

**Title:**

Enhance Marketing of Fruits and Vegetables

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**Summary:**

Fruits and vegetables are usually more difficult to market than to produce. There are ready markets available daily or weekly for grain and livestock in almost all areas of the United States.

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Deep freezing, Cold storage, Fruits and vegetable processing, Shorting, grading, packing of fruits and vegetables

**Article Body:**

Fruits and vegetables are usually more difficult to market than to produce. There are ready markets available daily or weekly for grain and livestock in almost all areas of the United States. There are few similar markets for fruits and vegetables. Most commodities are produced in abundance and long established market channels may be closed to small scale or new producers. A producer may need several years to establish a marketing program. The number of produce buyers has decreased rapidly in recent years. One major nationwide supermarket chain has plans to consolidate the number of buying stations for produce to eight in the United States. A grower has little chance of selling to a local store in a supermarket chain as purchases are made through a central warehouse. As the number of buyers has decreased, the number of producers has decreased, but their acreage has increased considerably. There is often a delay of four to six months after shipment in receiving payment in the wholesale market system when selling through a broker. This often presents a cash flow problem for many growers. Wholesale buyers have strict and specific product quality, grade, and packaging requirements. These purchasing practices and price squeezes have eliminated market availability to many producers.

The future shows more promise for large scale producers or small scale producers than for mid sized producers. The large scale producer can afford the large equipment needed for production, and the use of migrant labor. Small scale producers can use smaller equipment, often hand operated, and family or local labor to substitute for other equipment. Large producers are linked through brokers to supply produce over a relatively long season or year round and it is difficult for small scale producers to supply the quantity and quality required

over a long period. Both types of producers can be highly successful or can go broke as production and marketing practices are highly volatile. A mid sized producer is less efficient, and often can't economically justify the purchase of needed equipment or substitute labor for equipment.

The small scale producer needs to seek local market channels. There are opportunities, but a producer must work to find them. Direct to the consumer markets bring highest prices to the producer, but also require more producer time in marketing. A diverse group of crops is ideal, since market demand changes rapidly. A commodity may sell well and bring high prices for a long period, but demand and prices may drop drastically over night. Supply and demand has a tremendous effect on marketability and prices of produce. There are no federal support prices for fruits and vegetables to help the grower when market demand or prices drop. Pick-your-own was a popular practice a few years ago. Society has changed and many people do not have time for harvest. Most consumers would rather buy produce that is harvested, and a popular developing trend is to prepare produce for the market that is as near ready to eat as possible. Precut salads and green beans are good examples of this practice. Shelf life of precut produce is relatively short, and cooling is essential.

There are opportunities for small scale producers for on-farm markets, organized farm markets, locally owned supermarkets, and locally owned fruit and vegetable markets. When selling to any market, and especially to local supermarkets or fruit and vegetable markets, good communication between producer and buyer is essential. A producer needs to know what, when, and how much the buyer can use. The buyer needs to know what is available and when, as he has to keep the shelves stocked. Determining a fair price can be difficult. Daily market prices are available on the internet. County Extension personnel can access this information for producers. Retailers generally double the price paid to account for shrinkage and spoilage.

Crop and variety selection are critical factors in marketing. Buyers are indifferent to the origin of most crops. Locally grown produce is much preferred versus other crops, primarily due to the difference in quality (flavor). Preferences for locally grown fruit and vegetable crops are apparent for sweet corn, tomatoes, strawberries, and peaches. These commodities either are harvested for shipping before top quality is attained, or rapidly lose quality during post harvest handling and shipping.

Different varieties may be used in shipping markets as compared to local markets. The sweet corn shipping market uses mostly supersweet type varieties. Local markets may use supersweet type varieties, but usually prefer SE or SU type varieties. Certain crops or varieties are preferred in specific locations,

and a ready local market may exist for a specific item that is not widely available.

