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**ABSTRACT**

The Food Security Act of 1985 authorizes the U.S. Department of Agriculture to issue generic certificates in lieu of cash payments due to program participants and merchants of agricultural products under provisions of several programs. The certificates may be used to acquire stocks held as collateral on government loans or owned by the Commodity Credit Corporation (CCC). These certificates offer producers and merchants advantages when they are exchanged for crops held under loan or owned by the CCC, and they have freed up stocks that might not have been marketed. Although the costs of using certificates likely exceeded the costs of issuing those payments in cash during fiscal 1987, generic certificate costs are projected to range between 93 and 99 percent of cash costs during fiscal year 1989. As of March 31, 1988, about \$17.9 billion worth of certificates had been issued, with about \$1.7 billion worth having been redeemed as of May 31, 1988. Approximately 72 percent of the exchanges have been for corn, 20 percent for wheat, and the remainder for various other commodities held under loan or owned by the CCC. One concern that has been raised is that, by freeing up government-owned stocks, certificates may dampen prices and thus increase deficiency payments. (MW)

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**Generic Certificates**, by Joseph W. Glauber, U.S. Department of Agriculture, Economic Research Service, Commodity Economics Division. Agricultural Economic Report No. 594.

**Abstract**

The Food Security Act of 1985 authorizes the U.S. Department of Agriculture to issue generic certificates in lieu of cash payments due program participants and merchants of agricultural products under provisions of several programs. The certificates can be used to acquire stocks held as collateral on Government loans or owned by the Commodity Credit Corporation (CCC). Certificates offer producers and merchants advantages in exchanging them for crops held under loan or owned by the CCC, and their use has freed-up stocks which might not have been marketed. While the costs of using certificates likely exceeded the costs of issuing those payments in cash during fiscal year 1987, costs for FY 1988 and FY 1989 are estimated to be about the same as had the payments been made in cash. As of March 31, 1988, about \$17.9 billion of certificates had been issued since April 1986. Total certificate redemptions as of May 31, 1988, approached \$17.1 billion. Approximately 72 percent of the exchanges have been for corn (\$12.4 billion), 20 percent for wheat (\$3.3 billion), and the remainder for various other commodities held under loan or owned by the CCC.

*Keywords:* Generic certificates, issuances, exchanges, auctions, premiums, corn, wheat, budget costs

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# Summary

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The costs of generic certificates, issued instead of cash payments to agricultural producers and merchants enabling them to acquire commodity stocks, would likely be about the same as the cost of cash payments in fiscal years 1988 and 1989. But certificate costs exceeded what payment costs would have been in 1987.

The Food Security Act of 1985 authorizes the U.S. Department of Agriculture to issue generic certificates in lieu of cash payments due program participants and merchants of agricultural products under provisions of several programs. The certificates can be used to acquire stocks held as collateral on Government loans or owned by the Commodity Credit Corporation (CCC).

As of March 31, 1988, about \$17.9 billion of certificates had been issued since April 1986. Total certificate redemptions as of May 31, 1988, approached \$17.1 billion. Approximately 72 percent of the exchanges have been for corn (\$12.4 billion), 20 percent for wheat (\$3.3 billion), and the remainder for various other commodities held under loan or owned by the CCC.

Costs of issuing generic certificates in lieu of cash were 5 percent above cash costs during fiscal year (FY) 1987. Because of the large number of generic certificates exchanged for CCC stocks and the high cash prices for corn and wheat during the 1987/88 marketing year, the costs of issuing generic certificates in FY 1988 may actually have been about equal to the costs of cash payments (budget-neutral). Generic certificate costs are projected to range between 93 to 99 percent of cash costs for FY 1989.

However, by freeing up Government-owned stocks, certificates may dampen prices and increase deficiency payments. While this was not a factor for FY 1988 (the 5-month wheat deficiency payments were calculated prior to start of the wheat bid exchange), substantial certificate issuances in FY 1989 could result in increased deficiency payments for corn and wheat, particularly if prices are well above loan repayment levels (but below target prices).

With current certificate supply for the remainder of FY 1988 estimated at \$4.3 billion, certificate carryover for FY 1988 would likely range between \$1.1 billion and \$1.8 billion.

Certificate needs for FY 1989 will likely depend on the size of the corn and wheat harvest and export demands. If 1988 corn and wheat crops are relatively unaffected by the drought, additional certificate issuances for FY 1989 will likely approach \$4.2 billion. However, if there are substantial crop shortfalls, additional certificate needs could approach \$6.4 billion.

# Generic Certificates

## Introduction

This study responds to a request from the Office of Management and Budget (OMB) for an analysis of the market and budget effects of generic certificates. The Food Security Act of 1985 (1985 Act) authorizes the U.S. Department of Agriculture (USDA) to issue generic certificates in lieu of cash payments due program participants and merchants of agricultural products under provisions of several programs. The certificates can be used to acquire stocks held as collateral on Government loans or owned by the Commodity Credit Corporation (CCC).

OMB was specifically interested in the following:

- o The nature of generic certificates and how they affect commodity markets.
- o The current situation and short-term outlook for generic certificate issuances and redemptions, including projected certificate activity for FY 1989.
- o The budgetary effect of generic certificates.
- o The long-term outlook for the generic certificate program.

The latter two issues are of particular interest since some controversy has surrounded the use of generic certificates in lieu of cash payments. Estimates in 1987 by the Congressional Budget Office (CBO) suggest that generic certificates cost approximately 15 percent more than payments made in cash would have cost (4).<sup>1</sup> A similar study by the General Accounting Office (GAO) concluded that certificates cost USDA between 3 and 21 percent more than cash payments (16). Cost estimates by USDA's Agricultural Stabilization and Conservation Service (ASCS) ranged from 5 percent above cash payments for the first year of the program to "budget-neutral" (1,2).

This study estimates the costs of issuing generic certificates in lieu of cash were 5 percent above cash costs during fiscal year (FY) 1987. Because of the large number of generic certificates exchanged for Commodity Credit Corporation (CCC) stocks and the high cash prices for corn and wheat

during the 1987/88 marketing year, the costs of issuing generic certificates in FY 1988 may actually have been about equal to the costs of cash payments (budget-neutral). Generic certificate costs are projected to range between 93 to 99 percent of cash costs for FY 1989.

## Generic Commodity Certificates

Section 1005 of the Food Security Act of 1985 (1985 Act) amended the Agricultural Act of 1949, authorizing the Secretary of Agriculture to make in-kind payments in the form of negotiable certificates or "by such other methods as the Secretary determines appropriate to enable the producer to receive payments in an efficient, equitable, and expeditious manner so as to ensure that the producer receives the same total return as if the payments had been made in cash." There are 18 authorities in the 1985 Act for making in-kind payments (3,6).

Farmers have received generic certificates as payment for participation in numerous Government programs, including acreage reduction, paid land diversion, the Conservation Reserve Program (CRP), rice marketing loans, disaster, and emergency feed programs. In addition, grain merchants and commodity groups have been issued certificates through the Export Enhancement Program (EEP) and the Targeted Export Assistance (TEA) program. Ethanol producers have also received certificates.

Generic certificates have a fixed dollar face value and an 8-month life beginning at the end of the month of issuance. They are not currency; they are a claim on CCC assets and backed by commodities owned by the CCC. They are generic in that they can be exchanged for a variety of commodities under loan and in CCC inventory, including wheat, rice, rye, corn, grain sorghum, barley, oats, soybeans, upland cotton, honey, and dairy products. The certificates are also negotiable in that ownership and the right to exchange can be transferred.<sup>2</sup>

<sup>2</sup> When generic certificates were first issued, initial regulations required producers with an outstanding loan (regular, reserve, or special) to use those loans to satisfy their commodity certificate payment. Certificates had to be redeemed for loans that were outstanding on the day following the last day of sign-up for the 1986 programs. Certificates issued to producers with no outstanding loans or insufficient loans could either be sold or redeemed for cash at a later date. On May 15, 1986, USDA announced that producers would no longer be required to liquidate their certificates by redeeming outstanding loans. Producers could take out 1986-crop loans strictly for the purpose of repaying those loans with certificates (3).

