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Forward Contracting in the Corn Belt and Spring Wheat Areas, 1988

Results of An Elevator Survey

Bruce H. Wright
Joy L. Harwood
Linwood A. Hoffman
Richard G. Heifner

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FORWARD CONTRACTING IN THE CORN BELT AND SPRING WHEAT AREAS,
1988: RESULTS OF AN ELEVATOR SURVEY. By Bruce H. Wright, Joy L.
Harwood, Linwood A. Hoffman, and Richard G. Heifner, Commodity
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ABSTRACT

Although drought-induced forward contracting problems have affected many elevators in 1988, few elevators face serious losses. Elevators surveyed in 13 Corn Belt and spring wheat States in September expected that farmers would default on less than 1 percent of their contracts. Only about 1 percent of these elevators expected that losses from farmers failing to meet contract commitments would exceed 10 percent of the elevator's net worth. Over half of the elevators in these 13 States entered forward contracts with farmers for corn, soybeans, or wheat produced in 1988. These contracts covered approximately 15 percent of the corn, 22 percent of the soybeans, and 7 percent of the spring wheat purchased by these elevators during the year. Because farmers seldom contract for more than half of their expected production, contracting problems have occurred mainly where yield shortfalls are most extreme. Elevators have renegotiated or expect to renegotiate less than 2 percent of their contracts. Of those contracts that are renegotiated, approximately 90 percent are expected to be settled by the farmer paying the elevator the full difference between the current price and the contracted price, plus a service charge.

Keywords: Forward contracting, futures, elevators, corn, soybeans, wheat, grain marketing

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SUMMARY

Although drought-induced forward contracting problems affected many elevators during 1988, few elevators anticipated serious losses as harvest approached. Elevators surveyed in 13 Corn Belt and spring wheat States in September expected that farmers would default on less than 1 percent of their contracts. Only about 1 percent of these elevators expected that losses from farmers failing to meet contract commitments would exceed 10 percent of the elevator's net worth. Borrowing to meet margin calls on futures sales made to cover cash forward contracts exceeded 10 percent of net worth for only 2-3 percent of the elevators.

These results are based on a telephone survey of 325 elevators conducted in September 1988. The results are consistent with information obtained through field interviews of elevator managers, telephone interviews of bankers and brokers, and by State grain marketing extension specialists.

Severe drought and the associated grain and soybean price increases hit farmers who priced forward in two ways. Those who hedged by selling futures were the first to be affected. To meet margin calls during the period when prices increased, these farmers had to either tap financial reserves or obtain increased credit. Information collected from a small-scale survey of commodity brokers and bankers suggests that farmers and their brokers and bankers satisfactorily weathered the period of sharp price increases and margin calls that occurred in June and July. For farmers who entered into cash forward contracts, the financial problem hit when it became necessary to buy back contracts in lieu of making delivery. The severity of this problem was investigated in this study by questioning elevators about contract renegotiations and defaults.

Over half of the elevators surveyed in the 13 drought-stricken States had forward contracts with farmers for corn, soybeans, or wheat produced in 1988. These contracts covered approximately 15 percent of the corn, 22 percent of the soybeans, and 7 percent of the spring wheat that these elevators purchased this year. The percentage of elevators using forward contracts and the percentage of purchases contracted were higher in the eastern Corn Belt than in the western Corn Belt. As in past years, contracting percentages were considerably lower for spring wheat than for corn and soybeans due in part to the higher yield risks with wheat and the inability to hedge protein premiums.

In September 1988, over 95 percent of elevators' contracts with farmers were expected to be fulfilled as originally negotiated. Less than 2 percent had been or were expected to be renegotiated. Renegotiations and defaults are relatively more numerous in the eastern Corn Belt than in the western Corn Belt and spring wheat areas.

Forward Contracting in the Corn Belt and Spring Wheat Areas, 1988

Results of An Elevator Survey

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INTRODUCTION

The 1988 drought raised commodity prices sharply and left many farmers with less grain and fewer soybeans to deliver than they expected when they entered into forward contracts early in the year. Many would have liked to get out of their contracts, if that were possible, because market prices rose above the contracted prices. Some farmers produced less than they had sold forward and faced buying out their contracts at a loss. A relatively small number of farmers were expected to default on their contracts, leaving elevators or other buyers to absorb the losses.

This report presents findings of a survey of elevators conducted in September 1988 to assess the severity of these problems. The survey responded to Section 334 of the Disaster Assistance Act of 1988 which requires the Secretary of Agriculture to submit a report to Congress on the financial effect that forward contracting, hedging, and the associated margin requirements have had on producers and grain marketers, particularly local elevators and intermediaries, during drought-year 1988 (see app. I).

This report discusses the extent of:

- forward contracting and hedging;
- contract renegotiation and default;
- unusual demands for credit caused by hedging and forward contracting; and
- severe financial stress among elevators because of defaults and margin calls.

To obtain the information needed about contracting conditions in September 1988, National Agricultural Statistics Service (NASS) enumerators telephoned 325 elevators in 13 Corn Belt and Great Plains States. Economic Research Service (ERS) researchers

interviewed 33 elevator managers at their places of business, telephoned 28 agricultural bankers and brokers, and talked with other representatives of the grain industry. The Extension Service provided information collected from grain marketing specialists at the land grant universities. ERS analysis of the information collected is reported here.

Forward Contracting Practices

Cash forward contracting along with hedging in commodity futures or options are methods of forward pricing. Forward pricing means setting price before delivery. Most farmers price forward in order to:

- protect against possible price declines;
- capture favorable prices;
- spread sales over time to lessen the chances of selling a year's production at a low price; and
- get credit on more favorable terms.

Cash Forward Contracting. This report defines a cash forward contract as an agreement between a farmer and a buyer, usually an elevator, to deliver a commodity in exchange for payment at a future date. The agreement specifies the quantity and grade to be delivered and either sets the price or sets a minimum price. Most forward contracts specify a price; minimum price forward contracts are a relatively recent development that are less widely used.

