to people's fitness habits and their diets in general. Such findings could advance the efficiency of the advertising and marketing of organic produce.

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PRICING

by Russell Tronstad[1]

Do consumers not buy their preferred produce because its too expensive or is it other reasons like insufficient quality? Does a consumer not buy their favorite item of sweet corn because of poor quality or the price is too high? The Packer's 1994 Fresh Trends survey asked consumers this question. The percentage of respondents that didn't purchase their preferred fruits were for the following reasons: 59% too expensive; 8% disliked appearance; 7% underripe; 5% shelf life too short; and 3% inconsistent quality. Vegetables showed a similar pattern with: 51% too expensive; 14% disliked appearance; 8% inconsistent quality; 4% shelf life too short; and 1% underripe. Thus, price appears to be a main reason why mainstream consumers sometimes don't buy their preferred commodities. How should one price? Although their is no black and white answer, this section discusses issues related to pricing.

Sizing up the Competition

Sizing up the competition starts at assessing the supply and demand for the specific products you are selling. If you had a bed and breakfast with a view of the Grand Canyon, your product would be unique from other bed and breakfasts near the rim. Just like beach front property is different from property a few blocks away from the beach. Product uniqueness allows you to be more of a price setter rather than just a price taker. How unique is your product compared to competing products? If you are selling seedless watermelons at the farmers' market next to four other vendors selling seedless watermelons, your price will need to be right at the going rate. Even if you try to get a price that is just 1% to 2% more, virtually all consumers will opt for the cheaper melons. But if you are selling a melon that is more exotic and unique, many consumers will pay a 50% to 100% premium over what regular watermelons are selling for.

Freshness is a unique characteristic for products that are very perishable like sweet corn, blackberries, raspberries, and strawberries. But products like carrots, potatoes, and apples that store well, need to be priced competitively with supermarket prices. If you're selling storable products you might possibly use exotic varieties, distinguish your growing methods, or provide rural recreation opportunities for developing product uniqueness. Defining a unique market niche is critical for having any ability to set price rather than being a pure price taker.

When Domino's pizza recently gave up the motto of "delivery within 30 minutes or your pizza is free," many franchise owners were disappointed. Franchise owners recognized the litigation scrutiny and pressure that prompted Dominos to give up the guarantee, but many also voiced that this guarantee was important because it set Dominos apart from the competition. The guarantee of delivery within 30 minutes or your pizza was free made Dominos pizza unique from other pizza delivery services. What makes your product(s) unique?

Pricing for Maximum Profit

Pricing for maximum profit requires that you can assess consumer demand and

variable costs of production for your product. Costs of production are commonly broken down into fixed and variable costs of production. Fixed or ownership costs are defined as those costs that don't change with an increase or decrease in output — they are fixed once these resources are committed to production. Land payments, property taxes, capital allocations, and your own management skills are generally referred to as fixed costs. Costs that vary with production like labor, fertilizer, gas, fuel, and water usually refer to variable costs of production. But once fertilizer has been applied, the cost becomes sunk or fixed in that you can't go out and retrieve 300 lbs. of nitrogen that you applied yesterday. Conversely, if you haven't yet invested any capital or resources into a direct farm marketing or tourism operation, all costs are variable. No resources have been committed to the production process.

Ideally, one would like to receive a price that covers all fixed, variable, and opportunity costs of production. It is important to include any opportunity costs or foregone alternatives. For example, if you could earn $75/acre for renting your land to a neighbor, this is a foregone opportunity. Your land cost would be the greater of your actual costs or the $75/acre foregone in land rental fees. Owner wages are often foregone opportunities that need to be accounted for as well. If you add up all fixed, variable, and foregone costs of production and divide by an estimated yield you will obtain your break-even price. Since yields will vary from one year to the next, calculate a break-even price using a five year average yield and then 25% above and below the five year average.

Maximum profit for the "short-run" is where the additional revenue from selling one more unit (marginal revenue) barely exceeds or meets the additional cost of selling another unit (marginal cost). In economic jargon this is referred to as marginal pricing. The additional revenue received needs to exceed the added costs from making a sale. Figuring out the additional revenue received or marginal revenue requires that you can assess consumer demand - which is related to your competition, on the cost side, if you have hauled perishable sweet corn to the farmers' market and the market is to close down in 5 minutes, your marginal cost is close to zero. Almost all costs are sunk (i.e., growing and trucking costs) and the perishable nature of the product implies that you have little opportunity for selling at the next farmers' market. At this point, any moneys that you receive from a sale will help cover some of your sunk costs. Some money is better than throwing the corn away. But all costs are variable or must be covered in the long haul so you don't like to get into a situation where you're "forced" to take rock-bottom prices.