<sup>1</sup> Italicized numbers in parentheses refer to items in the References section.

Generic certificates can be used in several ways:

- o An individual farmer can reacquire commodities pledged as collateral to the Government under the 9-month loan, extended 9-month loan, Farmer-Owned Reserve (FOR), or Special Producer Storage Loan Program (SPSLP).
- o Certificates may also be exchanged for commodities owned by the CCC. CCC publishes catalogues listing commodities available from CCC. Storing warehouses normally have the first option to acquire the commodities. Catalogue lots are then made available to third parties.
- o Beginning November 6, 1987, holders of certificates could exchange their certificates at an accepted bid exchange rate for specified lots of CCC-owned catalogued wheat. The bid exchanges, the so-called wheat auctions, have been generally held once a week with targeted exchanges of 10 million bushels.
- o Certificates can be sold or transferred to others. The transaction must be completed before the expiration date on the certificate. During October 1986, certificates reportedly sold for a record 30-35 percent above face value. Certificates have recently sold at par or at a slight discount in some locations.
- o Farmers who are original holders of certificates can return them to the CCC for cash at face value during the 6th through 8th month of the certificates' life. After the expiration date, they are redeemable at 85 percent of face value for 6 months. During the subsequent 12 months, they are redeemable at 50 percent of face value. The certificates have zero redemption value after these 18 months.<sup>3</sup>

### Mechanics of Certificate Exchange

Farmers exchange generic certificates for grain loan collateral based on an exchange price determined daily by ASCS.<sup>4</sup> These exchange prices, or posted county prices (PCPs), are based on the previous day's closing market prices for 19 terminal markets. PCPs are determined for over 3,000 counties and 7,000 warehouse locations by adding or subtracting a predetermined differential on the terminal market price. Most counties are assigned two terminal markets with a differential assigned for each market. (Prior to December 1, 1986, counties had been assigned one terminal market for determining PCPs.) The PCP is based on

the higher of the two terminal market prices, adjusted by their respective differentials.<sup>5</sup>

Certificates exchanged for CCC-owned commodities are based on the PCP, adjusted to reflect the in-handling charges CCC has paid to the storing elevator (currently, about \$0.05 a bushel). Unlike certificate exchanges for commodity loan collateral which are based on a daily PCP, exchanges for CCC-owned commodities are based on PCPs determined at the time of exchange, and may be adjusted several times during the day to reflect changing market conditions.

Certificates exchanged for CCC-owned commodities must meet a minimum volume equivalent of 10 carlots.<sup>6</sup> Certificate exchanges for quantities less than this amount are allowed, but only one less-than-minimum transaction is allowed per month.

When exchanging certificates for wheat under the wheat auctions, holders submit bids to the CCC office in Kansas City for individual lots of wheat. The highest bids are accepted. CCC can reject all bids if they are determined to be too low.

### Advantages of Using Generic Certificates

There are a number of incentives for producers and merchants to use certificates. For producers who place their crop under loan with intentions of forfeiting the collateral to the Government, certificates allow them to receive the loan rate without having to incur storage costs over the life of the loan.

To illustrate, assume that the producer must pay \$0.27 a bushel to store wheat for 9 months (\$0.03 per bushel per month). Although PCPs are intended to reflect market prices, there are often differences between the two. Using the example given in table 1, assume the PCP for wheat is \$2.19 a bushel while the farm price is slightly higher at \$2.20 a bushel. A certificate valued at \$1,000 could be exchanged at the PCP for 457 bushels of wheat (1,000 divided by 2.19).

Consider the producer who places 457 bushels of wheat under loan with the intention of forfeiting the loan collateral after 9 months. The producer receives \$1,042 at the time of loan placement (457 times \$2.28) but must pay \$123 (457 times \$0.27) to store the crop for 9 months. Total receipts (including the face value of the unused certificate) equal \$1,919.

<sup>3</sup> Certificates issued for 1986 programs were subject to a 4.3-percent Gramm-Rudman-Hollins reduction if exchanged for cash.

<sup>4</sup> The producer is legally acquiring CCC assets, not loan collateral.

<sup>5</sup> Certificates exchanged for cotton or rice are determined by the adjusted world price, announced weekly by USDA to determine loan repayment levels for marketing loans for those commodities (see 8).

<sup>6</sup> The equivalents of 10 carlots are: 19,000 cwt. for sorghum; 18,000 cwt. for rough rice; 35,000 bushels for corn, wheat, and barley; and 45,000 bushels for oats.

Now consider a producer who exchanges a certificate for the loan collateral. As before, the producer receives \$1,042 at the time of loan placement. Using the certificate to exchange for the loan collateral, the producer then sells the 457 bushels at the market price. Total receipts equal \$2,047. The net difference between placing and forfeiting a loan and exchanging the loan with certificates is \$128.

Thus, the \$1,000 certificate is worth \$1,128 to the producer who wishes to redeem the loan, 12.8 percent above par value. If certificates are trading at premiums greater than this amount, producers could possibly earn more by selling

**Table 1--Calculating the value of exchanging generic certificates for crop loan collateral 1/**

Item	Wheat	Corn
	<u>Dollars/bu.</u>	
Loan rate	2.28	1.82
Posted county price (PCP)	2.19	1.74
Farm price	2.20	1.75
9-month storage cost	.27	.27
	<u>Dollars</u>	
Certificate value	1,000	1,000
	<u>Bushels</u>	
Bushels exchanged with certificate	457	575
	<u>Dollars</u>	
Loan forfeiture:		
Certificate value	1,000	1,000
Loan proceeds	1,042	1,047
Storage costs	<u>- 123</u>	<u>- 155</u>
Net value	1,919	1,892
Certificate exchange:		
Loan proceeds	1,042	1,047
Sales revenue	<u>1,005</u>	<u>1,006</u>
Net value	2,047	2,053
Net difference	128	161
Par-dollar certificate value	1.13	1.16

1/ Reflects returns for producers who would otherwise forfeit their loan collateral at the end of 9 months.

their certificates and keeping the crops under loan. If certificates are selling at premiums less than 12.8 percent, producers would gain by purchasing additional certificates to exchange for the remainder of their crops under loan.

While certificates are generic, returns from exchanging certificates are greatest for those commodities whose potential storage cost savings are highest relative to the PCPs. Storage costs per bushel are relatively similar for wheat, feed grains, and soybeans, but corn is typically the lowest priced per bushel. The more bushels that can be acquired for a fixed value of certificates, the greater the storage savings. This tends to favor the lower priced commodities such as corn.

Using certificates to exchange for crop loan collateral can yield positive returns whenever the PCP is less than the loan repayment level. This placing of crops under loan for the purpose of exchanging them with certificates is often referred to as "PIK-and-Roll." Exchanging certificates at the same time the crop is placed under loan is referred to as "Quick PIK." Producers net the difference between the loan rate and PCP, in addition to the price they receive when selling the crop. For example, assume that at harvest the PCP and farm price for corn are \$1.74 and \$1.75 a bushel. At a loan rate of \$1.77 a bushel, producers could place their crops under loan, exchange them with certificates, sell the crop on the cash market, and net \$1.78 a bushel. This would net \$1,023 for a certificate worth \$1,000. Thus, producers would have incentives to place their crops under loan for PIK-and-Roll purposes even if potential storage cost savings were negligible (that is, if they had no intention of forfeiting their loan collateral otherwise).<sup>7</sup>

Merchants can use certificates to gain access to CCC-owned stocks that otherwise would not be available to the market. The CCC is restricted from cash sales of CCC-owned stocks unless prices rise above specified release levels.<sup>8</sup> With the exception of soybeans, cash prices for program commodities are currently well under CCC release levels. Merchants can exchange certificates for CCC-owned stocks at the PCP plus in-handling charges.

<sup>7</sup> PIK-and-Roll offers producers similar advantages to marketing loans. Producers receive the loan rate but can repay the loan at a lower price (here, the PCP) (See 8).