Contracts between farmers and elevators can be entered either verbally or in writing. Some contracts are negotiated in the elevator with both the farmer and elevator representative present. Others are initiated by a phone call from the farmer to the elevator. The two parties agree to the contract terms over the phone, and the elevator then typically mails a confirmation memo to the farmer for signature and return. Usually this memo is the contract that would have been signed had the farmer visited the elevator to negotiate the contract.

More farmers use cash forward contracts than futures and options contracts. The advantages of cash contracts over futures and options include:

- avoidance of margin calls on futures;
- ability to fit contract terms to the farmer's specific needs;
- opportunity to deal with local buyers in familiar circumstances; and

- avoidance of basis risk (uncertainty about the relationship between the local price and the futures price).

When an elevator enters a contract to buy a farmer's crop at a fixed price, it assumes price risk. A price decline could cause the elevator to sell the commodity at a lower price than paid to the farmer. Consequently, elevators who buy forward from farmers typically cover their purchases with another transaction, either by selling a like amount through cash contracts with other merchants or processors, by selling futures contracts, or by buying put options. (Farmers can also sell futures or buy put options. These alternatives are discussed after the description of cash forward contracting is completed). This insulates the elevator from the effects of price changes so long as both the elevator's purchasing contracts and sales contracts hold.

Farmers generally are advised to sell forward no more than half of their expected crops until yields are well assured. Many of 1988's contracting problems are due to yields which were less than half of planting-time expectations in the areas most affected by the drought. Otherwise, a small crop might force them to renegotiate contracts at high prices.

Renegotiation involves modifying the original contract or executing a new contract that supersedes the original one. The terms of the renegotiated contract reflect the interests of both the producer and the elevator and involve inconvenience, if not financial sacrifice, for both parties. Generally, the producer makes a cash payment to buy out of the original contract with the elevator. The amount of payment is based on the difference between current conditions (prices) and those prevailing at the execution of the original contract (see "Contract Renegotiation" box).

If the farmer defaults on the contract, however, the elevator must either buy out its short futures position or buy the commodity in the cash market to deliver on its cash forward sales contract. The elevator loses in either case if the price has risen since the contracts were entered.

While both the producer and the elevator would prefer to fulfill the original contract, a renegotiated contract is generally preferable, and less costly to both parties, to contract default. The producer may view default as a way of not having to deliver a commodity that was not grown because of the drought or of not having to deliver a commodity for a price that is below current levels. But, in doing either the producer does not avoid the legal obligation associated with the contract. Legal obligations extend beyond the goodwill of both parties and reflect the Uniform Commercial Code (UCC) and the applicable State case law. Case law is not uniform in all States.

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*           Example:  Contract Renegotiation
*
* Farmer Jones planted 200 acres of soybeans in May 1988,
* expecting a 40-bushel per acre yield and an 8,000-bushel
* output.  Soon after planting, Jones forward-contracted half
* the expected crop, 4,000 bushels, with the local elevator
* at $6.50 per bushel to protect against a price decline.  By
* late June with severe drought, Jones faced the possibility
* of a complete crop failure and of renegotiating the contract
* at $9.50 per bushel or higher.  With modest rains in July
* and August, however, Jones harvested 15 bushels per acre
* giving 3,000 bushels to deliver against the contract.  This
* left a 1,000-bushel shortfall.  At harvesttime, the elevator
* was paying farmers $8.00 per bushel for soybeans.  Jones
* renegotiated the remainder of the contract by paying the
* difference between $8.00 and $6.50 plus a $0.05 service
* charge to defray elevator costs of completing any associated
* transactions  [($8.00-6.50) + $0.05] x 1,000= $1,550.
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Selling Futures Contracts. Commodities being produced or stored can be forward priced by selling futures contracts. A futures contract is a standardized agreement to buy or sell a commodity for delivery in the future at a price determined at contract initiation. People who deal in commodities typically view futures contracts as temporary substitutes for cash transactions that will occur later. Grain and oilseed futures contracts are traded on boards of trade or exchanges, which guarantee the contracts through their clearing houses. A futures contract obligates the seller to deliver the commodity at contract expiration, but delivery is the exception rather than the rule. In most cases, the seller buys back an offsetting futures contract when the commodity is sold in the cash market to a merchant or processor. To trade in the futures market, one must enlist the services of a broker to execute the desired trades, post margin money to protect the position, and be prepared to post additional margin money if market prices move against the position taken (see "Margining" box).

Buying Put Options. Producers can establish minimum prices for their crops by buying put options. A put option grants the buyer or holder the right, but not the obligation, to sell a futures contract at a specified price (the strike price) for the duration of the option. The option buyer pays the person granting the option through the exchange an amount (the premium) that is not refundable. Commodity options can be exercised at any time. Exercising a put option amounts to selling a futures contract at the option's strike price and results in a profit for the option holder if the futures price is less than the strike price. If the futures price exceeds the strike price, the holder can let the option expire without being exercised. By buying put options, the farmer in effect pays for protection against a price decline while maintaining the opportunity to gain from a price

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*           Example:  Margining a Futures Position
*
* Suppose an elevator in early May 1988 offset a 5,000-bushel
* corn cash forward contract for harvest delivery with the
* sale of one December futures contract at $2.20 per bushel.
* At that time, the minimum margin for corn was $200 per
* contract.  In early July, after the drought was widespread,
* the price of the December contract reached $3.60 and minimum
* hedging margins had increased to $1,500 per contract.  Thus,
* the elevator would have had to post an additional $8,300 if
* it wished to maintain its position in December corn [ $\$3.60 -$ 
*  $2.20 = 1.40$  loss per bushel x 5,000 bushels equals $7,000 plus
* an additional $1,300 margin ($1,500 current minimum - $200
* original minimum)].  Of course, the value of the corn had
* increased by the change in price but revenue from it was not
* available because it was not yet harvesttime.  Borrowed
* funds would be needed.  By October, the price of the December
* contract had dropped back to the $2.90 area and the minimum
* margin had decreased to $500 per contract.  The elevator
* could have reclaimed $4,500 of its additional deposit ( $\$3.60 -$ 
*  $2.90 = .70$  per bushel x 5,000 bushels equals $3,500 plus $1,000
* of the additional margin--$1,500 maximum less $500 current).
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increase. Commodity options, like futures, are traded through brokers on an exchange.

