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**PRICE RISK MANAGEMENT CREATES UNIQUE CREDIT ISSUES**

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**Proceedings of 46<sup>th</sup> Agricultural Finance Conference  
“The Changing Nature of Agricultural Risks”  
Delta Meadowvale Resort & Conference Centre  
Mississauga, Ontario, Canada  
October 4-6, 1999**

University of Guelph

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## Price Risk Management Creates Unique Credit Issues

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When times are good in the agricultural economy, lenders are eager to extend credit to agricultural borrowers. If lending standards are compromised in this rush, however, agricultural financial institutions may be left with many troubled loans during periods when land values and commodity prices fall, as they did in the mid-1980s. Besides reducing earnings, a number of agricultural banks failed as a result of this agricultural crisis. Similarly, this decade ends with another period of weakness in the agricultural economy. Although banks have not experienced epidemic problems, troubles in the agricultural economy are a reminder that financial institutions need to focus on creating strong credit risk management systems. "Risk Management" refers to the process of identifying risks, measuring their potential impact, developing processes to control them, and monitoring the effectiveness of these processes. This article focuses on agricultural credit risk, or the potential that farm borrowers will not meet their loan obligations.

In an effective system of credit risk management, agricultural lenders identify all of the possible scenarios that could cause the agricultural business to falter and thus undermine the loan. Typically, an agricultural business falters when its operator does not adequately manage risks. The risks run the gamut from rising input prices prior to production to declining market prices after production. Producers face weather related risks such as floods or droughts, or other catastrophes caused by pest or disease infestations. There are a wide variety of tools and practices that can be used to manage these risks. Although prudent use of these tools benefits producers and reduces the credit risk borne by their lenders, improper use of risk management tools creates a new set of problems.

The primary focus of this article is to introduce issues lenders should address when evaluating, structuring, and monitoring agricultural credits affected by price risk management tools.<sup>2</sup> This article does not focus on how to use the tools, but rather how lenders should supervise their borrowers who use them.<sup>3</sup> As a point of reference in the discussion of credit issues, this article first reviews the primary risk management methods.

### *Risk Management Practices in Farming*

There are a number of risk management methods a producer can use to effectively address risk. Primarily, these methods fall into three categories: government farm programs, improving operations, and price risk management. The following describes the incentives to adopt each of these approaches.

Producers have traditionally depended on federal government programs to reduce risk. A survey conducted in 1996 with 940 readers of *Farm Futures* revealed that a large number of producers, 69%, still depend on government programs.<sup>4</sup> Traditionally, government programs offered price and income support through various programs. However, the Federal Agricultural Improvement Act (FAIR Act), passed by the US Congress in 1996, reduced these programs significantly.<sup>5</sup> While not a traditional program, government-sponsored crop insurance is also widely used by producers to protect against falling yields. Recent innovations in crop insurance also protect against shortfalls in revenue.

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<sup>2</sup> Price risk is the risk that prices of finished commodities will fall.

<sup>3</sup> More information on risk management tools is available in "Managing Risk in Farming", Agricultural Economic Report 774 by the Economic Research Service.

<sup>4</sup> Bryce Knorr, "Price Protection", *Farm Futures*, January 1997, 12-13.

<sup>5</sup> Detailed information on the FAIR Act can be found at [WWW.USDA.Gov/FARMBILL](http://WWW.USDA.Gov/FARMBILL).

A second approach is to improve the management of the farm business, namely decrease costs and improve production. Developing a sound production plan is a way to measure the costs and benefits of adopting various production technologies. In a crop production plan, for example, the farmer chooses which commodities to produce and how much land to devote to each. The farmer develops a schedule for preparing and fertilizing the land, planting the seeds, and caring for the crop. A growing number of farmers may use variable rate technologies to improve the cost efficiency of seed and fertilizer applications. In a livestock production plan, special attention is given to efficient feeding regimes, animal health care, and safe facility management.

