AGRICULTURAL PRICES IN THE 1970'S: HOW WILL VALUE BE ESTABLISHED?

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INTRODUCTION

The method of value determination for agricultural commodities and products is likely to be of major concern during the balance of the 1970's. Food and agricultural prices are currently in the forefront of public interest. This concern is likely to continue and be more dramatic at times during the rest of this decade. Attention is likely to focus on the marketplace and arrangements for price determination.

Several writers in the field argue that the manner in which agricultural prices are determined presents some major equity problems [1, 2, 5, 6, 7, 12, 16]. They envision more problems ahead. Some conclude that there must be better mechanisms, institutions, organizational arrangements and procedures for determining the value of agriculture products. This concern implies a belief that a relationship exists between the method or process of price determination and performance [3, 9, 10, 13]. However, we know very little about the formation of prices [8, p. 1173], and we have very little empirical evidence on which to base firm conclusions about alternative arrangements [15, p. 231].

In this paper I will first abstract and identify those trends or situations that seem to perplex us, discuss the situation briefly by commodity groups, identify the basic reasons for the changes that have occurred, and then identify and discuss some basic issues. In the context of this paper the concern is not with price determination in the theoretical sense, but rather with the mechanisms, organizations and procedures. The processes and mechanisms have been, are, and will most likely continue to be mixed and complex.

OVERALL TRENDS

Briefly stated, the trends which seem to perplex us are the following:

1. In most commodity markets there is a trend toward decentralization and more direct negotiation between buyer and seller on price and the other terms of trade.

2. There is a decline in cash or spot trading on organized exchanges. At the same time, there are substantial increases in trading volume in future contracts.

3. There is more forward contracting through private treaty contracts or through trading in futures contracts. The prices in private treaty contracts, if determined in advance, are determined in a rather imperfect market situation. If prices are not determined at the time of the signing of the contract, the value determination responsibility is placed on trading of the uncommitted supplies. Competition in trading of these supplies is imperfect.

4. There is an increased use of electromagnetic means of communication to bring buyers and sellers together. However, this new technology has been neither fully nor adequately exploited.

5. Computers can handle a large number of transactions and could provide the means of establishing more complex means of centralized, organized exchange arrangements. Only a few attempts have been successful.

6. There is an increase in the number of joint ventures. In most of them, value determination is dependent on the existence of a market price. Some of these joint ventures cover most of the volume produced and, therefore, the market price is not a

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very reliable basis.

7. Lastly, government intervention in price determination has shifted to a different form in recent months. The impact of ceilings has been unsettling to say the least.

The Situation by Commodities

The situation is mixed across commodities. Decentralization has been most dramatic in livestock. Volume at terminal markets has decreased substantially. Beef prices are now negotiated at the feedlot. Hog packers have buying stations located throughout the pork-producing areas. Some sales are contracted in advance through futures contract hedges.

More fresh fruit and vegetable growers negotiate a trade directly with chain store buyers and bypass the central market. Growers of fruit and vegetables for processing have more volume contracted prior to planting either through private treaty contracts or contracts established by bargaining associations. There are more joint ventures which have a great mixture of means to determine transfer price. Some large marketing cooperatives are now in a better position to exert price leadership.

Broiler prices are individually negotiated between large integrated producers and chain store or institutional buyers. There is some tendency for group action price leadership.

Egg prices were long based on small volume central market trading, but since March 1970 there is no longer exchange trading in New York or Chicago. Subsequent to this, trading volume in fresh egg futures contracts increased, absorbing some of the functions of a cash market.

There has never been an organized centralized exchange for milk, although a thin central exchange for butter and cheese has existed for some time. Most milk is priced administratively. More volume is now under the control of large cooperatives and priced on a formula to the federal order price which has been based in part on free market prices for raw milk. The free market supply is very small and thus, some question the validity of the established value.

Grain prices are determined in a complex mixture of organized exchange trading in both spot and futures contracts. Grain cooperatives do not seem to be in a position to take much leadership in price determination. The grain futures market operates erratically when supplies are very tight. Unless very heavily regulated and monitored, futures contracts may be used to generate short-run windfall gains or losses. This could send incorrect signals to the cash market and to production and marketing decision-makers.