Trial and error is often involved with feeling out consumer demand and adjusting prices appropriately. If you are forced to take a rock-bottom price at the end of a day at the farmers' market, your price was probably too high earlier in the day. Lots of lookers, low sales per customer, and complaints are other signs that your price is too high. But if your product is moving so that you run out of product before you run out of buyers, your price is too low. Even if you are covering all your costs of production and realizing a good return you should raise your price. An exception might be when your buyer has agreed to pay a price below the market when prices are high but above the market when prices are low. But this type of an agreement needs the trust and commitment of a long-lasting relationship. If you are working on this kind of a relationship, your break-even price is appropriate provided that you have included a reasonable return for your wages, management, and capital.

Some consumers are willing to pay more than others so how does one differentiate between consumers? Retailers have used various tools to maximize their profits through the years by "price discriminating" among consumers. Coupons are a form of price discrimination. Consumers that are looking for the lowest pos-

sible price have a demand curve that is relatively elastic. This means that the consumers are very price sensitive. Supermarkets offer coupons in order to maximize their profits, not because they like to save the consumer money. They recognize marginal pricing concepts. Coupons are a vehicle for allowing them to price lower for the price sensitive shopper but maintain a higher price for consumers that are less price sensitive (i.e., more inelastic demand) and don't want to be bothered with coupons.

Terrific Tuesdays or Wednesdays (i.e., discount days) are another vehicle for price discrimination. Video stores commonly have one day a week where they rent videos at half price. These stores do this because they know sales revenues will increase for these price shoppers (i.e., elastic price demand) even though prices are cut in half. Seniors are generally price shoppers so businesses offer discounts to Seniors as a form of price discrimination. Volume discounts reflect a form of price discrimination and/or a different per unit cost of making the sale. If you plan to purchase a large volume you will be a more price sensitive shopper. Again, these discounts are offered in order to maximize profits rather than "give a good deal to the consumer." Discounts are most appropriate for the direct marketer at the peak of harvest when ample produce is available.

Pricing Strategies and Tips

Does $9,999 differ from $10,000? Even though the percentage price difference is essentially zero, retailers commonly price with 9's to convey a cheaper price image in the consumers mind. If you want to have a product position of being the low price vendor or offer a discount to attract the bargain hunter, price in 9's. If your regular price is $15.00 a bag, offering a price of $12.99 would be an appropriate use of 9's. A $3 discount is flashed in consumers minds before they think a $2 discount. Multiple pricing is also a form of price discrimination and pricing 3 for $.99 or $.40/each would be an appropriate use of 9's to attract the bargain hunter. Nine pricing doesn't generally fit if you are trying to promote a product image of high quality and solid value.

When dealing primarily with cash sales, prices that are in $.25 increments have an obvious advantage of reducing time at the cash register. If a tax must be added, price items so that they will come out to a $.25 increment. Selling by weight for some items helps consumers compare with supermarket prices, but this also requires more time at the checkout line. Most direct marketers don't have computerized scales that provide calculations to the ounce in a fraction of a second. Scales also need to be monitored for their accuracy and are subject to the scrutiny of inspectors. If your prices are obviously lower than supermarket prices, unit pricing may be to your advantage. When your prices are near supermarket prices and you're competing with the same supermarket varieties, sales by weight are generally most appropriate.

With many singles, couples, and small families today a "variety pack" of assorted fruits and vegetables is probably more appropriate to offer as a special than a volume discount. Variety packs get consumers to try new items that they might not otherwise try and reduce the risk of getting too much of one item. A meal with corn, sweet potatoes, and a salad with fresh lettuce, green pepper, celery, carrots and tomatoes is more appealing for most individuals than corn, corn, corn, and more corn. That is, a couple might not be able to consume two dozen ears of corn before their sweetness and freshness is lost.