<sup>8</sup> Release levels for the FOR are currently the maximum of either the current target price or 140 percent of the current loan rate. CCC sales prices are 110 percent of FOR release prices, when the reserve is in effect. FOR and CCC release prices for 1988 crops are:

Crop	FOR	CCC
Wheat	\$4.23	\$4.65
Corn	\$2.93	\$3.22
Sorghum	\$2.78	\$3.06
Barley	\$2.51	\$2.76
Oats	\$1.55	\$1.71



If the cash price exceeds the PCP plus in-handling charges, there are opportunities to take advantage of the price differences. Also, certificates are cheaper to hold than commodities, so marketing costs for storage, handling, and transportation may be reduced. A merchant can acquire certificates anywhere in the country and exchange them for available commodities at most CCC storage locations.

### Understanding the Market For Generic Certificates

There has been an active market for generic certificates since they were first issued in spring 1986. Their prices rose as high as 30-35 percent above face value in October 1986, yet they traded at a 1-percent discount in some locations in spring 1988. Offers for certificates are currently 101-101.5 percent of face value.

The price of certificates is determined by their potential redemption value and their relative availability (7). As seen in the previous section, certificates may offer producers and merchants significant advantages over cash payments. If the price of certificates is less than the percent return producers or merchants gain in using certificates over cash, there are incentives to purchase certificates. This tends to bid up the price of the certificate. Likewise, when the redemption value falls, certificate premiums fall.

Additional factors affecting certificate premiums include the availability of certificates and the amount of time left before the certificate expires. For example, producers who receive certificates as advance deficiency payments may have little incentive to exchange them for crops currently held under loan if PCPs are above loan repayment levels. Rather, they may choose to hold them until harvest when their redemption value is likely greater. If current certificate prices fall below the discounted expected return from exchanging the certificate in the future, producers would have an incentive to purchase additional certificates and hold them until harvest. This tends to put a floor on certificate prices.

Cash redemption provides a floor on certificate prices for producers. However, the floor is not 100 percent of face value but rather reflects the opportunity cost of holding a certificate for 5 months prior to cash redemption. For example, at current interest rates of 8 percent, a newly issued certificate with a face value of \$1,000 has a cash-redemption value of only \$968 (\$1,000 divided by  $1 + .08 * 5/12$ ). (Stated differently, this is the amount a producer could deposit in an interest-bearing account and be worth \$1,000 after 5 months.) Thus, a producer would be willing to sell a certificate to a second buyer if the producer could receive a price above 97 percent of face value. An increase in interest rates accordingly decreases the effective cash-redemption value of the certificate, and vice-versa.

Since cash redemption applies only to producers who are first holders of certificates, certificate premiums could, at least in the short term, fall below the discounted cash redemption value.

### Certificate Issuances and Exchanges

As of March 31, 1988, about \$17.9 billion of certificates had been issued since April 1986. Almost \$14.5 billion went to producers in the form of deficiency and diversion payments. Of these, 51 percent went to corn producers and 38 percent to wheat. The remaining \$3.4 billion were issued through other commodity programs (table 2). The average face value of certificates issued was \$1,154.

About \$2.4 billion of certificates were issued in FY 1986. During FY 1987, the first full year of operation, \$7.5 billion of certificates were issued. As of March 31, 1988, \$8.0 billion had been issued during FY 1988. Total issuances in FY 1988 are estimated at \$11.5 billion. Certificate issuances for FY 1989 are as yet unannounced.

Table 2--Cumulative generic certificate issuances, March 31, 1988

Source	Issuance
	Million dollars
Deficiency/diversion payments:	
Wheat	4,548.4
Corn	7,338.6
Barley	431.2
Oats	46.0
Sorghum	636.3
Cotton	900.2
Rice	552.5
Subtotal	14,453.4 1/
Export Enhancement Program	1,365.8
Conservation Reserve Program	1,169.8 2/
Disaster payments	558.2
Other	316.8
<b>Total</b>	<b>17,864.4</b>

1/ Numbers may not add due to rounding.

2/ Includes corn bonus payments.

Source: Agricultural Stabilization and Conservation Service, USDA.



Total certificate redemptions as of May 31, 1988, approached \$17.1 billion. Approximately 72 percent of the exchanges have been for corn (\$12.4 billion), 20 percent for wheat (\$3.3 billion), and the remainder for various other commodities held under loan or owned by the CCC (table 3). About 89 percent of the certificates exchanged for corn have been for corn held under loan and 11 percent for CCC-owned corn. For wheat, 44 percent of certificate exchanges have been for loans while 56 percent have been for CCC-owned wheat.

### Certificate Exchange Patterns

Exchange patterns have differed markedly by quarter (tables 4, 5, and 6). From April 1986 through November 1987, cer-

tificate exchanges generally favored corn over wheat, and producer loans over CCC-owned commodities. Corn prices over much of this period were below crop loan repayment levels, encouraging PIK and Roll activity. Prior to December 1, 1987, quarterly certificate exchanges for wheat were generally under 100 million bushels, except during the March-May 1987 quarter when the exchange of \$629 million of certificates occurred.

Certificate exchange patterns have changed over the past two quarters. During the December 1987-February 1988 quarter, wheat exchanges accounted for over 27 percent of total certificate exchanges while corn's share of total exchanges fell to 63 percent. The shift in pattern was due largely to the effect of the CCC wheat auction program (which began

Table 3--Cumulative generic certificate exchanges as of May 31, 1988

Commodity 1/	Units	CCC inventory 2/	Producer loans	Total
<b>Food grains:</b>				
<b>Wheat--</b>				
Volume	Mil. bu.	729.0	563.3	1,292.3
Value	Mil. dol.	1,856.9	1,434.7	3,291.6
<b>Rice--</b>				
Volume	Mil. cwt.	42.2	.3	42.5
Value	Mil. dol.	153.9	1.3	155.1
<b>Feed grains:</b>				
<b>Corn--</b>				
Volume	Mil. bu.	860.1	6,301.8	7,161.9
Value	Mil. dol.	1,491.1	10,924.2	12,415.3
<b>Grain sorghum--</b>				
Volume	Mil. bu.	114.5	430.8	545.3
Value	Mil. dol.	201.2	757.5	958.7
<b>Barley--</b>				
Volume	Mil. bu.	76.6	118.0	194.5
Value	Mil. dol.	108.9	167.9	276.8
Cotton volume 3/	Mil. bales	.89	5.98	6.87
Rye, oats, soybeans value	Mil. dol.	14.5	31.5	46.1
<b>Total value 4/</b>	<b>do.</b>	<b>3,826.5</b>	<b>13,317.1</b>	<b>17,143.6</b>

1/ Other program commodities for which few or no exchanges have been made include honey, nonfat dry milk, butter, and cheese. 2/ CCC loans as of May 27, 1988. 3/ Includes exchanges with cotton-specific certificates. 4/ Does not include values for cotton exchanges.

Source: Agricultural Stabilization and Conservation Service, USDA.

Table 4--Quarterly certificate exchanges for corn and wheat

Quarter	Corn			Wheat		
	Total	CCC	Loans	Total	CCC	Loans
<u>Million bushels</u>						
Mar-May 1986	37.5	2.9	34.6	20.2	8.5	11.7
Jun-Aug 1986	215.0	38.9	176.2	76.9	31.5	45.3
Sep-Nov 1986	343.8	23.9	319.8	87.9	4.4	83.4
Dec-Feb 1987	750.9	14.0	736.9	69.9	6.4	61.5
Mar-May 1987	1,641.0	44.9	1,596.0	240.6	117.4	123.3
Jun-Aug 1987	436.1	40.3	395.8	60.3	27.7	32.5
Sep-Nov 1987	1,334.1	53.1	1,280.9	205.8	69.4	136.5
Dec-Feb 1988 1/	1,298.7	178.2	1,090.5	328.2	290.2	38.0
Mar-May 1988 1/	1,104.8	463.8	641.0	202.6	171.5	31.1

1/ Estimated.