Reasons for Change

The reasons for all these changes are very complex, but the following factors are probably the most important:

1. Producers and thus sellers of farm products have become larger in size and fewer in number.

2. Physical inefficiencies involved in moving commodities through centralized markets resulted in higher costs than with decentralized marketing arrangements.

3. Technological advances in processing, storage, packaging and distribution have made larger processing plants, and more geographical dispersion, economically feasible.

4. While rail transportation was a large factor in the development of centralized markets, increased use of truck transportation favors decentralized marketing arrangements.

5. Improved communications have facilitated the rapid flow of market information and getting together of individual buyers and sellers.

6. Development and use of grades and standards make it possible for transactions to occur between spatially separated buyers and sellers without visual inspection of the commodity.

The Basic Issues

As I review the situation, several issues evolve. I want to discuss six: (1) voluntary electronic or computerized organized exchange arrangements, (2) mandatory or subsidized organized exchanges, (3) decentralized trading and individual negotiation, (4) group negotiation and bargaining, (5) formula pricing arrangements, and (6) committee pricing arrangements. Then I will digress to make a few points about government intervention and close by suggesting some policy considerations.

VOLUNTARY ELECTRONIC OR COMPUTERIZED ORGANIZED EXCHANGE ARRANGEMENTS

Many suggestions and several attempts have been made to reverse the trend to decentralization of trading and increase the use of centralized exchange mechanisms. Teleauction systems are now in operation for slaughter lambs in Virginia, and for feeder pigs in the Midwest. They seem to be working very well. Volume of feeder cattle going through auctions at terminal markets has increased, but so far none are sold through teleauction. However, many are sold directly over the telephone. Ralph Johnson [6] at Nebraska has proposed that a teleauction system for fed cattle would provide the best arrangment in pricing efficiency.

Schrader has designed an electronic

computerized egg exchange. Buyers and sellers could enter bids or offers through touch tone telephones. The computer would match like bids and offers and complete the transactions. Delivery would be made directly from seller's location to buyer's [12]. Holder [5] has designed one of these systems for a forward contract for slaughter hogs.

The egg industry has a nationwide telephone exchange (Watts Line) now in operation. Matching is done manually. An individual in Illinois has started a private electronic exchange for slaughter hogs.

The principal advantages of electronic systems are: (1) management time and transportation costs of searching for a buyer/seller are reduced; (2) the need of moving the product to a central market point is eliminated, and (3) the number of potential buyer/sellers that can be contacted is increased.

The principal disadvantages are: (1) the product has to be gradeable or definable so that visual inspection is not deemed necessary; (2) a critical volume is necessary to support a telephonic manual match system, and a much larger critical volume is necessary to support a telephone computerized match system; (3) the user fee is a barrier to use, as individuals will bypass the system to avoid user charges; (4) rigorously enforced rules on grades and standards and on financial accountability are a necessity; and (5) direct communication and negotiation on other terms of trade, quality, delivery schedules, etc., which enable advance planning are restricted.

MANDATORY OR SUBSIDIZED ORGANIZED EXCHANGES

The voluntary establishment of such organized arrangements will depend on the relative costs of sales or procurement through direct contacts as compared to the unit cost of operating the exchange mechanism. For most, but not all, commodities, it is more economical to deal direct. A national producer cooperative subsidized the development cost of the egg exchange. They started it as a profit-making venture, but after three years it is still a nonprofit operation. Volume is relatively low[1] and the user fee barely covers the low cost of manually matching the bids and offers. A mandatory requirement that all or part of the marketed volume be traded across an organized exchange is also a possibility. Canada's mandatory system for hogs apparently works quite well.

If we are to make sure that latent competitive forces have an avenue of expression when necessary or appropriate, it most likely will be necessary to subsidize in some way the operation of open market exchange mechanisms. I would favor subsidization over a mandatory requirement in this country.

Some are proposing mandatory trading for livestock. Packers argue that it would cost too much and that since visual inspection is necessary, their procurement costs would not be reduced. They further argue that the numbers of trades and traders are too large for it to be a manageable operation even if the mandatory provision covered only a portion of the volume.