The producer can gain some of the advantages of buying put options by entering a minimum price contract with a local buyer. As with a cash forward contract, quantity can be set to fit the farmer's needs and the farmer avoids dealing with a broker. The elevator can offset the risks in guaranteeing the farmer a minimum price by buying put options and charging the producer directly, or indirectly, through higher margins for the premium. Like a put option, a minimum price contract lets the producer benefit from price increases while avoiding losses due to falling prices.

Previous Studies

The extent of cash forward contracting by farmers varies widely. Previous studies indicate that one-quarter to one-half of the corn and soybeans are contracted in some years. Contracting is heaviest in the central Corn Belt where yields are most dependable and proximity to delivery points for futures contracts makes hedging more effective in limiting risk. A lower percentage of the wheat is contracted due in part to greater yield uncertainty in the major wheat-growing areas.

Results from previous surveys providing information on forward contracting by farmers are summarized in appendix II. None of these previous studies focuses exclusively on farmers' use of forward contracting, although each study addresses this topic.

All of the studies are based on the responses of randomly selected farmers or elevators chosen from a restricted universe (such as farmers located in a specific area, or those with gross sales above a certain level).

The studies show that the percentage of grain and soybeans contracted varies among areas and between commodities. Most of the studies indicate that less than one quarter of the farmers contract forward and/or less than one-quarter of the crops produced are sold by contract. However, more farmers use cash forward contracts than hedge in futures. Few of the studies asked farmers the percentage of their crop that they typically forward contracted. But from the information provided in these studies and from talks with grain marketing extension specialists, it appears that farmers seldom forward contract more than half of their expected output until yield is assured.

THE 1988 DROUGHT AND CROP PRICES

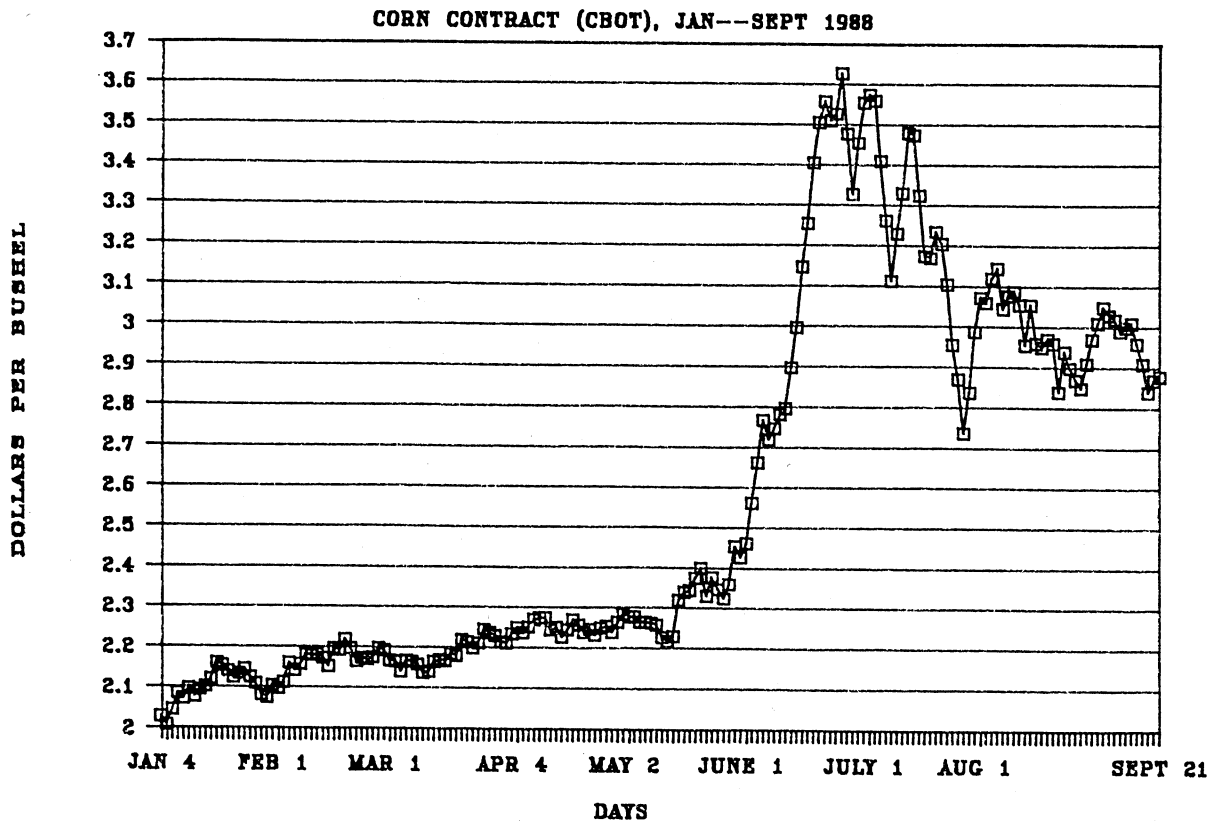
The drought and resulting price volatility made 1988 a hazardous year for forward selling. Drought conditions developed early in the growing season in the major grain-producing areas and intensified during the early summer, causing prices to strengthen in May and climb sharply in June. Farmers who sold fixed price contracts in May or earlier lost opportunities to benefit from the large price increases that were to follow. Those who had hedged by selling futures were hit by large margin calls during June. For example, growers who hedged in early May would have been faced with margin calls totaling up to \$1.50 or more per bushel for corn and \$3.50 or more per bushel for soybeans. Some farmers with cash forward contracts were also in trouble. By late June, they faced prospects of not growing enough to meet their contract obligations. Fortunately, such impacts were limited by the relatively small proportion of the prospective crop that farmers typically sell forward and the fact that the drought appeared early in the season before large volumes were contracted. The problems were eased somewhat by the improved rains and lower prices occurring later in the season.

Corn

At planting time, the 1988 corn crop was expected to reach 7.3 billion bushels. Total supply for the 1988/89 crop year was projected at 11.4 billion bushels and use at 8.0 billion bushels, suggesting a slight decline in ending stocks. Although the loan rate at \$1.77 was 5 cents a bushel lower in 1988/89 than for the prior year, the average farm price was expected to equal or exceed the 1987/88 price.