Table 5--Value of quarterly certificate exchanges for corn and wheat

Quarter	Total	Corn	Wheat
<u>Million dollars</u>			
Mar-May 1986	182.1	87.5	54.7
Jun-Aug 1986	692.2	384.7	175.0
Sep-Nov 1986	810.1	519.2	204.0
Dec-Feb 1987	1,506.1	1,208.5	170.1
Mar-May 1987	3,522.8	2,698.9	629.1
Jun-Aug 1987	964.4	785.5	119.7
Sep-Nov 1987	2,808.5	2,042.7	501.7
Dec-Feb 1988 1/	3,351.2	2,124.3	915.2
Mar-May 1988 1/	3,303.1	2,544.0	521.9

1/ Estimated.

in November 1987) and the reduced PIK-and-Roll opportunities for corn producers as corn prices rose. Exchanges for CCC-owned wheat, primarily through the wheat auctions, accounted for over 80 percent of certificate exchanges for wheat since December 1, 1987.

During the March-May 1988 quarter, an estimated 464 million bushels of CCC-owned corn were exchanged with

generic certificates. This would account for over 33 percent of total corn exchanges during this quarter. This reflects the issuance of CCC catalogues for corn and sorghum and the reduced PIK-and-Roll opportunities for corn producers as corn prices rise above loan repayment levels.

#### Wheat Auctions

Over 383 million bushels of wheat were exchanged with certificates through the CCC wheat auctions from November 4, 1987, through May 25, 1988 (table 7). This represents a total certificate value of \$1 billion and an average bid price of \$2.65 a bushel. Over 73 percent of these exchanges were for Hard Red Winter wheat. Hard Red Spring wheat accounted for about 18 percent of total exchanges.

Wheat exchanges were heaviest over the initial months of the auctions. Almost 220 million bushels of wheat were exchanged from November 1987 through January 1988. By contrast, from April 15, 1988, to May 25, 1988, only 17.2 million bushels were exchanged.

The wheat auctions have been a major factor in the decrease in CCC wheat stocks. Stock levels for CCC wheat for June 1, 1988, are estimated at 283 million bushels, a decline of 529 million bushels from November 1, 1987, stock levels (fig. 1). Without generic certificates, these stocks would not have been available to the market because of the high CCC release price levels (\$4.82 a bushel for 1987 wheat).

## Generic Certificate Premiums

Generic certificate premiums have generally declined since the certificates were first issued in April 1986 (fig. 2). While certificates traded as high as 30-35 percent above par value in October 1986, certificate premiums averaged only 3.4 percent above par during March 1, 1986-May 31, 1987.

Certificate premiums rose throughout the summer of 1987 in anticipation of harvest PIK-and-Roll activity by corn producers. However, as corn prices rose above corn loan repayment levels, certificate prices began falling (fig. 3). Certificates even traded at a discount at some locations in late April 1988. Certificate prices are currently 1.0 to 1.5 percent above face value.

When the quarterly average of weekly certificate premiums is weighted by quarterly redemptions, certificate premiums have averaged 3.5 percent above face value since June 1987 (table 8). This compares with 6.1 percent over the period June 1, 1986-May 31, 1987.

## Certificate Needs for FY 1988

As of March 31, 1988, about \$17.9 billion of certificates had been issued since April 1986. In addition, an estimated \$2.1 billion were issued in May and June as 1988 advance deficiency payments for wheat, feed

grain, upland cotton, and rice producers. And, \$0.7 billion were paid to feed grain producers as advance diversion payments, bringing total certificate issuances to an estimated \$20.7 billion. Total certificate redemptions as of May 31, 1988, approached \$17.1 billion, placing near-term availability at \$3.6 billion (table 9). Potential issuances for the balance of FY 1988, including EEP and TEA program payments, could bring total certificate availability for the rest of FY 1988 to \$4.3 billion.

Approximately 2.1 billion bushels of corn were outstanding under the regular loan program as of May 25, 1988, including 1.4 billion bushels of 1987 crop corn. Current USDA estimates (*World Agriculture Supply and Demand Estimates*, June 9, 1988) project September 1, 1988, outstanding CCC corn loans at 1.4 billion bushels. This implies loan redemptions of approximately 765 million bushels for the remainder of the 1987/88 corn marketing year.

Assuming an average PCP of \$2.00 for the remainder of the 1987/88 marketing year would imply a corn certificate need of \$1.5 billion if all outstanding loans were redeemed with certificates. Exchanges for CCC and FOR corn could add another \$0.4 billion, bringing total certificate exchanges for corn to \$1.9 billion. At an average PCP of \$2.50 for the remainder of the 1987/88 marketing year, total certificate exchanges for corn could ex-

Table 6--Quarterly exchange patterns

Quarter	Share of value of corn exchanges from:		Share of value of wheat exchanges from:		Share of value of all commodity exchanges from:	
	CCC	Loans	CCC	Loans	Corn	Wheat
	<u>Percent</u>					
Mar-May 1986	7.8	92.2	42.2	57.8	48.1	30.0
Jun-Aug 1986	18.5	81.5	41.0	59.0	55.6	25.3
Sep-Nov 1986	6.0	94.0	4.7	95.3	64.1	25.2
Dec-Feb 1987	1.7	98.3	12.3	87.7	80.2	11.3
Mar-May 1987	2.7	97.3	47.4	52.6	76.6	17.9
Jun-Aug 1987	8.8	91.2	48.7	51.3	81.4	12.4
Sep-Nov 1987	3.9	96.1	33.7	66.3	72.7	17.9
Dec-Feb 1988 1/	14.8	85.2	84.1	15.9	63.2	27.4
Mar-May 1988 1/	33.0	67.0	84.5	15.5	77.6	15.8

1/ Estimated.

Table 7--CCC wheat auctions

Date	Amount	Value	Average bid
	<u>Mil. bu.</u>	<u>Mil. dol.</u>	<u>Dols./bu.</u>
<b>1987:</b>			
Nov 6	8.6	20.4	2.37
Nov 13	9.2	22.0	2.39
Nov 20	9.8	23.9	2.44
Nov 27	10.3	26.2	2.55
Dec 4	15.3	41.4	2.70
Dec 11	14.6	37.8	2.59
Dec 18	25.7	66.9	2.60
Dec 23	25.5	67.1	2.63
Dec 30	12.0	31.4	2.62
<b>1988:</b>			
Jan 8	26.0	72.3	2.75
Jan 15	23.1	65.5	2.83
Jan 23	25.5	67.6	2.65
Jan 29	14.1	38.1	2.71
Feb 5	26.4	72.7	2.76
Feb 12	16.1	43.5	2.71
Feb 19	11.0	29.7	2.70
Feb 26	15.8	42.7	2.71
Mar 1	10.0	26.8	2.68
Mar 2	1.4	3.5	2.56
Mar 4	1.6	3.8	2.33
Mar 8	7.7	20.5	2.67
Mar 9	9.9	25.3	2.56
Mar 11	9.9	24.3	2.46
Mar 15	.5	1.4	2.71
Mar 16	1.6	4.2	2.54
Mar 18	.3	.7	2.60
Mar 22	.3	.9	2.97
Mar 23	7.2	19.1	2.65
Mar 25	10.3	26.8	2.60
Mar 29	3.3	9.2	2.81
Mar 30	1.0	2.7	2.57
Apr 6	11.5	30.4	2.65
Apr 13	.9	2.3	2.63
Apr 15	11.2	30.2	2.68
Apr 20	.9	2.7	2.87
Apr 27	2.9	7.8	2.66
May 4	.1	.3	2.74
May 11	1.1	2.8	2.65
May 18	.5	1.3	2.72
May 25	.5	1.5	2.85
<b>Total</b>	<b>383.6</b>	<b>1,017.7</b>	<b>2.65</b>

ceed \$2.4 billion. Additional exchanges (including approximately 500 million bales of 1987 crop cotton) could bring total certificate exchanges for the balance of FY 1988 between \$2.5 billion and \$3.1 billion. With current certificate supply for FY 1988 estimated at \$4.3 billion, certificate carryover for FY 1988 would likely range between \$1.1 billion and \$1.8 billion.