Loss leader pricing refers to advertising one item at a price below cost, with the intent of getting customers "in-the-door." After customers have made the decision to stop and buy the loss leader item, the objective is to sell enough items at full-price to cover any losses occurred on the loss leader. Loss leaders are most ef-

fective for a common good that everyone is purchasing. Turkeys at Thanksgiving are a classic example of a loss leader. Almost everybody serves turkey and all the other goodies that go in and with the turkey cost way more than the turkey, making it a good loss leader item. Pumpkins sold during Halloween are sometimes used as a loss leader item by direct marketers of produce.

Method of Payment

Why are retailers all across the US willing to give credit card companies up to 5% of the purchase price of an item to make a credit card sale. Why do retailers not just request cash? First, retailers know that the average consumer will buy more if they take plastic rather than require cash or check. A consumer may plan to spend $50 when they visit your outlet and take $50 in cash. But if after arrival they realize that your produce is a better value than they anticipated, they are constrained to spending $50 or less if you only take cash. You are at risk for not receiving any payment if you accept checks. Credit card companies are a vehicle for insuring payment to the retailer and getting consumers to buy more. Keeping cash out of the cash register also reduces the risk of losing all your sales for the day to a dishonest or disgruntled employee, or armed robbery. The fixed costs of getting connected and set up for credit card purchases may outweigh the perceived benefits for small and isolated outlets. But if your business is growing and you want consumers to walk out buying $75 worth of produce rather than $20, credit card purchases are a must. Most consumers are so accustomed to the convenience of purchasing items with credit cards that they don't carry significant amounts of cash.

If you are operating a delivery service, an account is generally set up for each client and you send them a bill on regular intervals, commonly every two weeks. Offer a slight discount for early payment from your "regular price" in order to encourage prompt payments. Some farmers' markets and roadside stands are set up to take food stamps as a form of payment to promote afford ability. Food stamps are probably not worth investigating for produce outlets that are isolated and providing a "rural experience" or up-scale in price. But if your outlet is catering to low income consumers with a product image that includes low price, food stamps may be worth pursuing.

Regardless of the method of payment you choose to adopt, records need to be kept. Records that can track how much was received for fresh corn and day old corn on the same day are needed to make keen pricing and ultimately next years planting decisions. Personal observation help, but it is definitely not enough when it comes to going to the bank. User friendly computer programs can be used to enter the sale code and quantity purchased, and within seconds a detailed sales receipt is printed out for your customer. With the price of computers getting more affordable every year, computerized records and receipts are a wise business tool for even small produce outlets. Tracking individual consumer purchases from year to year can be the best key for discovering what items need to be discontinued or emphasized more.

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ASSESSING RISKS AND FINANCE REQUIREMENTS

by Russell Tronstad[1]

"The man who makes no mistakes does not usually make anything."

Edward John Phelps

Starting out in a direct farm marketing and tourism venture will require many decisions and some will undoubtedly be "mistakes." One never starts out or continues in a business with the goal of losing money but reality is that many years will have negative profits. The potential for things to turn sour is never far off since agricultural products are notorious for irregularities in production, price, and input costs. Determine what you are willing to forfeit up front rather than after you are fully committed and drowning in financial commitments. This section gives some tips and tools that can help assess understanding your market and the associated risks and finances required. The section of Business Planning has related discussion on risk and finance requirements.

Secondary Data

Securing a loan for starting a direct farm marketing and tourism related business is generally not easy. With little or no proven production and marketing history, one can hardly blame agricultural lenders for being very cautious. Investing one's own money needs to be carefully evaluated as well.

Market analysis is crucial for providing the information you need for making investment decisions and especially for securing a loan. A good starting place is to explore secondary data and previously published studies. Data presented in the previous section on industry trends can be updated for a nominal charge by receiving timely ERS publications. Most of this data is available free of charge if one has access to Internet — the electronic communication tool that is connecting the world. Many private companies offer access to Internet for a modest monthly fee (currently less than $10/month for about 5 hours of time). Computer and News magazines review the services and costs associated with these private "e-mail" services on a regular basis.

Analyses of market and production risks are often found in farm magazines that provide valuable information as well. A fairly recent study by Blank and Schmiesing indicate that the farm financial crisis of the 1980s and savings and loan crisis have caused lenders to shift from the common practice of lending on equity to income. The focus of analysis from equity to cash flow has caused lenders to place more emphasis on risk analysis. Lenders are paying more attention to the volatility and uncertainty surrounding expected income rather than a target income level.

