Productive capacity of most perennial crop industries depends primarily upon investment decisions made by a large number of individual grower-investors. These decisions, influenced by past prices and by future expectations, provide a widespread coordinating mechanism. The results, however, have varied greatly from crop to crop and region to region.

Because of the uncertainties regarding future conditions, making accurate long-run predictions of future prices is difficult. Information on future market conditions which is available to grower-investors is often limited. Despite these factors growers must make investment decisions for orchards which are specialized, non-flexible investments and which continue for several decades. The limited informational base on uncertain future markets combined with long-term orchard investments results in large investment risks to growers.

If a grower plants an orchard crop which later experiences low prices, perhaps because of widespread grower plantings and surplus production, the grower can experience substantial losses. The importance of this high risk situation is especially great because of inflationary escalation of investment costs necessary for the establishment of orchard crops. If the grower-investor plants an orchard crop that later has unusually strong markets for much of its life, he can experience very favorable net returns from that investment. In either case the returns to the grower are likely to be experienced over a period of several years because of the long-term investment and slow adjustment process.

Although grower-investors have difficulty getting accurate information on future market conditions, they can obtain at least some incomplete informational tidbits from various sources. These sources of information include processors, fresh packershippers, grower cooperatives, trade associations, food manufacturers, grocery and food service retailers, trade publications, extension and university information, and government publications.

A particularly important source of information on future productive capacity is provided by specialized orchard surveys done by the federal and state Crop Reporting Service. If a marketing order is used for a particular crop this can provide another source of useful data.

Marketing firms such as proprietary processors, packershippers, cooperatives, food manufacturers, retailers and trade associations may provide particularly important sources of information on long-run demand. These firms also may be able to provide some information on future supplies and the competitive position of a geographic region in the production of a specific crop.
Universities, the Cooperative Extension Service and government can also supply information and analyses on both long-run demand and long-run supply for a particular perennial crop. Certain industries have this kind of long-run projection analysis done on a periodic basis. The Florida citrus industry provides an example of this approach through joint efforts of the Florida Citrus Commission and agricultural economists at the University of Florida.

One reason grower-investors have difficulty in obtaining accurate and complete information on long-run demand expectations is that growers are usually not in direct contact with (a) consumers, (b) food service menu decision-makers, (c) grocery retailers who make shelf space and merchandising decisions, nor (d) food manufacturers who make key decisions on product lines using perennial commodities. This information situation is even more complicated by the fact that growers' products may be sold through two or three vertical layers of food firms, including processors, manufacturers, brokers and wholesalers, between the grower and the key demand decision-makers.

Another problem is that demand for a grower's commodity can change substantially in a period much shorter than the life of his orchard. The demand for a commodity is especially subject to change depending upon the advertising and product-line decisions of food manufacturers with strong brands and upon menu decisions of food service chains.

For the grower of a perennial crop to have accurate information on long-run demand, it is important that this demand information be transmitted effectively through the food marketing system from the consumer level to the grower-investor. Although retailers have consumer access and substantial (although certainly not complete) information available on consumer demand trends, these firms are interested in information to aid decisions on their grocery business such as on store and warehouse facilities and other grocery retailing issues. They therefore do very little analysis of long-run demand trends for specific commodities. This is quite understandable given their type of business. However, the grower-investors must by necessity be concerned with long-run information on demand expectations for their commodity alternatives.

The basic data needed for commodity demand analysis may be available from the retail level or through specialized studies of consumers. A commodity industry cannot, however, rely upon retailers to analyze that data for their commodity.

Some analyses and data on retail demand are available through specialized agencies and marketing firms. Particular attention to industry organizational efforts to obtain such analyses is necessary for commodity industries. Some perennial commodities obtain long-term demand analysis through their industry trade associations, special research agencies, consulting firms, universities, commodity marketing cooperatives or proprietary commodity processors. Many commodity industries are not, however, organized to obtain this type of information in a systematic way and to use it for long-run demand analysis.

Food manufacturers sometimes have extensive information available on demand trends by product type. These firms typically have the research capabilities and finances to obtain the appropriate data (perhaps by purchasing it from some specialized firm or agency) and to analyze it for their purposes. Although the manufacturers use this type of information for their business and product lines, their commodity orientation will frequently be minor. This type of demand analysis
by food manufacturers is also only infrequently available to growers of commodities. To the extent that such information is available it is usually not adequate for growers because of the understandably different orientation of the manufacturing company in contrast to the commodity orientation of the growers.

Commodity processors as well as growers need accurate long-run information on demand for commodities. This is because commodity processors must invest in specialized processing facilities as growers must invest in their specialized orchards. With some notable exceptions, there is a tendency in the U.S. for most processors who emphasize commodities to be relatively small firms. Because of this, commodity processors are similar to growers in that they are somewhat limited in their ability to obtain complete data and accurately research the long-run prospects for the commodities in question.