The strongest argument against mandatory trading, in my opinion, is that it reduces buyer-seller contact and restricts communication to price and quantity data for prior prescribed qualities, delivery schedules, and other terms of trade. Flexibility to adjust to changing conditions is thus somewhat reduced. The basic question relates to whether this cost in reduced flexibility is more than offset by the gain in pricing efficiency.

DECENTRALIZED TRADING – INDIVIDUAL NEGOTIATION

The primary concern with a system of decentralized primarily closed trading is that individual producers, processors and distributors may have very little information on the total market situation and thus have difficulty determining the appropriate short-run price. Moreover, if the negotiating power is not balanced, or one side has more information than the other, then there is a potential for abuse of this power.

The system does have some advantages. Direct contact provides for maximum communication on other terms of trade such as delivery schedule and quality. It provides a potential base for market orientation of production and coordination of production quantity and quality.

The principal need under such a system is for information on what others are doing with respect to price and production decisions. If the current market news and statistical reporting system has difficulty getting proper high quality information, we will need to consider mandatory reporting requirements. It also may be necessary to review and possibly revise substantially the current public information system.

Under a decentralized system, some means may be necessary to make sure that the balance of power does not swing too far away from the farmer. The solution may be to make sure that they can group together as appropriate to negotiate.

[1] As of this writing, volume is just adequate to support it.

GROUP NEGOTIATION AND BARGAINING

There are a large number of bargaining associations for milk and for fruits and vegetables – about 170 for milk and 40 for fruits and vegetables in 1969-1970. These are voluntary. Numbers are decreasing, but the remaining associations are getting bigger [4, p. 12-13].

We now have cooperative laws which authorize bargaining units. But to get more effective bargaining[2] in the future, enabling legislation is needed which would more clearly describe a bargaining unit, prescribe a procedure for accreditation, require bargaining in good faith, and specify unfair practices. The new Michigan Agricultural Marketing and Bargaining Act of 1972 establishes such a base for Michigan fruit and vegetable producers. And one senses increased interest in this arrangement.

In milk, bargaining units have been rather effective under existing legislation. The basic issue is whether or not rules are necessary to insure that producers are treated equitably and that the cooperative performs in their best interest. The recent political actions of the large dairy cooperatives have focused attention on them and rekindled concern over the protection of the public interest. The issue is how to maintain a proper balance of power which will be in the public interest in the long run.

FORMULA PRICING

Most formula pricing arrangements for private treaty transactions use market or terminal market prices as a reference point. This may be valid from a price efficiency point of view if the actions of the firm(s) using the formula are independent of the actions of those whose trading determine the market price. If they are not, then the price level and the distribution of gains among participants may become seriously distorted.

Formula pricing is a convenience. If buyers and sellers can agree in advance on the formula, subsequent transactions are routine, and the cost of price discovery to that set of terms is practically zero. The price discovery function has been delegated to others.

Formula pricing now is common in eggs and milk. It is most useful in a situation where production and marketing is continuous. If it is discontinuous or seasonal, then formulas using the free market cash price as a reference are not much help. Formulas tied to specific futures contract months might be feasible.

Formulas also could use costs of production as a reference. Such an arrangement could insure returns sufficient to cover production costs, but if the prices thus determined get out of line with competitive short-run market prices, then one of the parties to the transaction will find himself at a competitive disadvantage.

Formulas could use finished product prices as a reference. This could insure constant margins or returns to the buyer or processor. However, in some years the producer price could get completely out of line from the competitive producer price. In some years the buyer would reap windfall gains or losses because his raw product costs would be out of line from his competitors. His windfall loss would be the producer windfall gain and vice versa.

If traders in an industry use formula pricing, they need some reliable reference point that will adequately and accurately reflect the value of the commodity. If many producers get committed through some form of formula pricing, the open market prices will not be reliable or will be difficult to obtain. Incorrect formulas result in performance inconsistent with the public interest and in misallocation of resources. It is this situation that raises a relevant public policy issue. Should the government become more directly involved in generating reference point prices or indexes that could serve as elements in a formula? Should the public, for example, legitimize a committee which could meet periodically and publish value estimates that the industry could use as a base point for determining day-to-day transaction values?

COMMITTEE PRICING

Currently we have no general enabling legislation which would authorize a committee structure to assist in the price discovery process.[3] Any industry committee which might meet to talk about price or to publish a suggested price may be in violation of our antitrust laws.