In May, December corn futures contract prices rose from \$2.22 to \$2.46 per bushel as free stocks tightened and rain fell far short of normal over the Corn Belt (fig. 1). As dry weather continued in June, the market began to anticipate a severe drought and prices rose sharply to the \$3.50 level. Scattered rains over much of the Corn Belt in mid-July eased prices.

FIGURE 1. CLOSING PRICES OF DEC. 1988



According to the National Weather Service, April and June 1988 were the driest spring months on record in the eastern Corn Belt and among the five driest in the western Corn Belt. Although the late July showers over most of the Corn Belt were too late for many fields, yield prospects improved enough to allow December futures prices to fall below the \$3.00 level. Farmers and elevators with short futures positions got some of their margin payments back. Some farmers with cash forward sales regained prospects for producing at least enough corn to meet their contract commitments.

As of September 1988, corn production was forecast to be 4.5 billion bushels, down 37 percent from last year's crop of 7.1 billion. Although price volatility subsided after June and July had passed, prices were expected to range from \$2.30 to \$2.70 per bushel, well above May expectations of \$1.65 to \$2.00 per bushel.

Soybeans

In early May, soybean production was projected to be 1.9 billion bushels, down slightly from 1987. Planting intentions indicated an increase in acres planted, but trend yields suggested a slight drop in production. U.S. soybean stocks were projected to drop to a very low level relative to use and season average prices for soybeans were projected to rise significantly in 1988/89. Soil moisture levels were low in many growing areas at planting time.

The driest April-June period since the 1930's over much of the major U.S. soybean growing areas significantly reduced soybean yield prospects, particularly in the eastern Corn Belt. The reduction in output was expected to result in the lowest ending stock levels since 1983/84.

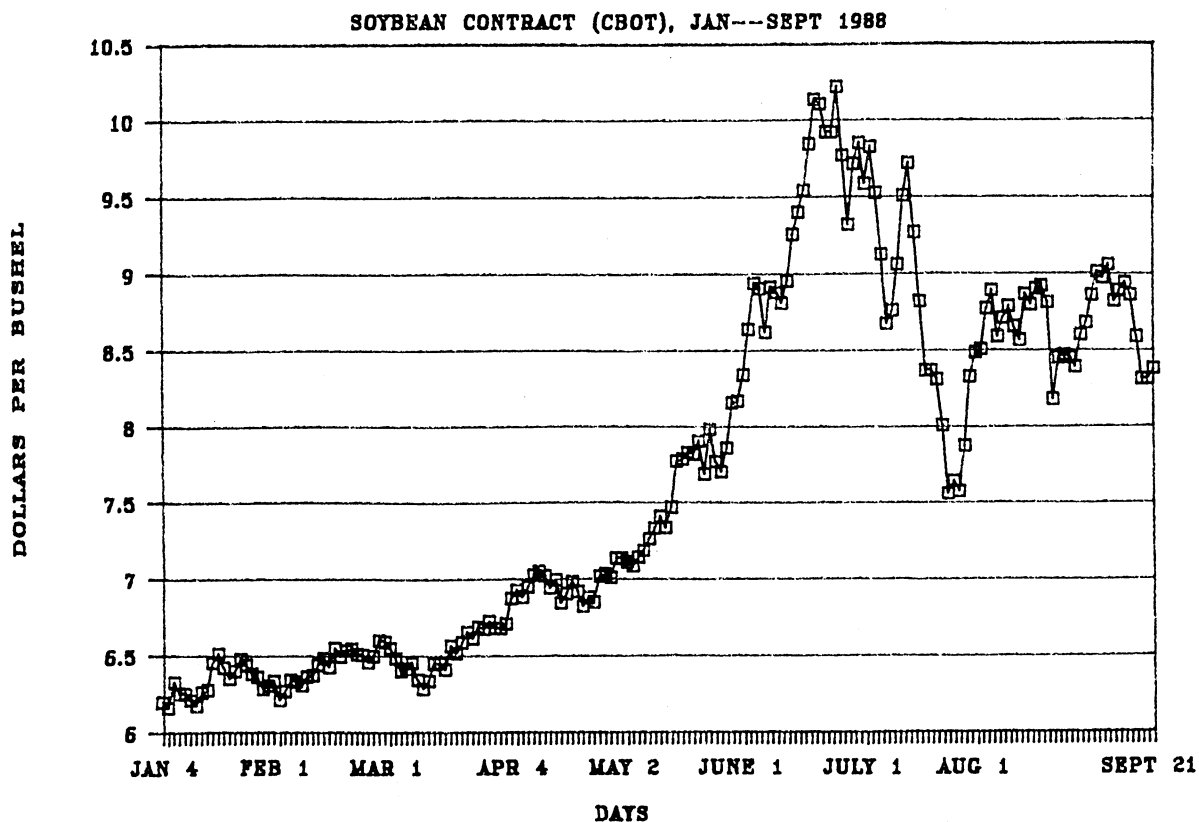
Based on the Crop Condition Index, the soybean crop prospects were at their worst during the week of July 10th. Closing prices for the November 1988 soybean futures contract reached contract highs during late June to mid-July (fig. 2). Increased yield prospects with the scattered rains in late July allowed prices to briefly drop below \$8.00, but yield uncertainty and price volatility remained large.

As this report is written, the 1988/89 season average soybean price is expected to range between \$7.25 and \$9.75 a bushel. The unusually wide range reflects uncertainty about final 1988 soybean production and increased volatility in prices as stocks tighten.

Spring Wheat

Planting intentions for 1988 reflected relatively large hard red spring (HRS) supplies. This high protein wheat was selling at a discount relative to other wheat classes. Part of the 7-percent area decline reported for HRS reflected a shift to durum which was experiencing strong prices.