Blank proposes a measure for calculating the probability of a loss from an activity as the average return divided by the standard deviation of returns. The standard deviation, a figure easily computed on virtually all hand held calculators, is a measure of dispersion associated with returns. Dividing mean returns by the standard deviation gives a normalized value in which probabilities can be inter-

preted from a normal distribution (see Blank or any introductory statistical book for a table of values). The value from the normal distribution gives the probability of a loss occurring from an activity. Table 1 presents these probability of loss estimates and average return estimates for some of the crops and counties in California Blank considered in a recent study.

Blank calculated average returns from California Agricultural Statistics data and University of California cost estimates. These secondary data sources are available to the public. Farmer prices received (volume weighted) were multiplied by average county yield estimates for calculating gross revenues. Then total costs per acre (fixed and variable costs), as reported in Extension budgets published for each crop by county, were subtracted to obtain a return estimate for each crop year. Annual return estimates from 1958 - 86 were used as a basis for the study by Blank.

Table 1. Assessing Price and Income Risk of Selected Agricultural Crops.[a]

Crop/County	Mean Price *$/ton*	Standard Price Deviation *$/ton*	Mean Income *$/acre*	Standard Income Deviation *$/acre*	Probability of Loss *%*
Almonds					
San Luis Obispo	1,605	790	170	1,383	45.2
Stanislaus	1,741	727	NA	NA	NA
Broccoli					
Santa Barbara	341	29	891	1,581	28.8
San Luis Obispo	388	65	337	1,370	40.1
Carrots					
Monterey	157	28	1,675	643	0.5
Riverside	189	43	233	1,793	44.8
Grapes, table					
Fresno	363	135	1,342	659	2.1
Riverside	971	221	NA	NA	NA
Grapes, wine					
Fresno	150	42	440	559	21.5
San Luis Obispo	305	135	502	1,653	38.2
Lettuce					
Fresno	197	56	860	814	14.5
Monterey	222	28	545	604	18.4
Walnuts					
San Luis Obispo	914	201	262	1,331	42.1
Stanislaus	935	2362	97	647	32.3
Watermelons					
Kern	86	24	802	794	15.6
Riverside	92	21	509	1,398	35.9

a NA denotes that the mean net income in this county was not available over the data period due to insufficient cost data. All figures were adjusted for inflation to reflect 1986 dollars.

Source: Blank, California Agriculture, Volume 46, No. 5, 1992.

Results quantify what the relative risks and returns have been for several agricultural crops between 1958 and 1986. Although history doesn't always repeat itself, yield and price fluctuations are largely location and commodity specific. The difference in location can be seen by comparing carrots in Monterey versus Riverside county. Probability of a loss or year with negative income for carrots in Monterey is only .5% whereas it is 44.8% in Riverside. Mean prices are actually higher for Riverside than Monterey ($189/ton vs. $157/ton). These results indicate that yield levels and variability along with costs of production are remarkably different according to geographic location. Results show that income variation and the probability of a loss by site is often more different than differences found across commodities. Thus, the production capabilities of your site need to be carefully researched and explored on a small scale if no current production can be found in your area.

The method outlined above for calculating the probability of a loss can also be used for sensitivity analysis. For example, if you wanted to calculate the odds for making at least $100/acre, simply subtract $100/acre from average returns ($/acre)

before dividing by the standard deviation of returns. This would also measure the chance for defaulting on a loan payment of $100/acre, information that loan officers would like to make before securing a loan.

For many innovative and often new tourist attractions or farming activities, little historical data are available. In this situation, looking at farm profitability under; 1) best, 2) anticipated, and 3) worst case scenarios for yield, costs of production, and prices can provide a good feel for the risk-return tradeoff of an activity. The worst case scenario is obtained by combing a conservative low product price with a low yield and high costs of production. This value should also be the amount of money you are willing to risk or give-up from taking on a new activity.

Primary Data

Primary data collection can be very expensive to collect on consumers in a "scientifically based" format. The cost is generally prohibitive for the small direct marketer. Thus, primary research for the small scale direct marketer might be better coined as "personal observations." Nonetheless, personal observation of potential and current consumers is probably the best source of market information for the small direct marketer.