A local Crossville, Tennessee market owner recently shared a list of items that he had difficulty in obtaining, and that he needed during the summer season. His list included Half Runner, McCaslan, Caseknife and Greasy beans; pickling cucumbers of 1.5 to 2 inch diameter; fresh highly flavored sweet corn (yellow, white and bicolor); Red Cayenne pepper; colored bell pepper; Kennebec and Yukon Gold potatoes; watermelons (seedy and seedless), strawberries; greenhouse tomatoes (fall, winter, and spring seasons); and highly flavored local tomatoes in the summer season. He had an idea for a tomato festival that included tomato varieties not routinely found in regular market channels. This would include Rutgers, Celebrity, cherry, beefsteak, pink, yellow, yellow and red striped, and pear shaped varieties. Many of these varieties are less productive and have other production problems, but have excellent flavor compared to the standard commercial hybrid varieties. There is a marketing opportunity through this market at Crossville, and similar situations probably exist in most locations in the United States. A producer needs to search for such market opportunities. The budgets and profitability of crops is another factor in production. Tomatoes have consistently been the most profitable crop for Tennessee producers. Greenhouse production is completely different, but is a rapidly growing enterprise in Tennessee. Sweet corn can be profitable, especially if a high plant population is used to provide high yields. We are planting twice the population (23,500 plants/A) than was planted several years ago, and are evaluating spacings for higher populations. Budgets that detail costs of production and likely returns are available for most crops, or a grower can develop their own budget.

Tree fruit production does not fit well into small scale agricultural production. The time between planting a tree and the first economic fruit harvest is relatively long. Large equipment is necessary to apply pesticides 10 to 12 times annually starting at the first bud break. Many pesticides are restricted use, and require special handling procedures. Trees need to be pruned at planting and annually in late winter.

Grapes offer some opportunity, but strawberries and blueberries are small fruit that offer more opportunity for small scale producers. Large fruit are required for successful marketing of strawberries and blueberries. Drip irrigation is needed in most areas for stand establishment and crop production. Overhead sprinkler irrigation is often necessary for frost protection. Strawberry production systems are changing from matted row to annual production. The culture of each system is entirely different.

Harvest of fruit and vegetable crops at the proper maturity is essential. Many

crops have a very narrow harvest window, and proper maturity is needed to insure a marketable product. Crops that producers tend to harvest early are sweet corn and bell pepper. Sweet corn that is not fully mature has less flavor, and little usable grain. Immature bell pepper pods wilt rapidly and are not attractive. Crops that can easily be harvested too late are sweet corn, bell pepper, and green beans. Bell pepper may be harvested with some color showing. Most markets want a green or colored pepper pod, and not a partially colored pod. Sweet corn and green beans become tough rapidly is allowed to become overmature. Tomatoes are best harvested in the pink stage and harvesting twice a week may be needed for proper maturity. Pink tomatoes have full flavor. Fruit rot, cracking, and bruising may be less when harvest is at the pink stage.

Packaging of produce is a critical factor in marketing. Containers should protect the product and be attractive. Standard packs vary according to the type of product and the market demand, but many buyers require the use of standard size containers. Some routine container sizes are half bushels, bushels, 1 + 1/9 bushel, standard sweet corn crates to hold 4 ½ dozen ears, and pints or quarts for berries. Many different types of materials are used in containers. Waxed pasteboard cartons are very widely used. Snap bean and sweet corn buyers often prefer wire bound wooden boxes. Melons are often sold in bulk cardboard boxes that hold approximately 250 muskmelon. Many markets may require specific counts and product size. for the container. Peppers and tomatoes are specific crops sold by uniform size. Peppers are usually boxed as extra large (40 to 50 -pods/1 + 1/9 bushel) to small (70 to 80 pods/1 + 1/9 bu box). This relatively uniform size allows the retail vendor to sell pepper pods by count. Prepacking in small consumer packages such as 3 potatoes or tomatoes is becoming more of a demand at the producer level. Local markets may have more or less stringent packaging requirements.

Product identification can be a useful tool in marketing. Certain areas or growers have developed a name for their product. Some examples are Vidalia onions, Granger County tomatoes, Washington apples, and Idaho potatoes. Product identification can work well for anyone who wants to stress and maintain quality. It should pay in repeat sales and prices received by the grower. We are considering this approach in Tennessee for Tri-X-Shadow seedless watermelon which has exceptional quality. An identification label could be attached to each melon citing the identification (maybe Tennessee Seedless).

Harvested fruits and vegetables are perishable, and quality loss starts immediately after harvest. Rapid marketing to insure freshness is a desirable feature of locally grown produce. Produce, not sold immediately, needs to be stored properly to maintain appearance, flavor, and quality. Time of harvest, cooling, and storing in shaded areas will help retain quality. Produce harvested

early in the morning is cooler than if harvest is later in the day. Quality of products such as green beans, sweet corn, peppers, and peaches benefit from hydrocooling. Hydrocooled produce needs to be kept in a cooler to maintain the proper storage temperature after hydrocooling. Products such as broccoli and sweet corn benefit from storage with ice in the container or placed on ice to maintain a low temperature and to avoid drying of the produce. Produce that has been cooled, should be maintained in cool.