**Certificate Needs for FY 1989**

Certificate needs for FY 1989 will likely depend on the size of the corn and wheat harvest and export demands. A short crop could send harvest prices above 1988 crop loan repayment levels, thus reducing opportunities for so-called Quick 'TKs, the simultaneous placing of crops under loan and exchanging them with certificates.

Current USDA estimates for the 1988/89 wheat marketing year indicate that expected use will likely exceed available production (plus imports) by 470 million bushels (table 10). As much as 150 million bushels of CCC and FOR stocks could be freed up through certificate exchanges to meet this need. The balance could be met by free-stock carryin from the 1987/88 marketing year. Likewise, estimates for the 1988/89 corn marketing year indicate an expected imbalance of 723 million bushels that will have to come out of 1988/89 beginning stocks. At a season average PCP of \$1.82 a bushel for corn and \$3.10 a bushel for wheat, certificate needs for CCC and FOR exchanges could approach \$1.8 bil-

Table 8--Generic certificate premiums

Period	Certificate exchanges	Premiums as percentage of face value
	<u>Mil. dols.</u>	<u>Percent</u>
Jun-Aug 1986	692	111.4 1/
Sep-Nov 1986	810	114.5
Dec-Feb 1987	1,706	105.5
Mar-May 1987	3,523	103.4
1986/87	6,531	106.1 2/
Jun-Aug 1987	964	106.5
Sep-Nov 1987	2,277	105.5
Dec-Feb 1988	3,351 3/	103.7
Mar-May 1988	3,445 3/	101.0
1987/88	10,037	103.5 2/

1/ Average of period July 14, 1986-August 31, 1986. 2/ Weighted by certificate exchanges. 3/ Estimated.

Figure 1

**Wheat auctions cause CCC stocks to fall**

Carried stocks (million bushels)