First, have an ear that is sensitive to what the consumer is saying. When Jay Leno was starting out as a comedian he used to rush into the mens' rest room and sit in a "stall" after he did a comedian show. For what reason? To obtain invaluable unbiased information on what consumers were thinking of his product. Jay would use this information in making changes to his comedy show. As a direct marketer, you should also seek unbiased information on what consumers are thinking of your products. Act like you're a consumer in your own store if possible or persuade a friend to find out what customers might be complaining or praising about your business. Find ways for getting an unbiased opinion of what consumers think of your products, and react appropriately. If you are just starting out, visit other businesses in the area as a customer to see what works for them. Ask yourself, "why would I rather buy from the business I envision instead of the competition?"

Surveys are another common method for getting detailed information that can help target your consumer. First, determine what "population" you are trying to gain information from. Most surveys focus on current customers since they have had an experience with your business and are an easy population to identify for sampling. But if you are trying to figure out why consumers haven't visited the local farmers' market — you obviously can't survey people at the farmers' market. When doing any survey, be sensitive to the amount of time you are requesting from participants. A small sample of free products or discount coupons are token gifts that can give individuals some compensation for their time and show your appreciation. Scientifically designed surveys often pay their participants well for completing surveys.

Surveys can be conducted in person, over the phone, or by mail. Personal interviews have an advantage in that you can often gear your survey so that it comes off as a promotion for your business. It gives your customer a feeling that you care for them personally and lets them know that management is listening to suggestions or concerns they might have. Also, you can give them a gift of appreciation immediately after they answer your questions. A disadvantage with personal interviews is that they require lots of man hours and responses may be biased more favorable than what consumers are really thinking. Human nature is that nobody wants to bring bad news. Most of us would rather tell someone that their business is great rather than a disaster.

Telephone surveys can yield information in a timely manner and are relatively

inexpensive. But be sure that your phone calls don't invade on an individual's privacy. Many people are annoyed at evening phone calls, particularly when dinner is warm, and this brings a negative image to your business. Keep phone surveys short with easy questions to answer and call business rather than home numbers. Be sure and ask the same questions in the same tone of voice to everyone as well, to improve consistency.

Mail surveys are great for obtaining detailed information and consistency across individuals. But the response rate is often very low for mail surveys. A letter or phone call reminding individuals of the survey a week or two later are helpful for improving response rates. A response rate of at least 60 percent is considered sufficient for most types of questionnaires. However, the response rate for many mail surveys to businesses are as low as 20 percent. Information compiled from structured questions, like questions 1 through 3 in the "sample of survey questions," have little value with low survey responses. Questions that are more open-ended, like questions 4 and 5, are more useful with low survey responses since they yield specific suggestions that can be evaluated and acted upon. A combination of structured and open-ended questions will provide general information along with specific suggestions.

All surveys need to be interpreted with care. What consumers say they will do with their dollars and actually do are sometimes different. Over 90% of the consumers interviewed by the Packer indicated that they had increased or at least maintained their fruit and vegetable consumption (see Figure 1) between 1987 and 1992. Yet average per capita consumption figures have been flat during this period (see Charts 1 and 2). When consumers actually vote with their dollars, pay attention. Thus, not enough can be said for keeping track of the cash register and having a record system that can pinpoint what items consumers have increased or decreased their purchases of. Daily or weekly records are preferred to just annual summaries too, since many produce items may sell better at the beginning of the season than at the end of the season. Tourist activities and events are often heavily dependent on a holiday or season. Demand for specialty meat products like summer sausage, smoked hams and turkeys can surge before the holidays of Thanksgiving, Christmas, and

Sample Customer Survey Questions

1. How did you first learn about this fresh farm produce outlet?
   - ❑ Through friends or family.
   - ❑ Through roadside signs.
   - ❑ Through a newspaper article.
   - ❑ Through the Fresh Farm Produce brochure.
   - ❑ Through classified newspaper ads.
   - ❑ Received a call or postcard.
   - ❑ Referred by another producer or business.
   - ❑ I don't remember or am not sure.
   - ❑ Other, please specify: _____

2. Have you seen the following advertisements for produce operations here?
   - ❑ Fresh Farm Produce brochure.
   - ❑ Classified newspaper ads.
   - ❑ Newspaper feature articles.
   - ❑ Road signs.
   - ❑ Radio announcements.
   - ❑ Television coverage.

