

Futures Contracts for Commodities in Production Differ in Application from Those Held in Storage

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Professor Bakken did an excellent job of reviewing and considering the broad areas of futures markets. Most of his comments I agree with. Certain points I would like to amplify in relation to the cattle industry. Then, there are a few points where my views are different.

I should like to direct my comments more to the nature of the cattle industry and the contribution that a futures market might make to this industry rather than to a more general discussion of futures market operations. Perhaps, this is because I feel that I have a greater understanding of the operations of the cattle industry than I do of the operations in the broad areas of futures markets.

Certainly the traditional lists for the requirements for the successful operation of a futures market are no longer applicable. Experience has indicated that many of these can be successfully overcome. The obsolescence of previous guidelines is more nearly the rule than the exception both in present day business and agriculture.

Timing is exceedingly important in any enterprise. What was not feasible and successful ten or twenty years ago may prove to be a tremendously successful venture under present day conditions. As you all know, the changes which have occurred and are occurring in agriculture and related businesses are tremendous. The great developments which have occurred in the cattle industry make this a timely period for the introduction of a futures market for live cattle. To quickly review some of these changes, the consumer market for beef has expanded tremendously. Per capita consumption has exceeded a hundred pounds annually, as compared with levels of fifty to sixty pounds twenty years ago. Beef production has more than doubled in the past twenty

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years. A sizeable amount of this increase in beef production can be attributed to the great increase in grain-fed beef. Currently about 60% of our beef production is grain fed. The percentage twenty-five years ago was less than half as great. To achieve these increases in production, cattle feeding has become a specialized, volume operation. In 1964, 40% of the cattle marketed were from lots with capacity in excess of a thousand head. As you are well aware, the concentration of feeding has shifted westward. On January 1, 1956, Illinois accounted for 10.7% of the cattle on feed. By January 1, 1966, the percentage was only 6.7%. Yet, actual numbers being fed in Illinois for the two years were quite comparable. We had just expanded. With the expansion and concentration in larger operations, the need for capital in cattle feeding, as in other agricultural enterprises, has increased. The risk element also has become a much more serious factor. When a load or two of cattle were fed on a general farm of 160 acres, the investment in cattle represented a rather minor percentage of the farm business. This is no longer true with a specialized cattle operation. To fill a lot with a thousand cattle would represent roughly an investment of \$150,000 for cattle alone. Moving up to 10,000 head, a not unusual size operation, the requirement would be \$1.5 million. Hence, the need for greater amounts of credit is readily apparent.

With this increased volume of operation, fed cattle prices have continued to show a great amount of instability. A quick examination of the average monthly prices for Choice steers at Chicago for the past ten years will show that generally the minimum price fluctuation from the high to the low month in the year was at least \$5.00. This means a variation of 20% to 25%, a sizeable element for a risk! Not only have price fluctuations been sizeable, but they have not fitted the past seasonal patterns which were more or less predictable. Currently, any particular month throughout the year might show either the high or low price. Price fluctuations primarily are a result of variation in quantities of beef coming to market at a particular time. These wide fluctuations indicate a poor job of programming by the industry in total. Partially as a result of these fluctuations in price of finished cattle, cattle feeding has been a high risk enterprise. Illi-

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nois Farm Bureau Farm Management records indicate that in three out of the past fifteen years cattle feeding operations did not pay the cost of feed.

These various items indicate a need for a system which would lessen price risk, and give access to more capital and credit. A futures market may help to provide this.

The point is well made that the level of sophistication, experience and understanding of the personnel dealing in a futures market is important. I feel it is no less important that speculators, brokers, and others of the trade understand something of the operation of the cattle industry, than for cattle feeders to understand something of the operations of a futures market. It seems to me, that this point was demonstrated at the beginning of operations in the live cattle contract. Initially only the cash prices were reflected in futures transactions with an added carrying charge which might be expected in a storable commodity. It now appears that this situation has changed and that the market is making a predictive effort.

The key role of a futures market, as has been stated, should be the determination and projection of prices. But in the case of cattle, I think the secondary purpose of providing a means of shifting price risk is extremely important in view of the capital needs in agriculture and particularly in cattle feeding. To date, the record of the live cattle futures market in achieving the major objective of projecting price has been poor. In achieving the secondary objective of providing a risk-shifting device, the record has been much better. For the first year futures prices appeared to reflect only the current cash market. About last December, the market began to project prices about the current level. The optimism was excessive for the summer level of cattle prices. But futures has been operating entirely too short a time to make an evaluation of this matter. The reaction in various phases of the cattle cycle is important.

By comparing prices at the expiration of a contract with the average cash price at the time, it appears that feeders can establish a forward price rather accurately. One of the problems of comparison here is the inexactness of livestock grades and prices even in the cash market. As Professor Broadbent has indicated

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in a study of Illinois hog prices, prices of comparable hogs at a given terminal market may vary widely. I am sure this is equally, if not more, applicable to the cattle market. Even with this inexactness, a feeder is not contracting to sell the cattle he is feeding. He merely wants to establish a general level of price, which I think is possible. With the rising prices in the spring of 1965, the feeder who established a price for his cattle by a futures contract failed to get the benefit of the strongly rising cash market, but the situation was reversed this year.

A futures market, to operate successfully and be an integral part of an industry, must have provisions whereby contract delivery can successfully be made. In actual practice, deliveries should be few, if any. The low number of deliveries that have been made in the live cattle contract would indicate that a good contract has been prepared. At this point, I feel that it has been successfully demonstrated that it is possible to deliver on these contracts, but it is usually not desirable.