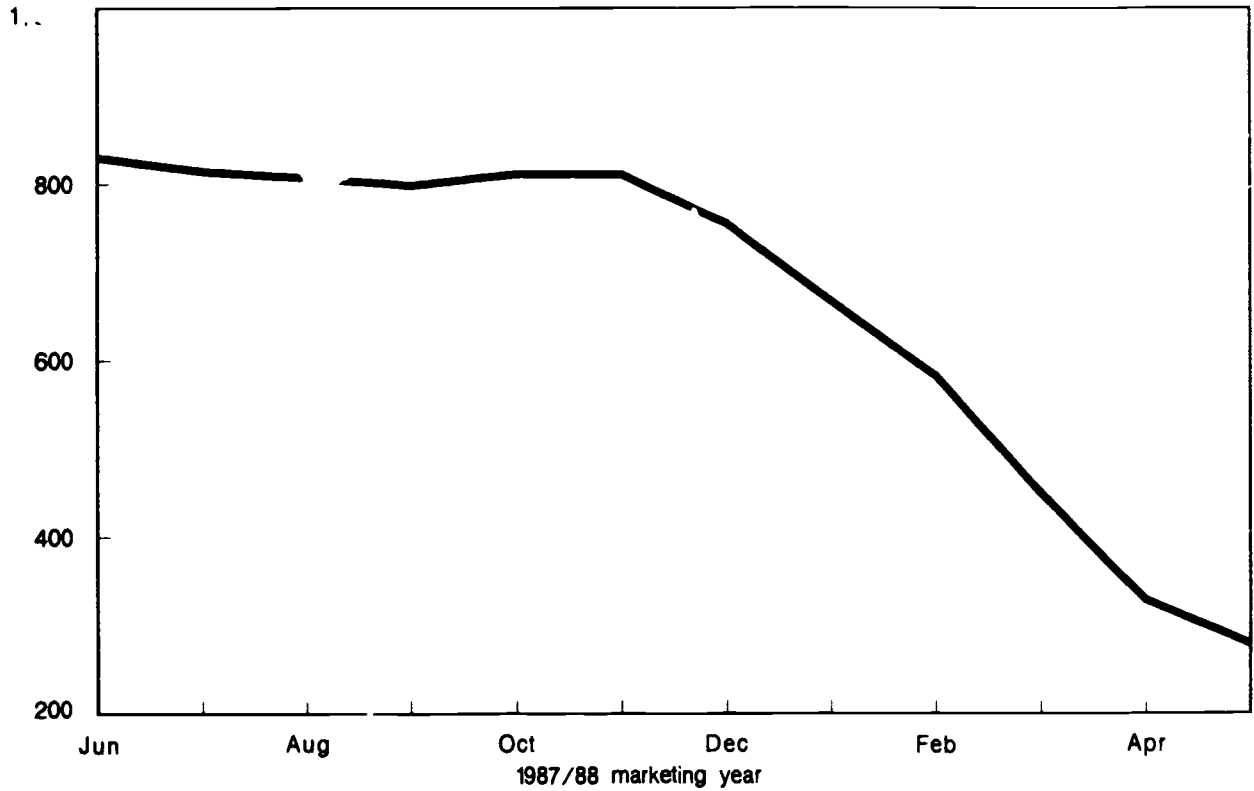


Figure 2

**Generic certificate premiums have declined after initial hikes in value**

Percent of par value

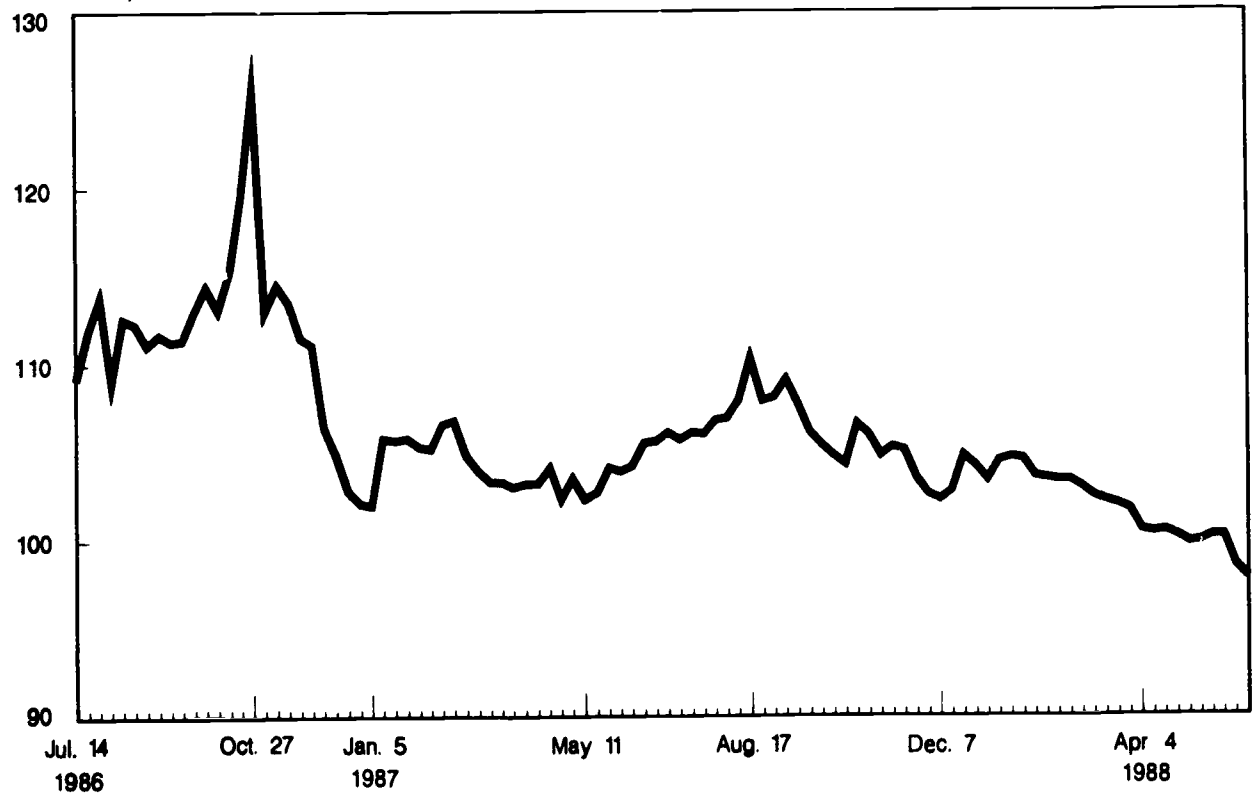
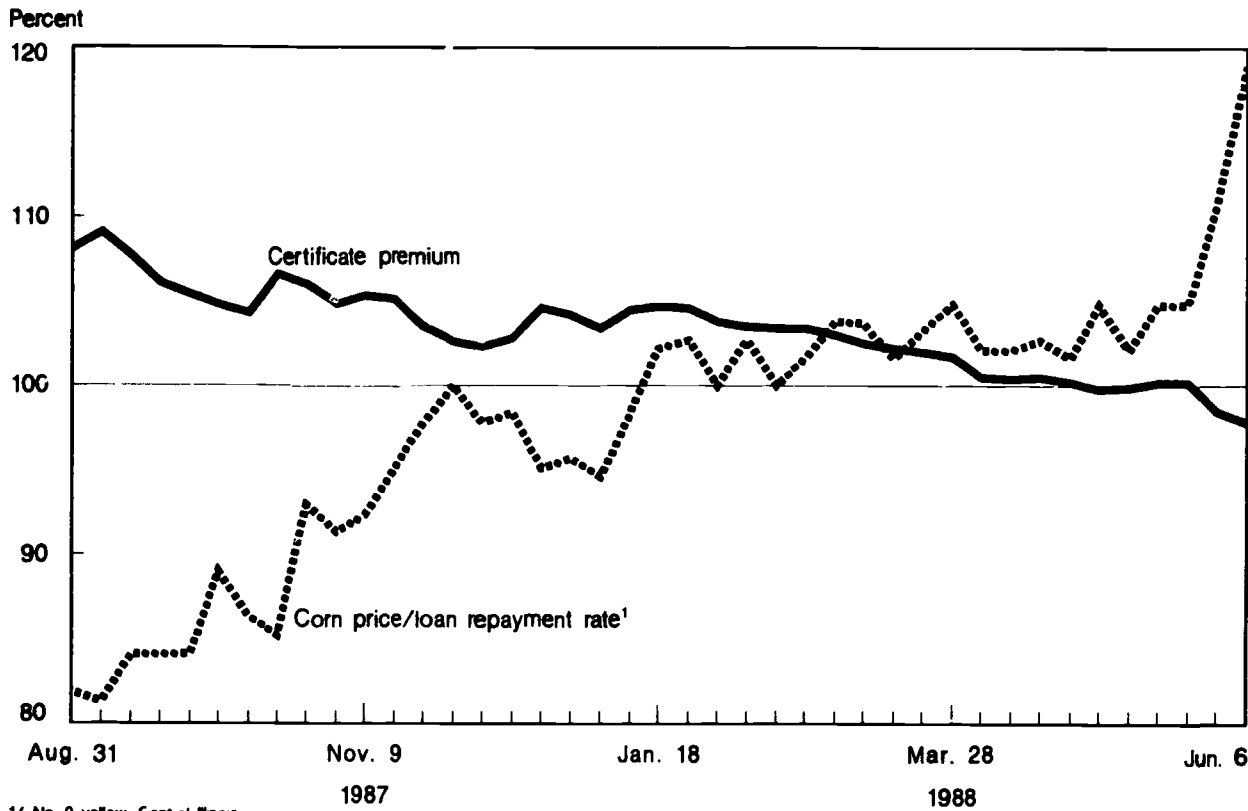


Figure 3

**Premiums fall as corn prices rise above loan repayment levels**



1/ No 2 yellow, Central Illinois

**Table 9--Certificate outlook, FY 1988**

Item	Value
	<u>Bil. dollars</u>
Issuances (March 31, 1988)	17.9
Redemptions (May 31, 1988)	- 17.1
Near-term availability	.8
Future FY 1988 issuances	3.5
<b>Total</b>	<b>4.3</b>
<b>Certificate needs:</b>	
Corn loan exchanges	1.5 - 1.9
Corn CCC and FOR exchanges	.4 - .5
Cotton exchanges	.3 - .3
Other	.3 - .4
<b>Total</b>	<b>2.5 - 3.1</b>
<b>FY 1988 carryover</b>	<b>1.1 - 2.1</b>

lion (table 11). Additional certificate exchanges for corn and cotton loans could bring total certificate needs to \$5.2 billion. Assuming a certificate carryout from FY 1989 of \$1.5 billion, this would imply an additional \$4.2 billion in FY 1989 certificate issuances (table 12).

However, if 1988 crop conditions deteriorate because of drought, prices for corn and wheat could rise and more stocks would need to be released from the CCC and FOR to meet demand. Assuming total corn exchanges of 2.5 billion bushels and total wheat exchanges of 0.2 billion bushels, total certificate needs for corn and wheat could total \$7.4 billion. Exchanges for cotton and other commodities could push total certificate exchanges to \$7.9 billion, implying an additional \$6.4 billion in FY 1989 certificate issuances.

**Estimated Program Costs For Generic Certificates**

Estimates of costs of using generic certificates in lieu of cash payments have ranged from as much as 121 percent more than cash payments (16) to being budget-neutral (2), generating considerable controversy among policy and budget analysts over the budgetary effects of generic certificates. Much of the confusion is directly attributable to the com-



Table 10--Supply and use estimates for wheat and corn, 1988/89 marketing year 1/

Item	Million bushels	
	Corn	Wheat
Beginning stocks, total	4,113	1,236
Farmer-Owned Reserve	1,390	467
CCC inventory	1,175	283
Outstanding loans	1,350	178
Free stocks	198	308
Production	7,300	2,120
Imports	2	15
Use, total	8,025	2,590
Balance 2/	-723	-470
Ending stocks, total	3,390	781
<u>Dollars per bushel</u>		
Average market price	1.65 - 2.00	2.90 - 3.30

1/ Marketing year for wheat begins June 1, 1988; for corn, September 1, 1988.

2/ Production plus imports minus total use.

Source: USDA, World Agricultural Supply and Demand Estimates, June 9, 1988

plexities of certificate transactions. The effect on budget outlays depends on many factors including current and future market conditions, the supply of certificates, the level of PCPs relative to spot prices, and the amount of certificates exchanged through the competitive bid process (auctions). Budget effects are also affected by technical characteristics of the markets, including substitution between private and public stocks, recycling percentages, and demand elasticities.

#### Market Effects of Generic Certificates

An understanding of how generic certificates affect market prices is crucial to understanding their budgetary effects. Of the quantitative work done in this area (such as, 3, 8, 18, 19), little has been done to model explicitly certificate exchanges because of the limited data available to researchers.

Certificate exchanges depend largely on the relationship of PCPs to market prices and crop loan repayment levels. When PCPs are below loan repayment levels, producers can use certificates for PIK-and-Roll purposes. Through PIK-and-Roll, crop loan collateral that normally would be forfeited to the Government becomes available to the market. Moreover, exchanging certificates for loan collateral also removes the effective price floor on market prices provided by the loan rate. As market prices fall, PCPs fall, which allows holders of certificates to exchange them for larger quantities of commodities. Producers, however, are protected from price declines since the loan rate sets a price floor value for their crop.