FIGURE 2. CLOSING PRICES OF NOV. 1988

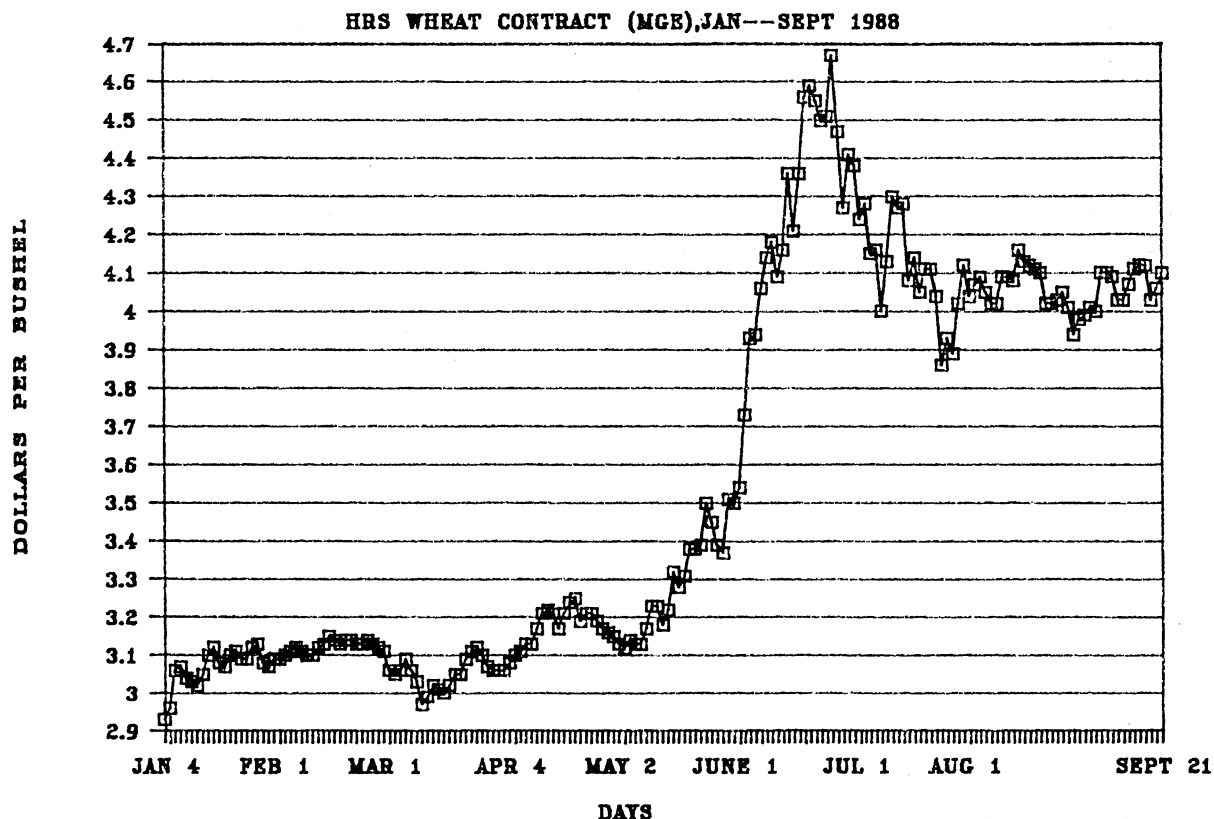


The drought hit the Northern Plains before spring wheat planting. Some areas experienced the driest April on record. By the time the crop was planted, there was little subsoil moisture; HRS areas needed above-normal rainfall to produce normal yields. Prices for the September 1988 contract at Minneapolis rose from just above the \$3.00 level in March and April to the \$3.50 range by the end of May (fig. 3).

Early June brought less than normal rainfall and record temperatures, ranging above 100 degrees over much of the HRS areas. Prices continued to increase to the \$4.50 area by early July. Without moisture reserves, stress continued into the heading stage and limited kernels per head.

During late June some areas received rain, but it was too late. Prices did drop, however, with the December contract falling to the \$4.00-4.10 range in August and September. Wheat streak mosaic virus also reduced the crop. Although some insect pests were devastated by the heat, grasshoppers multiplied rapidly in some areas. As of September, HRS production was forecast to fall 58 percent in 1988, to 182 million bushels.

FIGURE 3. CLOSING PRICES OF SEPT. 1988



DATA COLLECTION FOR ASSESSING 1988 CONTRACTING PROBLEMS

To assess the effects of forward contracting and the drought on financial stress and credit needs among farmers and marketers, we assembled information from several sources. The primary data source was a telephone survey of elevators in 13 Corn Belt and spring wheat States conducted by the National Agricultural Statistics Service (see questionnaire, app. III). The States were selected based on volume of production and drought severity. These 13 States accounted for 86 percent of U.S. corn production, 79 percent of soybean production, and 89 percent of spring wheat production during the past 3 years (1985-87). Both the Long Term Palmer and Short Term Crop Moisture Index indicated that most of the Corn Belt and Northern Plains were significantly affected by this year's drought.

For corn and soybeans, the 13 States in the survey were divided into eastern and western Corn Belt regions. The eastern Corn Belt includes Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsin. The western Corn Belt includes Iowa, Minnesota, Missouri, Montana, Nebraska, North Dakota, and South Dakota. Data on spring wheat contracting were collected for four States: Minnesota, Montana, North Dakota, and South Dakota.

The telephone calls were made during the week of September 19-23, 1988, to a stratified sample from the list of mills and elevators that NASS uses to collect monthly information on grain prices. The sample was selected so that all elevators on the list had equal probability of entering the sample.

The telephone elevator survey was supplemented with field interviews of 33 elevator managers during the week of September 19-23, telephone interviews with 28 bankers and brokers, and discussions with grain marketing extension specialists from universities and trade association representatives. The field interviews focused on key production areas and areas that were affected to differing extents by the drought. Information gathered was used to provide detail and to interpret the telephone survey results.

Information was also obtained from a late August survey of grain marketing extension specialists at universities conducted by the Extension Service.

EXTENT OF FORWARD CONTRACTING IN 1988

Telephone survey results indicate that about one-half of the elevators buying corn from farmers use forward contracts (table 1). The percentage of elevators buying corn under forward contracts is slightly higher in the eastern Corn Belt (55.1 percent) than in the western Corn Belt (48.8 percent).