A third approach is to improve the marketing process by locking in desirable selling prices. The traditional marketing vehicles include cash market contracts, futures contracts, and options. With the passage of the FAIR Act, there is greater reason for producers to utilize these marketing tools. Besides reducing farm support programs, FAIR allows farmers to produce whatever commodity best suits their operations without jeopardizing their eligibility for farm programs. This freedom makes year-to-year production (planted acres) less certain and, thus, prices more volatile. This price volatility makes agricultural production more risky. A study by the USDA predicted that producers who formally relied on government programs would likely increase use of price risk management tools.<sup>6</sup>

The use of production contracts is another way to manage price risk. In a nutshell, a production contract is an agreement between a producer and a processor. The producer agrees to deliver a commodity of a special quality to the processor in exchange for a predetermined price. The use of these contracts has become prevalent in the hog and poultry sectors due to the increasing size of producers and processors and the closer working relationships that are developing between them. These contracts ensure that the large processors operate closer to capacity with few disruptions in supply. While 33% of hog production occurred under a contract in 1997, less than 5% of crop production (corn) occurred this way.<sup>7</sup> Typically, crop contracts are associated with specialty and identity-preserved crops, such as high-oil corn, white corn, or food-grade soybeans.

Government programs, improvements in farm management, and the use of marketing and production contracts all offer ways to reduce risk. The following section explores the credit issues related to the process of production and marketing planning, as well as those issues created when a borrower specifically uses marketing and production contracts.

### *Price Risk Management Creates Unique Credit Issues*

As a starting point for understanding the unique issues created by marketing and production contracts, it is important to note some of their differences. When using marketing contracts (such as futures and options), the producer exerts complete control over the production process. The producer buys all of the inputs, makes all of the decisions, and arranges all of the finances. The producer owns the commodity until it is marketed. On the contrary, producers who use production contracts lose some of their business decision-making autonomy. Producers lose this autonomy because processors may provide some or all of the inputs, may require special management practices, or may finance some of the business investment. With this involvement, the processor may hold ownership of the commodity throughout production. When this occurs, the producer, in effect, acts as a hired agent for the processor.

A farm borrower who uses marketing tools or production contracts to lock in a commodity price enters into a web of issues that lenders should address. The first point deals with the use of the farm production

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<sup>6</sup> USDA, ERS 1997 *Agricultural Resource Management Study*.

<sup>7</sup> Sources: USDA, ERS 1997 *Agricultural Resource Management Study* and Elizabeth Curry Williams, "Contracting Criteria", *Farm Journal*, 1998, respectively.

plan in the credit evaluation process. The second and third points pertain to borrowers who use marketing contracts, such as forward, futures, and options contracts. The fourth and fifth points relate to issues associated with production contracts, such as ownership, payment, and contract fulfillment issues.

1. The lender should verify that the production plan is realistic.

Regardless of the risk management tools a producer selects, borrowers should have a production plan that can be used to evaluate the costs and benefits of the production technologies chosen. Lenders should verify the assumptions the producer makes to construct this plan. In a crop production plan, lenders should establish that 1) Yields are consistent with the quality and quantity of the land, 2) Estimates of cost are reasonable relative to production, 3) Machinery and labor are sufficient to meet the goals of the production plan, and 4) The producer has the necessary skills to achieve the goals of the production plan. Likewise, in a livestock production plan, lenders should confirm that 1) The feeding program is adequate to produce healthy, market-weight animals, 2) The animal feeding and waste management facilities are properly maintained and sufficient to handle the demands of the production plan, 3) The producer holds the necessary skills to achieve the goals of the production plan. The resiliency of both crop and livestock production plans should be stress-tested using extreme values of price and yield.

When growing specialty crops under a contract, producers may need to assume a cost structure that is vastly different from the one used when growing a traditional crop. Seed costs are typically higher for specialty crops, while yields may be less than with traditional crops. A good example is high-oil corn, which not only requires more expensive seeds, but also yields less than standard feed corn.<sup>8</sup> Furthermore, specialty crops typically demand special management techniques that may add to the cost of production. To preserve the unique identity of specialty grains, for example, producers will need to segregate the specialty grains from other planted crops to prevent cross-pollination. The producers may also need to expend more labor harvesting the grains to preserve their special quality.

Fulfillment of some livestock contracts also requires special, expensive management techniques. For example, to deliver hogs that are free of drug residues and microbial contamination, the producer may need to impose better feeding regimes, stricter feeding facility management, and improved waste management. These changes require higher skills and incur more costs.

2. The lender should analyze the marketing plan.

Successful marketing of a commodity is particularly important to the repayment of short-term production loans. When analyzing a marketing plan, a lender should determine what methods or contractual arrangements the producer uses to lock in a price. The lender should also determine if the producer really knows how to use these tools and if the producer can correctly calculate the expected prices and income.