This process has two important effects on producers. One, participation rates in commodity programs increase because

Table 11--Estimated FY 1989 exchanges for corn and wheat

Item	Corn		Wheat	
	Low	High	Low	High
<u>Dollars per bushel</u>				
Season average price	1.82	2.60	3.10	3.50
<u>Million bushels</u>				
Potential certificate exchanges:				
CCC and FOR exchanges	723	1,850	150	230
Loan exchanges	1,840	675	0	0
Total	2,563	1,525	150	230
<u>Billion dollars</u>				
Value of certificate exchanges	4.7	6.6	.5	.8

Table 12--Estimated issuances, FY 1989

Item	Low	High
<u>Billion dollars</u>		
<b>Exchanges:</b>		
Corn	4.7	6.6
Wheat	.5	.8
Other	.5	.5
<b>Total</b>	<b>5.7</b>	<b>7.9</b>
<b>FY 1988 carryin</b>	<b>1.5</b>	<b>1.5</b>
<b>Issuances</b>	<b>4.2</b>	<b>6.4</b>

the loan rate no longer sets an effective price floor and this raises price risk to nonparticipants. Second, loan placement increases because of the added return possible from placing a crop loan at the loan rate and essentially redeeming that loan at the lower PCP.<sup>9</sup> However, falling market prices may encourage holders of old crop loans to forfeit their loan collateral since PIK-and-Roll opportunities are far greater for new crop loans and cash redemption of old crop loan collateral would be unprofitable.

As PCPs rise above loan repayment rates (loan rate plus interest), PIK-and-Roll opportunities decline. Producers are ambivalent between redeeming crop loans with cash or certificates. As a result, certificates have little effect on net loan forfeitures since there is little incentive to forfeit loan collateral.

Despite reduced incentives to exchange certificates for crop loan collateral when prices are above loan rates, certificates can still affect prices if exchanged for CCC-owned commodities. If PCPs or accepted bid prices are low enough relative to cash prices, certificate holders may be encouraged to exchange certificates for CCC stocks. These exchanges would increase free supplies and may dampen prices.

The exchange of a large enough quantity of certificates for CCC stocks could possibly depress prices sufficiently to fall below loan repayment levels. This would encourage

<sup>9</sup> In the long run, it is possible that certificates would encourage an increase in corn acreage base. However, to increase their corn base under the 1985 Act, producers would have to stay out of the program for those years in which they exceed their base. Base acreage is determined on the basis of a 5-year moving average of the previous years' planted acreage. The penalties of staying out of the program when market prices were substantially lowered by certificates could be costly (8).

PIK-and-Roll activity, potentially increasing Government outlays.<sup>10</sup>

### Costs and Savings

Generic certificates affect budget outlays primarily through net loan outlays and loan forfeitures. Net loan outlays are defined here as the difference between the loan rate and the loan repayment rate times the quantity of loan collateral redeemed.

When PCPs are below cash loan repayment rates, net loan outlays increase. Net loan outlays may also increase because of concomitant increases in program participation and loan placement.

How do certificates affect loan forfeitures? The fall in market prices attributable to certificates causes an increase in domestic and export demand. This demand may be met somewhat by certificate exchanges for CCC and FOR stocks. If the demand rise is not fully met by CCC, FOR, and free stocks, loan forfeitures will decrease. Reduced loan forfeitures reduce Government budget expenditures by the amount of the loan rate, the in-handling charge paid to the elevator to hold the forfeited crop, and all subsequent storage charges.

The budgetary effect of generic certificates depends on the size of savings due to reduced loan forfeitures relative to the increase in outlays due to differences between PCPs and loan rates. The relative costs and savings depend on a number of factors, including:

- o Whether the loan rate is above or below the PCP. If PCPs are greater than loan repayment rates, certificates will have marginal effects on net loan outlays and loan forfeitures. However, if large numbers of certificates are exchanged for CCC and FOR stocks, cash prices may be significantly decreased, increasing the size of the per-unit deficiency payment if prices are above the loan rate.
- o The relative responsiveness of demand with respect to a change in price. The greater the percentage increase in demand generated by a percentage decrease in price, the greater the savings due to reduced loan forfeitures.
- o The substitution effect between public and private stocks. Research suggests that the release (build-up) of public stocks results in a less than proportionate increase

<sup>10</sup> There has recently been some discussion among grain merchants calling for USDA to hold weekly auctions for corn as it does currently for wheat. Since February 1988, corn prices have been above loan repayment rates (fig. 3). However, there is concern that they would likely fall below these levels if large quantities of corn were exchanged from CCC positions. To date, USDA has chosen not to implement a corn auction.

(decrease) in private (free) stocks (5, 11, 12, 14, 15, 20). Thus, the degree to which exchanges for CCC-owned stocks offset increased demand depends largely on the proportion of those stocks which are carried into the following crop year as free stocks.

o The recycling percentage. This refers to the amount of additional crop that is placed under loan because of certificates. A recycling percentage of 100 implies that increased loan placements offset, bushel-for-bushel, certificate exchanges for crop loans.

## Budget Effects

The model presented in this section estimates the effect of generic certificates on USDA budget outlays. Budget effects for corn and wheat are calculated using a spreadsheet-type program based on various market parameters. By changing assumptions about substitution effects and demand elasticities, the sensitivity of the estimates can be evaluated.<sup>11</sup>

For example, consider the 1986/87 marketing year for corn and wheat. The 1986/87 marketing year is instructive because it provides examples of where the season average price of a crop was below the loan rate and crop loan exchanges were heavy (corn), and where the season average price of a crop was generally above the loan rate and affected by exchanges for CCC-owned stocks (wheat).

The parameters used in the FY 1987 budget estimates are given in table 13. Total certificate exchanges, the percent exchanged for corn and wheat, and the percent exchanged for 9-month loans, FOR and SPSLP loans, and CCC-owned stocks are taken from historical data. Average PCPs are based on average farm prices over the period. The certificate premiums are based on quarterly averages, weighted by exchanges. In-handling charges, on-farm storage charges, and commercial storage charges represent average costs over the period.

We assume that prices for corn and wheat would have been higher had certificates not been issued in FY 1987. For corn, we assume prices would have averaged \$1.75 a bushel, reflecting the 1986 crop loan rate of \$1.84 a bushel. The \$0.25 difference between cash prices with and without certificates is similar to the price effects discussed in previous research (18, 19).

For wheat, we assume that prices would have been slightly higher than the loan rate in the absence of certificates. Almost 50 percent of certificates exchanged for wheat during FY 1987 were for FOR and SPSLP loans and CCC-owned

stocks. These stocks would have normally been unavailable to the market.

The demand elasticity for corn is assumed to be -0.45 and for wheat, -0.50. That is, for a 10-percent decrease in corn price, the quantity demanded is assumed to increase 4.5 percent. Substitution effects between public and private stocks were assumed to be -0.33 for corn and wheat. This implies that for every 100 bushels released from CCC or FOR positions, private carryover increases by 33 bushels.

FY 1987 certificate redemptions are presented in table 14. Of the \$6.8 billion of certificates exchanged, over \$5.2 billion were for corn. Of this total, approximately \$5.0 billion of certificates were exchanged for 9-month loans. In all, 3.5 billion bushels of corn and 483 million bushels of wheat were exchanged with certificates.

By lowering market prices, certificate exchanges for corn and wheat increased market demands (table 15). Certificates are estimated to have increased total corn use by 437 million bushels and total wheat use by 45 million bushels. This increase was offset somewhat by the increase in free supplies available for consumption in FY 1987.

Loan forfeitures are estimated to have declined by 351 million bushels for corn. (Loan forfeitures for wheat were assumed negligible since season average prices were above loan repayment levels.)

Estimated net loan outlays for corn increased by almost \$1.2 billion, primarily due to the large quantity of corn 9-month loans exchanged with certificates (3.3 billion bushels) and the large per-bushel payment (the loan rate minus the season average PCP) paid on these exchanges (table 16).

A decrease in corn loan forfeitures contributed to almost \$800 million in reduced loan outlays, including storage costs and in-handling charges on these loans. Exchanges for CCC stocks and FOR and SPSLP loans reduced storage and handling costs by an additional \$42 million (table 17).