A system which relies exclusively on individual investment decision by many growers, influenced by prices and future market expectations, has both advantages and disadvantages. Some of these are summarized below:

**Advantages**

- Grower-investors make their own decisions and take the consequences.
- This approach fits well with the widespread social-psychological value system in the U.S. of "individual entrepreneurship."
- For those grower-investors who "guess right," the price and profit rewards can be quite favorable -- for a number of years. This provides a substantial incentive for risk-taker investors.
- Many individual investor decisions, evaluating different sets of information, may have some balancing effect on one another. For example, some growers follow an investment strategy described as: "I plant the orchard crops that other growers aren't planting."
- A more diversified marketing system for the commodity may be facilitated.
  -- A more diversified marketing system provides a wider range of opportunities and access for marketing firms.
  -- A more diversified marketing system may be more dynamic and efficient than one relying upon one or a few firms or marketing agencies.
- Growers may tend to diversify into several crops in regions where this is feasible.
  -- This can lead to spreading of overhead costs and possible efficiencies for growers, processors and other marketing firms.
  -- This diversification can reduce long-term investment risks for both growers and marketing firms.
  -- Crop diversification can also provide greater flexibility for changing market conditions and can reduce risks from fluctuating weather conditions.
Disadvantages

- This approach often results in orchard overplanting and later surplus production.

  -- If this happens, resources are misallocated and wastes occur. This may continue for a number of years.

  -- Substantial crop (food) losses can occur. This can happen if (a) price falls below harvest costs; (b) there is not a demand for all the production even at low prices, or (c) there is inadequate processing or storage capacity for the surplus. Food losses are quite unpopular in today’s society.

  -- Grower-investors face long-term losses or low returns, painful disinvestments, and possibly bankruptcy.

  -- Because grower investors are usually small, family owner-operators, perhaps without many nonfarm employment alternatives, the loss-disinvestment crunch can pose economic hardships for them for a good share of their lives.

  -- Low returns may cause overreaction through excessive orchard or perennial crop removals and failure to plant new acreage. Then shortages can occur for a number of years during a rebuilding period.

  -- Very large farm production can result in surplus-plagued, unprofitable markets for processors. This can lead to low or negative returns to processors along with economic hardships, disinvestment and later shortages of processing capacity.

  -- Low prices and unprofitable grower returns can lead to poor relations between growers and their processors and/or fresh packers. Processors and/or fresh packers may be inaccurately perceived as the cause of low prices since they transmit to the growers the results of market interactions.

  -- Low grower prices from excessive orchard capacity can lead to inappropriate solutions which do not correct the excess capacity cause of the grower price problems. Such inappropriate solutions may divert attention from the excessive capacity problem and slow the needed adjustments in that capacity. Such misdirected solutions may also lead to new economic problems for the industry which might otherwise be avoided.

- This approach can frequently result in underplanting of orchard and later shortages.

  -- If this occurs higher consumer prices than would be necessary for a long-run supply and demand balance are likely.

  -- Shortages of supply and high prices inhibit development of new consumer products using this commodity as an ingredient. This reduces consumer choice and availability of products. This situation can also reduce long-run opportunities for growers and for specialized marketing firms.
-- Underplantings may lead to insufficient raw product availability so that some consumer products are dropped from food service menus, retail grocery shelves and/or food manufacturers' product lines. Thus, some consumer products using that orchard commodity would not be available to consumers at all.

-- If manufacturers or retailers drop certain consumer products, it may be very difficult to regain consumer access when supplies increase again after several years from new plantings. This situation could hurt growers, consumers and commodity processors.

-- Underplantings and substantial output reductions may result in a withering away of specialized phases of the commodity marketing system (such as certain processors, marketing firms, etc.) or specialized inputs for this crop. Then these specialized support-system components would not be available if and when the industry expands again later.

-- If shortages occur from underplantings, export market potentials can be severely damaged. This would be especially so if the U.S. shortages stimulate large competing plantings in other countries, so that these countries then effectively capture the existing export markets.

• Lack of accurate information on future markets encourages (a) overemphasis of information on past markets (which may not be especially relevant), and (b) “band wagon” planting psychology.

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This publication is one of a series on "Coordination of Long-run Supply and Demand for Perennial Crops." Leaflets in this series include:

#1 AN OVERVIEW
#2 GROWER ACREAGES INFLUENCED BY PRICES RECEIVED
#3 GROWER COOPERATIVES
#4 COOPERATIVE-CORPORATION JOINT VENTURES
#5 COMMODITY DEMAND EXPANSION
#6 MARKETING ORDERS
#7 LONG-TERM CONTRACTS AND FORWARD DELIVERABLE CONTRACT MARKET
#8 GOVERNMENT PAYMENTS FOR ACREAGE REMOVALS