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Contracts, Markets, and Prices: Organizing the Production and Use of Agricultural Commodities

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Abstract

Production and marketing contracts govern 36 percent of the value of U.S. agricultural production, up from 12 percent in 1969. Contracts are now the primary method of handling sales of many livestock commodities, including milk, hogs, and broilers, and of major crops such as sugar beets, fruit, and processing tomatoes. Use of contracts is closely related to farm size; farms with \$1 million or more in sales have nearly half their production under contract. For producers, contracting can reduce income risks of price and production variability, ensure market access, and provide higher returns for differentiated farm products. For processors and other buyers, vertical coordination through contracting is a way to ensure the flow of products and to obtain differentiated products, ensure traceability for health concerns, and guarantee certain methods of production. The traditional spot market—though it still governs nearly 60 percent of the value of agricultural production—has difficulty providing accurate price signals for products geared to new consumer demands (such as produce raised and certified as organic or identity-preserved crops modified for special attributes). We are likely to see a continuing shift to more explicit forms of vertical coordination, through contracts and processor ownership, as a means to ensure more consistent product quantity and quality.

Keywords: Contracting, marketing contracts, production contracts, vertical integration, vertical coordination, market structure, risk analysis, price signals.

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Summary

Contracts govern 36 percent of the value of U.S. agricultural production, up from 28 percent in 1991 and 12 percent in 1969. Contracts are now the primary method of handling sales of many livestock commodities, including dairy, hogs, broilers, and turkeys, as well as of major crops such as sugar beets, tobacco, fruit, and processing tomatoes. In recent years, we have seen dramatic shifts toward contracts and away from spot markets in hogs and tobacco, and producers of fed cattle expect similar shifts in coming years.

However, spot markets still govern nearly 60 percent of the value of agricultural production and remain an efficient way to produce and distribute many products. This is especially true for more generic products for which differentiation is less important to the final consumer. The use of contracts is closely related to farm size. Farms with at least \$1 million in sales have nearly half of their production under contract. Those farms accounted for 42 percent of the value of U.S. agricultural production in 2001, up from 26 percent 10 years earlier.

Why would farmers want to use contracts instead of spot markets? The report focuses on two explanations for the shift. Contracts may be seen as a device to limit price and income risks (*risk-sharing approach*), or they may be regarded as a means to reduce the costs of using spot markets to arrange transactions (*transactions-cost approach*). Either or both of these considerations may enter into the decision to use contracts.

Contracts can substantially reduce income risks associated with price and production variability, and contract terms can be calibrated to tailor the degree of risk reduction offered. Livestock producers frequently cite risk sharing as a major benefit of production and marketing contracts. However, there are many ways to reduce risks, and many contracts appear not to be targeted at risks. The transactions-cost approach demonstrates that contracts can be designed to improve incentives to lower production costs and deliver products with specific attributes. They can also facilitate coordination among stages of production—speeding adoption of new technology; improving information flows; managing quality, uniformity, and delivery; and enhancing access to credit. If transactions costs are important, then contracting can lead to improved productivity and higher product quality.

Increased contract use creates several types of concerns for producers. Contracts may lead to unanticipated new risks for producers. Under some conditions, they can allow buyers to exercise market power, reducing prices received by producers. And as more production shifts to contracts, reductions in spot market volumes can raise spot market costs.

Some contracts commit producers to long-term investments that will support production for a particular buyer. If contracts give producers only short-term purchase commitments, they will face new risks from contract cancellation or buyer failure. Moreover, many contracts specify fees for producer services rather than market prices. Without reliable market information on fees and services, producers can find themselves at a bargaining disadvantage with contractors.

Critics presume that contracts create market power for buyers and reduce farm prices. Under the right conditions, contracts can be designed to limit entry of potential rivals into concentrated markets. They can also be designed to limit the intensity of price competition among existing rivals or to expand buyer profits through price discrimination (by targeting lower prices at some sellers who have few alternatives). However, the success of such actions depends on the precise terms of agricultural contracts, the structure of the agricultural markets involved, and the responses of rival buyers. In particular, contracts that aim to create market power generally require highly concentrated markets with limits on entry by rivals, and they frequently need to have existing rivals adhere to similar contracts. Because contracts are often used in concentrated markets, there may be cases in which contract terms do allow buyers to exercise market power. However, since contracts can also lead to enhanced productivity and improved responsiveness to consumer demand, it is important for policy responses to target only those contracts that extend market power without offsetting gains in efficiency.

USDA has long provided agricultural market information to the public to facilitate smooth operation of the spot market. However, spot prices are relevant only to the extent that they provide information about the cost and value of products moving through the whole system. The expansion of contracting, particularly in hogs and fed cattle, may have reduced the value of traditional USDA price reporting to producers, and may consequently have raised the costs of using spot markets. Recently, Congress responded to these concerns after a drop in reported livestock transactions volumes. Seeking to improve the operation of spot and contract markets, it passed legislation designed to improve price reporting through the mandatory filing of spot and contract transaction data.

For a number of reasons, contracts are likely to govern a growing share of agricultural production over the next decade. First, demand for differentiated agricultural products to meet specific consumer preferences should continue to grow, and such products are generally produced under contract. Second, pressures will mount to ensure traceability of products for health and consumer concerns, and contracts provide one way to ensure traceability. Third, pressure to reduce environmental degradation associated with agricultural production will likely result in upgraded production technologies and require tighter management of production systems through contracting. Finally, large farms account for sharply growing shares of agricultural output. Contracting is closely associated with farm size, and contract use can be expected to grow along with the increase of large farms.