Why Use Contracts?

For farmers, contracts offer several advantages. Contracting reduces the income risks that arise from commodity price and yield fluctuations. Farmers can use contracts to ensure outlets for their commodities in thin markets, and thus ensure a better return on investments in physical capital and time. Contracts can also tie prices more closely to product attributes.[4]

Production and price fluctuations provide two major sources of income risk. Production risks for crops result from unpredictable events such as drought, frost, hail, and insect infestations, while livestock production risks arise from disease, feed supply shortages, extreme temperatures, or machinery malfunctions. Price risks arise from unanticipated changes in output or input prices, which occur commonly because of unexpected changes in production or demand. Farmers may dislike risk, and risk can also impose costs if farmers cannot meet recurring financial obligations or make long-term production and investment decisions.

Production contracts can eliminate most or all output price risk by making contract fees independent of market prices. Such contracts can also eliminate most input price risk, because contractors provide the inputs that comprise most operating expenses. Marketing contracts can substantially reduce a farmer's output price risks. The "forward" marketing contracts used in grain and livestock production typically establish a base price before harvest and provide for delivery of a given quantity of a good within a specified time. Such contracts can set an exact price, or they can set a "basis" price, tying a contract price to a price in a futures market, plus or minus some agreed upon amount (the basis). Farmers can offset price fluctuations in the contracted crop by hedging with the purchase of a futures contract, thus eliminating price risks.

Contracts can also be used to provide assurance that specialized capital investment can be recouped. For example, specialized broiler houses offer optimal growing conditions and are designed to facilitate feed delivery, regulate temperature through ventilation and cooling systems, and incorporate specific feed and water delivery systems. Similarly, sugarbeet production requires highly specialized harvesting equipment and extensive prior investment in seed beds. But once producers make those costly investments, they face a risk of holdup by a processor. Chickens cannot be shipped far before losing value, due both to direct costs of transport or extra feed and indirect costs from the birds' losing value due to stress, weight loss, or death during transport, or to aging during additional feeding. Therefore, the grower must produce for nearby buyers, and there may be very few of them. Similarly, sugarbeets lose value quickly and transport costs are still quite significant, leaving producers dependent on a few local buyers.

Under such circumstances, a spot-market buyer could force very low prices on the farmer, knowing that the farmers had few or no alternative outlets. In this case the processor would "hold up" the farmer for a lower price.[5] However, the possibility of holdup can also harm the processor, because farmers may respond to holdup risks by not making farm investments, in equipment or structures, which would leave the farmer dependent on the

[4]For a more complete discussion, with references, see MacDonald et al., 2004.

[5]A product's perishability may also affect the likelihood of holdup. Farmers with commodities that can be stored for long periods, like grains, can use storage while searching for more marketing options. A producer with a perishable product does not have that luxury.

goodwill of one buyer. In that case, processors would be unable to elicit investments in technology and expertise that would reduce costs, improve product qualities, and expand their businesses.

Contracts benefit farmers and processors, in this instance, by specifying a compensation scheme with the processor before the investment is made, thus eliminating the risk of holdup. By offering contracts, the processor can obtain investment commitments from farmers and ensure the commodity supply needed to support an expensive investment in processing facilities.

Contracts can also improve product quality. For example, processors of vegetables and fruits require commodities with specific qualities and varieties. Processors can secure the needed qualities and varieties through spot markets if effective measurement technologies and widely understood metrics exist, to be applied at sale. For example, the key distinctive attributes in high-protein soybeans can be precisely measured with near-infrared measurement technology.

But some quality attributes are hard to measure, so quality must be ensured in other ways. Most fresh market lettuce and virtually all processed vegetables are grown under contracts specifying a coordinated production process. These contracts typically specify seed stock, fertilizer and chemical inputs, and product qualities; the contractor may even provide these inputs to the farmer and monitor crop development and production processes through field visits.[6] The contract ensures quality attributes by closely specifying production processes.

[6]Such contracts, which tie input purchases to commodity sales by setting price and delivery schedules for specified seed and chemical inputs as well as for harvested crops, are quite common. In 2005, about 11 percent of the value of contract crop production was covered by such contracts, according to ARMS data.

Buyers are increasingly interested in identity-preserved products, such as organically produced commodities or specialty grains with specific attributes, which are segregated in the marketing chain. Contracts ensure compliance with identity-preserved standards by controlling production and harvesting practices and by requiring investments in information and measurement at key production stages. Again, attribute certification is met through contractual control and onsite inspection of practices, rather than through information, tests, and warranties from producers.

Agricultural contracts can positively affect production and efficiency throughout the supply chain for products by providing incentives to deliver products that consumers want and by producing products in ways that reduce processing costs and, ultimately, retail prices (RTI International, 2005). However, contracts can also increase certain types of risks for farmers. Although forward marketing contracts can limit price risk, they may commit the farmer to delivering a specific quantity, thus potentially increasing the cost of a production shortfall, if the commitment would have to be met through spot market purchases. Contracts that tie a grower to a single purchaser of a specialized commodity, even if they provide for fair compensation of the grower, still leave the grower subject to default risks should the contractor fail.

Contracts may create long-term holdup risks at the time of contract renewal. Some producers make substantial long-term capital investments as part of livestock or poultry production contracts, and those investments may tie the producer to a single buyer. If the contract covers a shorter term than the life

of the capital, then the farmer may face the holdup risk that the contractor will require new investments or may impose lower returns at the time of contract renewal.

If contractors already possess some market power, in the form of the ability to force grower prices below competitive levels, some contracts can extend that power by raising the costs of entry for new competitors, or allowing for price discrimination.

Because contracts create some of their own risks, contract adoption depends not only on contract design, but also on the performance of the primary alternatives—spot markets and vertical integration. If the spot market for a commodity exhibits significant price or production risks, or if spot market transactions cannot generate the information needed to manage risk, then contracts may be preferred. If spot markets are thin, such that there are few buyers for a product, then farmers will be more likely to use contracts.