One of the recommendations that came out of the $300,000 research project on egg pricing completed in 1969 was that the egg industry should establish a committee of non-industry persons to generate a suggested value for eggs. This could be used by traders as a reference point for formulas for

[2] For a discussion of economic requirements for effective bargaining, see [4, pp. 12-13].

[3] There is only one exception. Enabling legislation does exist which establishes a committee to generate official spot quotations for cotton in several markets. Their purpose is to generate a quotation at the end of the day which best represents actual training for that day [14].

individual transactions or for general information [1, 11]. A group of producers formed the Egg Clearinghouse, Inc., in 1971 for spot trading and established a committee, the Egg Market Evaluation Committee, to translate trading into a set of value quotations. It is currently functional with three members. They publish their translation of market values two times a week after a joint review of trading and market conditions which takes place at a meeting held via a conference telephone call. If such a quotation is objectively determined, it could facilitate an efficient determination of price. If the committee is industry-run, there may be some question of legality and a problem of creditability.

The committee system is used in bargaining or group negotiation. One large fruit and vegetable processing cooperative joint venture uses a complex committee structure to reach agreement on the procedure by which the transfer price will be established for each of the more than 20 fruits and vegetables contracted each year. They process almost 100 percent of some of the vegetables in their region. The committee system, although costly in meeting time and farmer's time, provides for a determination process which involves consideration of current information from many sources and is informative to all concerned in terms of how the process works. The process is more subjective and less objective than other processes. This is both a strength and a weakness.

One cannot predict in advance how well a committee might perform. In any enabling legislation, attention would have to be given to two factors: the makeup of the committee and the procedures for collecting and evaluating information.

The advantage of a committee structure is its flexibility and adaptability. Its drawback is that it would be a personal, subjective process potentially subject to manipulation or influence.

GOVERNMENT INTERVENTION

Government intervention in food pricing is probably inevitable. It has been around for centuries. The form it takes is crucial. Price ceilings low enough to be effective cause shortages and discourage production. Although we could end up with a level of output which would yield relatively good returns for the remaining producers, consumers would be dissatisfied with the quantity offered for sale. Rationing the available supply or government involvement in distribution becomes a necessity.

Price supports or minimum prices, with appropriate storage or inventory policies, reduce uncertainty. Effective minimums then tend to encourage production and generate surpluses. Public policy in this area must be consistent with the public interest, and implementors must be prepared to cope with the consequence of the final decision. If either approach, a floor or a ceiling, is to be effective, it must be long enough in duration to permit the initial overreactions to work themselves out and for consumers and producers to learn and adjust to the new set of rules. The almost inevitable necessity of inventory control with floors and distribution control with ceilings must be recognized.

SUMMARY

There really is no clear answer to the question, "How will value be established for agricultural products during the balance of the 1970's?" One could answer that value should be established in a competitive manner and in the public interest. But that begs the issue. An increase in decentralization, in private closed transaction systems, and in contract commitments of various kinds to trade in advance of price determination will make it more difficult to know whether the environment is competitive or not and will make it possible for imbalances of power to be exploitative. This will create difficulties in value determination directly but will also create difficulties in equity and creditability.

With this assertion, I suggest that we need to consider ways to influence the process of price determination so that prices that evolve will be in the public interest. Specifically, we should consider:

1. The feasibility of a subsidy through industry assessment or federal support to establish or maintain viable organized exchange activities.
2. The feasibility of mandatory reporting of individual transaction prices, contract prices, and inventory positions.
3. Specific legislation to insure equitable treatment of producers and appropriate treatment of consumer and public interests in bargaining or group negotiation.
4. The feasibility of more direct involvement of the power of government in helping to determine and suggest value which could be used as an element in formula price determination. A public committee structure offers a possible technique.
5. The feasibility of and efficiency of committee systems for price determination within large cooperatives, especially in joint ventures.
6. A comprehensive consideration of inventory control on a continuing basis to apply to

both periods of shortages and periods of surplus as a government intervention program.

In closing, let me suggest that the value determination process in the future will in great part be determined by our national policy toward the mechanisms, the institutions, the organizations, and the procedures for price determination. This is a long-run issue with short-run implications and a fertile field for imaginative work.

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