There are particular flags a lender should look for when examining a borrower's use of risk management tools. If the producer uses futures contracts, for example, the lender should verify that the producer indeed sells futures contracts, that the "short position" does not mature prior to harvest, and that the number of contracts sold does not exceed anticipated production. Likewise, when a producer buys put options to lock in a price, the options should not expire prior to marketing. When crop producers employ cash market contracts, the lender should determine whether or not the producer can satisfy financial obligations to the elevator given a worst-case scenario. Furthermore, the lender should assess the reputation of the elevator for meeting its financial obligations to producers.

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<sup>8</sup> Elizabeth Curry Williams, "Contracting Criteria", *Farm Journal*, 1998.

3. The lender should separate production notes from hedge notes<sup>9</sup>.

A hedge note is used to fund the hedging activities of a farm. A farm borrower can draw on this line of credit to fund the initial margin as well as maintenance margin calls. A lender can monitor the activities of this account by requesting statements from the producer's broker. Lenders should ensure that the actual hedge account activities are consistent with the marketing plan. Moreover, a covenant in the loan agreement should prohibit speculative activities. For more protection, lenders can take hedge accounts as collateral by executing a security agreement.

The hedge note is different from the production line of credit, which is used to fund the production activities of a farm. Throughout the production period, the producer can draw on that line of credit to pay for inputs, labor, and loan payments on capital equipment. The lender can monitor the expenses of the producer to insure the funds are used for their intended purpose, and the lender can secure the crop or livestock as collateral for the loan.

4. The lender should determine the nature of the contractual relationship between the producer and the processor.

The nature of the relationship between the producer and the processor has significant implications for the lender. If the producer acts as an independent contractor, then ownership of the commodity stays with the producer until the commodity is sold to the processor. Thus lenders still have the right to secure the commodity as collateral for the production loan. However, if the producer acts as an agent for the processor, producing goods that are owned by the processor, then the lender has no right to secure the commodity as collateral for the production loan since the borrower does not own the commodity. Furthermore, the lender cannot stop the delivery of the commodity to the processor in the event the borrower defaults on the loan.

5. The lender should determine if the borrower correctly interpreted the payment and contract fulfillment provisions in the contract.

Successful repayment of the loan obligation, to a great extent, depends upon successful completion of the contract. The contract is completed when the producer meets all of the specified requirements and the processor makes payment. Lenders may schedule loan payments to correspond to the payment schedule designated in the contract and the lenders may assign the production contract as collateral for the loan. However, these measures are pointless if the contract is not completed.

There are several situations in which a processor may have the right to cancel the production contract. In one scenario, the processor has the right to cancel the contract if the producer is negligent in his care of the product. A situation where the producer allows the commodity to become diseased, for example, could represent such negligence. In light of this, lenders should clearly understand what conditions could lead to the cancellation of the contract and ensure that the producer has the necessary systems in place to prevent this negligence from occurring.

Furthermore, the processor may have the right to cancel the contract when the producer fails to meet the product specifications. Lenders should clearly understand these requirements, as well as the producer's ability to meet them. For example, if a producer of high-oil corn significantly undershoots or exceeds oil requirements, that could be cause for rejection. Likewise, if a producer of cattle or hogs doesn't meet food safety requirements, the livestock could be rejected upon delivery. To protect themselves from

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<sup>9</sup> More information on hedge loans can be found in "Risk Management Guide for Ag Lenders" published by the Chicago Mercantile Exchange.

rejection, producers of specialty commodities should independently verify that they meet the special requirements by testing a sample of the crop or herd. This testing should be documented.

Even if the contract is completed successfully, the producer may not be able to meet the financial obligations to his lenders. This could occur because the producer may not have correctly interpreted the payment formula specified in the contract. To avoid this, lenders should independently verify the payment calculation.

***Conclusion***

The five points presented in this article do not represent all of the issues lenders should address, but rather they introduce major ones lenders should consider incorporating into credit evaluation, underwriting, and monitoring procedures. Whichever method a producer uses to manage risk, it is always important for lenders to understand how the risk management methods fit into the overall production and marketing plans of the producer. Moreover, it is important that the lender understands the nuances of the contract regarding commodity pricing and quality standards, and that the lender considers these nuances when structuring and monitoring the loan. Inevitably, agricultural producers will always face risk and as government involvement in the sector decreases, there will be more incentive for producers to employ marketing and production contracts. Thus, lenders should begin to prepare for this change today.