In the actual routine operations of a futures market, I would agree that a live cattle contract is perhaps like any other commodity contract. Yet, the purpose of a contract for a commodity in production is far different than for holding inventory of a stored product. The trade should be aware of these differences. I will not attempt to comment in detail on them, but Professor T.A. Hieronymus of our department has covered this point extremely well in an article on "Futures Trading in Hogs" in the July issue of *Illinois Agricultural Economics*. Briefly, he indicates that futures trading is shifting the risk on goods in production rather than on a store inventory. Such a system would provide the opportunity for establishing a price for livestock at other than the delivery time. In writing a production futures contract, a key consideration is that a production contract must not be storable. In this way the normal market flow will not be distorted.

More research data and effort are definitely needed in the futures markets. One point among others of importance to evaluate the live cattle market is the need for information on the open interests — who is involved and in what position? Are cattle feeders in the market to shift risk, or are they on the other side as a speculator with a long position? Personally, I have

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known of some cases of each. Quite logically, a cattle feeder might be in the market as a speculator. He understands something of the industry from his actual feeding operations. He is familiar with the risk involved. This may be quite a proper operation as long as he understands that he is carrying rather than shifting risk. In fact, futures contracts may serve a desirable function in lessening overexpansion and excessive capital investment. Thus, the fellow who has a hundred head of cattle in the lot and decides the market looks so good that he would like to put in an additional hundred may be doing the industry a favor when he takes a long position rather than expanding his feedlot for actual feeding. At least, if he goes broke, there are less physical facilities for someone else to come in and attempt to fill. Concerning the open interest, it would also be desirable to know how much other persons with industry affiliations, such as packers, market people, etc., are involved. Logically, from a risk shifting viewpoint, only a cattle feeder should be involved. Risks at other stages in the industry, because of the short time periods and rapid turnovers, are rather minimal. Such a study of open interests would add not only understanding, but, I believe, confidence from the cattle industry.

Futures trading simply provides a cattle feeder with an additional tool in the operation of his business. He must understand the capability of this tool, when it is feasible to use it, and how to use it, or secure competent advice before he acts. A futures contract cannot remove all of the risk in cattle feeding. There will be periods when, in his opinion, the market does not reflect the future with sufficient confidence. While he may fix a price by a futures transaction, he will also limit the possibility of gains from a rising cash market. Therefore, he must decide whether his best alternative is to accept the returns which would be assured from a futures contract or to simply carry on his routine feeding operation. An important test of the futures market for cattle will be the period when the cattle cycle is in a decline. Will the speculative side of the market develop price expectations that are optimistic enough to encourage participation from cattle feeders?

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There is considerable difference of opinion, as to the influence of a futures market on price stability. Possibly the effect of a futures market may be slightly different in a product in production rather than in storage. Personally, I feel a futures market may contribute to stability in cattle prices. Excess weight has been a major factor in recent price declines of slaughter animals implying that a fee is paid by hedgers to speculators in much the same way that I might buy fire insurance on my house. It further implies that hedgers decisions are neutral with respect to their impact on prices and that the decision to hedge does not involve choosing among alternative actions on the basis of price.

There is no doubt that hedging does, in fact, reduce risk, but the usefulness extends much beyond the idea of transferring risk from a beef hedger to a speculator, so my purpose today is to outline a much broader view of the role of futures prices and hedging in livestock marketing and production. In particular, I am going to try to argue or present arguments that futures markets and hedging can be viewed as operational tools that can be used as guides to decision making by marketing firms.

The following two papers were presented as commentaries to the foregoing paper at the September 8th, 1966 Study Conference on Live Cattle Futures. It might be helpful to the readers of this volume if they bear in mind, "That it is not physical commodities, but legal rights which are bought and sold in the markets of the world." This fact reduces all goods to a common denominator in their transfer from hand to hand, and the marketing function is specialized in the creation of possession utility. This concept applies to all manner of exchanges whether they occur in cash markets, in spot markets, or in futures markets.

In contrast, the production functions yield elemental, form, place, and time utilities. These are eminently useful characteristics of the corporeal good itself, and are of general concern to the millers, packers, processors, bakers, and ultimate consumers. Their appraisal of the good is based on its inherent composition such as its appearance, chemical composition, caloric content, and numerous other attributes. This array of subjective values may or may not be conducive to a monetary evalua-

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tion at the time of sale because some of them are not determinable without laboratory analysis.

The commentators, in this instance, have undertaken the difficult task of attempting to show that live cattle futures differ from other traditional futures contracts by relating the trades to a subjective consideration of certain physical characteristics of the product itself which are useful, real, and necessary to sustain life. There appears, however, to be no catalyst that will permit interfusion of material matter with abstract attributes of legal rights in common terms.

The brokers and traders in the world's exchange centers and elsewhere are as often as not unconcerned, oblivious, and incurious about materiality. They are specialists in negotiating the terms of exchange in determining the kind, degree, nature, and duration of legal rights to incorporeal and intangible properties which are offered in exchange for a similar array of rights in other goods, services, and properties with the hope of making profits without sustaining losses. This is an economic service primarily dedicated to the business of determining prices in advance of the ultimate transfer of the product into the hands of the final user.

An Editorial Observation

Paper presented at Live Cattle Futures Study Conference-Chicago on September 8, 1966.