A higher percentage of elevators contract with farmers for soybeans than for corn. About 75 percent of the soybean buyers in the eastern Corn Belt use contracts, while 70.8 percent of the

soybean buyers in the western Corn Belt report such activity. Just over one-quarter of the elevators buying wheat from farmers use forward contracts.

The percentage of purchases made by contract shows a similar pattern. The percentage purchased by contract is greater for soybeans than for corn. Contracting is relatively more important in the eastern Corn Belt than in the western Corn Belt. The percentage of wheat purchased by forward contract (7.4 percent) was lower than that for corn and soybeans. This result is consistent with the finding that a smaller percentage of elevators use forward contracts to purchase wheat.

Relatively few elevators use forward contracts for a large share of their purchases; many do not forward contract at all. For corn, less than one-fifth of the elevators (16.1 percent in the eastern Corn Belt and 19.8 percent in the western Corn Belt) used forward contracts to make over one-fourth of their purchases (table 2). In contrast, about one-half of the elevators (46.0 percent in the eastern Corn Belt and 52.9 percent in the western Corn Belt) reported that they did not use forward contracts to purchase corn.

Table 1--Extent of elevator forward contracting with farmers for corn, wheat, and soybeans, Corn Belt and spring wheat areas, 1988 ^{1/}

Commodity and area	Percentage of buyers using contracts ^{2/}	Percentage of volume purchased by contract ^{3/}
	Percent	Percent
Corn, E. Corn Belt	55.1 (n=89)	21.7 (n=87)
Corn, W. Corn Belt	48.8 (n=125)	11.7 (n=121)
Soybeans, E. Corn Belt	74.6 (n=71)	33.2 (n=69)
Soybeans, W. Corn Belt	70.8 (n=106)	16.3 (n=103)
Spring wheat	28.0 (n=50)	7.4 (n=48)

The numbers in parentheses indicate the number of elevators responding to each part of the questions.

^{1/} See text for States included.

^{2/} Percentage of elevators buying the commodity from farmers.

^{3/} Percentage of total volume purchased by elevators from farmers.

Source: National Agricultural Statistics Service telephone survey of elevators, September 1988.

Elevators typically purchase a larger share of their soybean volume than corn volume under forward contracts. One-third of the elevators purchased more than 25 percent of their soybeans with forward contracts. Less than one-third reported no soybean purchases with forward contracts.

Only 6 percent of the elevators purchasing wheat bought more than 25 percent of their wheat with forward contracts. Three-fourths of the elevators reported no wheat was purchased by forward contract.

These results are consistent with those shown in table 1. In short, contracting is more evident for soybeans than for corn and slightly more evident in the eastern Corn Belt than in the western Corn Belt. Furthermore, the extent of forward contracting observed in this survey is generally consistent with the importance of contracting reported in other studies.

Elevators in the sample were asked to indicate the method they used to offset cash forward contracts entered for the 1988 crop (table 3). As expected, the two primary methods are sales to another buyer (sometimes called back-to-back cash transactions) and hedging in futures contracts. Hedging in futures contracts is more widely used for corn than for soybeans. Conversely, back-to-back transactions are more dominant in the case of soybeans and spring wheat than in the case of corn.

Table 2--Elevators classified according to percentage purchased by contract, corn, soybeans, and wheat, 1988

Percentage purchased by contract	Corn		Soybeans		Spring wheat
	Eastern Corn Belt	Western Corn Belt	Eastern Corn Belt	Western Corn Belt	
	<u>Percent of elevators purchasing commodity</u>				
Over 25	16.1	19.8	37.7	35.0	6.2
1 - 25	37.9	29.3	36.2	35.0	18.8
Zero	46.0	52.9	26.1	30.0	75.0
Total	100.0	100.0	100.0	100.0	100.0
	(n=87)	(n=121)	(n=69)	(n=103)	(n=48)

The numbers in parentheses indicate the number of elevators responding to the question.

Source: National Agricultural Statistics Service telephone survey of elevators, September 1988.

Two entries in table 3 merit comment. First, the 9.6 percent of western Corn Belt corn that is offset with options seems high. The gradual adoption of options since trading began in 1984 is consistent with the percentage observed for corn in the eastern Corn Belt and for soybeans in the western Corn Belt.

Second, the 6.4 percent of corn purchases in the eastern Corn Belt that were not offset is also surprising. This finding could possibly reflect elevators that plan to use some corn in their own feed-mixing operations, and that offset corn purchases with sales of feed. But this result would also be expected in the western Corn Belt. This regional discrepancy lacks a good economic explanation.

Table 3--Methods used for covering forward contracts, by commodity, Corn Belt and spring wheat areas, 1988

Method used to cover contracts	Corn		Soybeans		Spring wheat
	Eastern Corn Belt	Western Corn Belt	Eastern Corn Belt	Western Corn Belt	
	<u>Percent of contracted volume</u>				
Selling to another buyer	39.1	38.0	55.7	61.5	81.6
Hedging in futures	53.8	50.1	42.3	36.2	18.4
Hedging in options	.7	9.6	0	.4	0
Not covered	6.4	2.3	2.0	1.9	0
Total	100.0	100.0	100.0	100.0	100.0
	(n=47)	(n=57)	(n=51)	(n=72)	(n=12)

The numbers in parentheses indicate the number of elevators responding to the question.

Source: National Agricultural Statistics Service telephone survey of elevators, September 1988.

EXTENT OF CONTRACT RENEGOTIATION AND DEFAULT

The elevators responding to the September 1988 telephone survey indicated that, on average, over 95 percent of their outstanding forward contracts with farmers would likely be fulfilled as originally negotiated (table 4). Elevators expected that between 1 and 2 percent of their outstanding forward contracts would be renegotiated during the harvest period, and that less than 1 percent would be in default. Uncertainty about contract outcomes appeared minimal.

Several factors help explain why the levels of contract renegotiation and default are lower than the levels expected in June and July. Most importantly, many farmers anticipated the intensity of the drought by early June and curtailed their forward contracting activity. As a result, farmers incurred fewer contract obligations than they might have incurred if the drought had not become apparent until later in the season.