3. Of the lettered income categories on this chart, can you tell me which letter best describes your family's before-tax income?
   - a. less than $15,000.
   - b. 15,001-30,000.
   - c. 30,001-40,000.
   - d. 40,001-60,000.
   - e. 60,001-80,000.
   - f. 80,001-100,000.
   - g. over 100,000.
   - h. No response.

4. Are there any other products you would like to see offered for sale?
   - ❑ No.
   - ❑ Yes, please describe: _____

5. Are there other things that you would like to do during this trip that you can not currently do?
   - ❑ No.
   - ❑ Yes, please describe: _____

Questions extracted from Agricultural Tourism in Cochise County, Arizona, Characteristics and Economic Impacts, by Leones et al.

Easter. Craft sales generally fluctuate with tourist travel and the seasons too. Keeping track of daily sales receipts can help you better plan for holidays and the value of special events in subsequent years.

Starting Small - "Testing the Winds"

Not enough can be said for the merits of starting out on a small scale. If you were on your first hang gliding adventure, wouldn't you rather launch from a small hill with sand below rather than a 300' cliff with boulders at the bottom? Sometimes this reasoning is forgotten when starting a business. Most major corporations and successful small businesses started in a home office, garage, or side project just like most of the thriving direct farm marketing and tourism operations today. Entrepreneurs that are on the "cutting edge" of production and marketing techniques always seem to be trying something different and they almost always trial test a new idea before going full scale. Even large companies like McDonalds do a test trial on all their new products before they go "national." Obvious advantages to starting small are that you can:

- Obtain valuable market information that will indicate what products you should exploit or drop. How customers vote with their dollars determines where you focus your limited resources. A *market approach* means growing products consumers want rather than a *sales approach* of running a high visibility add campaign that "coerces" consumers into making one-time purchases.

- Devote more time for each unit of production, making it easier to produce a higher quality product. This can be important for building a "name brand" image.

- Test your production capabilities for your land site and resources available without risking a large amount of capital.

- Lower finance requirements so that self-financing is often much more reachable. Credit sources generally loan to small businesses starting out at their highest category of interest rate, if they will loan.

- Assess the work load and type of work required before a full commitment is made to the business.

- Learn the legal requirements the most appropriate way of meeting legal obligations. Would be a shame to find out that a local ordinance could close down your business after you have already made a large investment in time and money.

- Work at least part-time at another job so that a "salary" is not required during the start-up phase.

A disadvantage commonly cited for not going into a direct farm marketing venture in a large way is that, "I have no other job and need to utilize my time and earn a full-time salary." But a more reasonable policy is to commit to not withdrawing any salary for at least a year and preferably two years. Many businesses fail to be the financial success they are destined for because start-up expenses in the first two years exhaust the available cash flow of the business.

Secondary Data Sources (wholesale price data)

Arizona Agricultural Statistics Service
3003 N Central Ave., Suite 950,
Phoenix, Arizona 85012-2994
602-280-8850

Arizona Field and Vegetable Crop Budgets
4042 N. Campbell
Tucson, AZ 85719
602-621-1713

The Packer
(weekly newspaper of the fruit and vegetable industry)
Vance Publishing
7950 College Blvd.
P. O. Box 2939
Shawnee Mission, KS 66201
800-255-5113

United States Department of Agriculture
Economic Research Service
National Ag. Statistics Service
Livestock and Poultry Situation and Outlook
341 Victory Drive
Herndon, VA 22070
800-999-6779

Federal-State Market News Service
Ag Marketing Service
Fruit and Vegetable Market News
P.O. Box 96456
Rm. 2503 So. Bldg.
Washington, DC 20090-6456
202-720-2745

Vegetables:
Gary Lucier, John Love, & Charles Plummer
202-219-0884

Fruit & Tree Nuts:
Dennis Shields & Diane Bertelsen
202-219-0884

AutoFax: 202-219-1107
(document 0411 for general information that leads to data for specific commodities)

Internet *(electronic data bases)*:
oldal.mannlib.cornell.edu

References

Blank, Steven C. "Income Risk Varies With What You Grow, Where You Grow It." California Agriculture 46, 5 (1992):14-16.

Blank, Steven C. and Brian H. Schmiesing. "Farm credit: The new focus on risk." Choices, First Quarter 1993, pp. 28-29, 41.

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