Weather was also important. Many areas, particularly in Ohio, Indiana, and parts of Illinois, received rainfall in late July

Table 4--Expected outcomes of elevators' forward contracts with farmers, by commodity, Corn Belt and spring wheat areas, 1988

Contract outcome	Corn		Soybeans		Spring wheat
	Eastern Corn Belt	Western Corn Belt	Eastern Corn Belt	Western Corn Belt	
	<u>Percent of contracts</u>				
Fulfilled as originally negotiated	94.7	98.6	97.2	98.7	97.4
Renegotiated	2.4	1.3	.6	1.2	1.9
Defaulted	.8	0	.2	0	.7
Uncertain	2.1	.1	2.0	.1	0
Total	100.0	100.0	100.0	100.0	100.0
	(n=47)	(n=57)	(n=51)	(n=72)	(n=12)

The numbers in parentheses indicate the number of elevators responding to the question.

Source: National Agricultural Statistics Service telephone survey of elevators, September 1988.

and early August. This timely rainfall improved yield prospects in these areas, and allowed farmers to meet contract obligations. Farmers' abilities to fulfill contract requirements appeared quite uncertain only a few weeks earlier.

Although the extent of contract renegotiation is relatively low overall, some elevator managers visited by the ERS field interviewers reported quite different results. Several elevators in the eastern Corn Belt reported that as many as one-third of their outstanding contracts had been renegotiated. These elevators are all located in areas that were seriously affected by the drought. Some sent out notices in July encouraging farmers to renegotiate if they anticipated production shortfalls. Defaults at these elevators were, however, expected to be minimal as of late September.

In most cases, renegotiation involves the farmer "buying out" the contract by paying the full difference between the price at the time of renegotiation and the contracted price, plus a service charge (table 5). About 85 percent of all contracts renegotiated were renegotiated using this procedure. A few contracts have been settled by other methods.

Table 5--Contracts renegotiated by method of settlement, all commodities, Corn Belt and spring wheat areas, 1988

Method of settlement	Percentage of contracts renegotiated
	<u>Percent</u>
Farmer pays full price difference plus service charge	84.0
Farmer pays full price difference	9.6
Delivery postponed to 1989 crop	4.0
Other settlement	2.4
Total	100.0
	(n=14)

The number in parenthesis indicates the number of elevators responding to the question.

Source: National Agricultural Statistics Service telephone survey of elevators, September 1988.

The elevators that do not require farmers to pay a service fee, or those that allow deferred delivery, are typically in areas that have been badly affected by the drought. Write-offs are extremely uncommon and are considered only for very small contracts. Most elevator operators indicate that farmers who threaten default will be taken to court.

FINANCIAL IMPACTS ON ELEVATORS AND CREDIT DEMANDS

To assess the financial impacts of contracting and the drought on elevators, we asked survey respondents to provide information about their borrowing to meet margin calls on futures sales made to cover cash forward contracts with farmers, and on their expected losses due to farmers failing to meet contract commitments. Both questions were asked in terms of percentage of the elevator's net worth.

Slightly over 5 percent of the elevators reported borrowing to meet margin calls on futures sales that offset cash forward contracts with farmers (table 6). Only 2.2 percent indicated that they borrowed more than 10 percent of their net worth for that purpose. The incidence of such borrowing was too small to estimate differences between regions.

Table 6--Elevators borrowing to meet margin calls on futures sales made to cover cash forward contracts, Corn Belt and spring wheat areas, 1988

Borrowing as a percentage of net worth	Percentage of elevators
	<u>Percent</u>
None	90.1
1 - 10	3.3
Over 10	2.2
Don't know	4.4
Total	100.0
	(n=273)

The number in parenthesis indicates the number of elevators responding to the question.

Source: National Agricultural Statistics Service telephone survey of elevators, September 1988.

In the field interviews, some elevators reported that more borrowing than that shown in table 6 occurred to protect hedges placed against elevator-owned grain, especially corn, purchased from the Commodity Credit Corporation before prices began to rise in the May-June period. Credit needs were increased by the increases in minimum margin requirements established by the exchanges because of volatile market conditions.

Only about 5 percent of the elevators expected to experience losses from farmers' failing to meet forward contract commitments (table 7). For 4.0 percent of the elevators, losses were expected to be between 1 and 10 percent of their net worth. Only 1.1 percent of the elevators expected to lose more than 10 percent of their net worth.

The elevators that are in severe financial stress due to farmers defaulting on contracts represent only about 1 percent of the industry. The field interviews and other sources of information indicate, however, that some elevators are experiencing financial stress for reasons that were not measured in the survey. Besides the extra interest expense associated with the just mentioned short hedging, elevators' incomes will be reduced by lack of volume from this year's crop and lower revenues from Government storage.

Table 7--Elevators expecting losses due to farmers failing to meet contract commitments, Corn Belt and spring wheat areas, 1988

Expected losses as a percentage of net worth	Percentage of elevators
	<u>Percent</u>
None	92.3
1 - 10	4.0
Over 10	1.1
Don't know	2.6
Total	100.0
	(n=273)

The number in parenthesis indicates the number of elevators responding to the question.

Source: National Agricultural Statistics Service telephone survey of elevators, September 1988.

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SEC. 334. FORWARD CONTRACTING REPORT.

(a) *REPORT.*—Not later than 60 days after the date of the enactment of this Act, the Secretary of Agriculture shall prepare and submit, to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the Senate, a report on the financial effect that forward contracting, hedging, and associated margin requirements for wheat, feed grains, and soybeans during the recent drought-related period of price volatility have had on producers and on grain marketers, particularly local elevators and intermediaries.

(b) *CONTENTS OF REPORT.*—In the report, the Secretary shall include a discussion of—

(1) the extent to which currently planted or stored crops are subject to cash forward contracts or otherwise are hedged, and what portion of such forward contracts are in danger of being defaulted on as a result of drought-related crop losses;

(2) the extent to which local grain elevators may experience severe financial stress due to defaults on cash forward contracts or due to margin requirements on futures market positions;

(3) the extent to which producers have been able to renegotiate forward contracts in light of drought-related changes in economic conditions;

(4) the extent to which hedging and forward contracting practices may produce unusual demands for credit among farm producers and marketers in light of drought-related conditions; and

(5) such other areas of related concern as the Secretary may find appropriate.

(c) *IMMEDIATE NOTIFICATION.*—The Secretary shall immediately notify, in advance of the report, the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the Senate if the Secretary finds, in the course of the study required under this section, that serious economic or financial problems related to forward contracting, hedging, and margin requirements for grains are likely to arise.

(d) *CONSULTATION.*—The Secretary shall consult with the Chairman of the Commodity Futures Trading Commission on issues concerning futures markets that arise in the course of the study required under this section.

APPENDIX II--PREVIOUS SURVEYS OF FARMER CONTRACTING

Study title	Study design	Forward contracting findings
Marketing and Pricing Methods Used by Selected U.S. Wheat Producers (Hoffman, Harwood, and Leath, 1988)	1,482 wheat producers in 15 States; data are for 1983 crop	Forward contracts were used to price from between 3% and 30% of all wheat sold off-farm at harvest
Wisconsin Corn and Soybean Producers' Knowledge and Use of Options and Related Marketing Instruments (Campbell and Shiha, 1987)	796 corn and soybean producers in Wisconsin; data are for 1986	About 20% of respondents had used a forward contract in the past 5 years; large producers contract more often than small producers
Marketing and Pricing Methods Used by Midwestern Corn Producers (Harwood, Hoffman, and Leath, 1987)	750 corn producers in 11 States; data are for 1983 crop	Forward contracts were used to price from between 11% and 61% of all corn sold off-farm at harvest
Farmers Current Marketing Practices and Attitudes (Mintert, 1987)	Summary of (typically unpublished) findings of forward contracting surveys	Typically, less than 20% of respondents forward-contracted
National Assessment of Extension Educational Programs in Producer Marketing Alternatives (Texas A&M, 1987)	3,494 grain and livestock producers responded in 12 States and New England; data are for 1986	24.4% of the respondents indicated that they had used cash forward contracts

continued--

APPENDIX II--PREVIOUS SURVEYS OF FARMER CONTRACTING--Continued

Study title	Study design	Forward contracting findings
Kansas Grain Marketing: Data for 1985 Crop (Kansas Ag. Statistics, 1987)	2,167 grain producers in Kansas responded; data are for 1985 crop	5% to 16% reported sales by forward contracting
Kansas Grain Marketing and Transportation: Data for 1984 Crop and Historical Data, 1979-1983 (Kansas Ag. Statistics, 1986)	3,494 grain producers in responded; data are for 1984 crop	4% to 8% forward-contracted all or part of their crop
Pricing Strategies Used by Soybean Producers (Leath, 1986)	1,181 soybean producers in 11 Midwest and Southern States; data are for 1982 and 1983 crops	19.2% of crop sold off-farm at harvest was priced by forward contract
Grain Pricing and Forward Contracting in Selected Agricultural Commodities: An Inquiry into Defaults (Helmuth, CFTC, 1977)	About 10,000 grain and livestock producers responded; sample was obtained so that results could be expanded to be representative of all U.S. farmers; data are for 1976 crop	10.3% of grain producers entered forward contracts in 1976; 0.4% defaults
The U.S. Cash Grain Trade in 1974: Participants, Transactions, and Information Sources (Heifner, et al., 1977)	2,664 grain firms responded; sample was obtained so that results could be expanded to be representative of all U.S. establishments with grain storage facilities; data are for 1974.	Grain firms purchased 20.2% of their corn; 13.9% of their wheat; and 19.9% of their soybean receipts from farmers more than 30 days before delivery



**FORWARD CONTRACTING SURVEY
SEPTEMBER 1988**

Form Approved
O.M.B. Number 0535-0215
Approval Expires 12/31/88

Dear Reporter:

Information requested in this survey is used to measure the financial effect of the recent drought on producers and grain marketers. Information about your operation is confidential and will be used only in combination with similar reports from other grain marketers. Response is voluntary.

Respectfully,

Richard D. Allen
Chairperson
Agricultural Statistics Board

Please verify name and address. Make corrections on label.

1. Have you or do you expect to purchase any corn, soybeans or wheat from farmers' that was harvested in 1988?

() YES, Continue () NO, conclude interview

Thousand Bushels

How much Corn? _____

How many Soybeans? _____

How much Wheat? _____

2. Have you entered into any cash forward contracts for corn, soybeans, or wheat so far in 1988?

() YES, continue () NO, conclude interview

	Number of Contracts	Thousand Bushels
How many for Corn?	_____	_____
How many for Soybeans?	_____	_____
How many for Wheat?	_____	_____

3. What percent of your 1988 forward contracted volume with farmers was hedged or covered by:

	Corn %	Soybeans %	Wheat %
Selling to another buyer?	_____	_____	_____
Hedging in futures?	_____	_____	_____
Hedging in commodity options?	_____	_____	_____
Not covered?	_____	_____	_____

4. Of your cash forward contracts in 1988 for corn, soybeans or wheat, how many have been or are expected to be:

	Corn	Soybeans	Wheat
Fulfilled as originally negotiated	_____	_____	_____
Renegotiated	_____	_____	_____
Defaulted	_____	_____	_____
Outcome uncertain	_____	_____	_____

Continue On Next Page

5. *[Note: If no renegotiation has occurred or is expected to occur, go to Question 6.]*
 For the contracts that are renegotiated for corn, soybeans or wheat, how many will be settled by the following methods?

	Corn	Soybeans	Wheat
	-Number of Contracts-		
Farmer pays full price difference plus service charge	_____	_____	_____
Farmer pays full price difference	_____	_____	_____
Farmer pays part of price difference	_____	_____	_____
Delivery postponed to 1989 crop	_____	_____	_____
No payment, elevator absorbs loss	_____	_____	_____
Other settlement, explain	_____	_____	_____

6. What percent of your net worth have you borrowed to meet margin calls on futures sales made to cover cash forward contracts with farmers?

_____ Percent of Net Worth

7. What percent of your net worth is your expected loss this year due to farmers failing to meet contract commitments?

_____ Percent of Net Worth

8. Would you like a copy of the results of this survey?

Yes _____ No _____

Comments:

Reported by: _____ Date: _____