Net costs of certificates over cash payments for corn are estimated at \$368 million (table 18). For wheat, certificate exchanges are estimated to have saved the Government \$26 million over what FY 1987 wheat program costs would have been in the absence of generic certificates. Overall program costs are estimated at \$341 million, about 5 percent above costs had program payments been made in cash.<sup>12</sup>

Table 19 summarizes the budget effects of generic certificates for FY 1987 through FY 1989. Varying assumptions

<sup>11</sup> Details of the spreadsheet, including formulas and market parameters, are available from Joseph W. Glauber, ERS/USDA, Room 1037, 1301 New York Ave., NW, Washington, DC 20005-4788.

<sup>12</sup> The analysis does not include the effect of the 4.3-percent Gramm-Rudman-Hollins sequester for payments made in cash in FY 1987.

Table 13--Budget parameters, FY 1987

Total face value exchanged for all commodities		\$6.8 billion	
	<u>Unit</u>	<u>Corn</u>	<u>Wheat</u>
Exchanged through CCC auctions	Mil. bu.	0	0
Percent of face value exchanged	Percent	77	17
Percent exchanged for 9-month loans	do.	96	50
Percent exchanged for FOR loans	do.	0	16
Percent exchanged for CCC stocks	do.	4	34
National average loan rate	Dols./bu.	1.84	2.30
Average posted county price	do.	1.50	2.30
Average price without certificates	do.	1.75	2.40
Base demand without certificates	Mil. bu.	6,800	2,150
Average certificate premium	Percent	106	106
In-handling charge	Dols./bu.	.07	.07
Onfarm storage costs	Dols./bu./mo.	.02	.02
Government storage costs	do.	.03	.03
Demand elasticity	Coef.	-.45	-.50
Substitution effect	do.	-.33	-.33

Table 14--Certificate exchanges, FY 1987

Total face value exchanged for all commodities		\$6.8 billion	
	<u>Units</u>	<u>Corn</u>	<u>Wheat</u>
Percent of face value exchanged	Percent	77	17
Face value of certificates exchanged	Dollars	5,209	1,122
<b>Exchanges:</b>			
Exchanged through CCC auctions	Mil. bu.	0	0
Percent exchanged for 9-month loans	Percent	96	50
Face value exchanged	Mil. dol.	5,007	557
Bushels exchanged	Mil. bu.	3,338	242
Percent exchanged for FOR loans	Percent	0	16
Face value exchanged	Mil. dol.	4	179
Bushels exchanged	Mil. bu.	3	78
Percent exchanged for CCC stocks	Percent	4	34
Face value exchanged	Mil. dol.	198	386
Bushels exchanged	Mil. bu.	126	163
Total bushels exchanged	do.	3,467	483

Table 15--Net loan forfeitures, FY 1987

Item	Units	Corn	Wheat	Total
<b>Net increase in demand:</b>				
Demand elasticity	Coef.	-0.45	-0.50	
Price change	Dollars	-.25	-.10	
Price change	Percent	-14.3	-4.2	
Base demand without certificates	Mil bu.	6,800	2,150	
Net increase in demand	do.	437	45	482
<b>Net increase in free supplies:</b>				
CCC auctions	do.	0	0	
FOR and SPSLP loan exchanges	do.	3	78	
CCC stocks exchanges	do.	126	163	
Substitution effect	Coef.	-.33	-.33	
Net increase in free supplies	Mil. bu.	86	160	246
Change in net loan forfeitures	do.	-351	0	-351

Table 16--Net loan outlays, FY 1987

Item	Corn	Wheat	Total
<u>Million dollars</u>			
CCC auctions	0	0	0
9-month loans	1,135	0	1,135
FOR and SPSLP loans	1	0	1
CCC-owned stocks	43	0	43
Total	1,179	0	1,179

Table 17--Savings, FY 1987

Item	Corn	Wheat	Total
<u>Million dollars</u>			
Decrease in loan forfeitures	645	0	645
Storage and handling savings:			
Loan forfeitures	151	0	151
FOR & SPSLP exchanges	0	7	7
CCC exchanges	15	20	35
Subtotal	166	27	193
Total savings	811	27	838

are made on demand elasticities, substitution effects, and on the level of the season average price for corn for FY 1989.

For FY 1987, certificates are more costly when demands are less responsive to changes in price and when most of the CCC stocks exchanged for certificates are consumed and not carried out into the new crop year as free stocks. Under the high-cost assumptions, it is estimated that certificate costs were about 11 percent above cash costs. However, assuming higher demand responsiveness and large substitution effects, certificates for FY 1987 were likely budget-neutral.

Budget effects for FY 1988 and FY 1989 are less dependent on the underlying assumptions concerning demand responsiveness and substitution effects. This is due, in part, to the fact that season average prices for corn and wheat strengthened greatly throughout FY 1988 and are expected to continue to do so throughout FY 1989.

Certificates are estimated to be budget-neutral or contributing to a slight savings for FY 1988 and FY 1989. As PCPs

Table 18--Summary of effects, FY 1987

Item	Corn	Wheat	Total
<u>Million bushels</u>			
Total bushels exchanged	3,467	483	3,950
<u>Million dollars</u>			
Certificate costs:			
CCC auctions	0	0	0
9-month loan exchanges	1,135	0	1,135
SPSPL and FOR exchanges	1	0	1
CCC exchanges	43	0	43
Subtotal	1,179	0	1,179
Savings from increased use	811	26	838
Net costs of certificate programs	368	-26	341
<u>Percent</u>			
Net costs as percentage of face value of certificates exchanged	107	98	105

Table 19--Budget cost summary

Item	Corn	Wheat	Total
<u>Percent of cash costs</u>			
FY 1987:			
High (-.3/- .3/0) 1/	115	98	111
Mid (-.45/- .5/- .33)	107	98	105
Low (-.6/- .7/- .66)	99	98	99
FY 1988:			
High (-.3/- .3/0)	104	92	100
Mid (-.45/- .5/- .33)	104	92	100
Low (-.6/- .7/- .66)	102	92	99
FY 1989:			
High (-.3/- .3/0/\$1.65) 2/	105	85	99
Mid (-.45/- .5/- .33/\$1.75)	99	85	95
Low (-.6/- .7/- .66/\$1.85)	97	85	93

1/ Total elasticity of corn demand, wheat demand, and substitution effect between public and private stocks, respectively.

2/ Total elasticity of corn demand, wheat demand, substitution effect, and season average corn price, respectively.

rise above loan rates, net loan outlays are reduced. Certificates have little effect on budget costs. The use of certificates to exchange CCC-owned stocks can reduce storage and handling payments, reducing program costs below what they would have been had payments been made in cash.

However, by freeing up Government-owned stocks, certificates may dampen prices and increase deficiency payments. While this was not a factor for FY 1988 (the 5-month wheat deficiency payments were calculated prior to start of the wheat bid exchange), substantial certificate issuances in FY 1989 could result in increased deficiency payments for corn and wheat, particularly if prices are well above loan repayment levels (but below target prices).

### Long-term Outlook for Generic Certificates

The future role of generic certificates in commodity programs depends on several factors, among them:

- o The level of the loan rate relative to farm prices. As market prices rise above loan rates, demand for certificates for PIK-and-Roll purposes declines. With the recent rise in corn and wheat prices and declining loan rates expected through the 1990 crop year (the last crop year governed by the 1985 Act), future demand for certificates for crop loan redemptions will likely fall. Since exchanges for loan collateral have composed the bulk of



certificate exchanges to date, total certificate demand will likely decline.

o Demand for CCC stocks. With reduced PIK-and-Roll activity, exchanges for CCC-owned commodities would likely account for the majority of certificate exchanges. Thus, their primary purpose would be to make CCC and FOR stocks available to the market when there were insufficient free supplies to meet expected demand. Under such a scenario, the role of certificates would be to augment supplies and moderate price increases resulting from unanticipated expansion in exports or reduced domestic production.

o Certificate premiums. Certificate prices are currently trading at or near par value. While potential PIK-and-Roll activity in the coming fall may drive certificate prices up to 105-107 percent of face value, the long-term outlook for certificates is for prices to stay at or near par.

o Budget costs. If certificates were used primarily for CCC stock exchanges, CCC storage and handling charges would be reduced, but potential increases in deficiency payments and loan placements could occur if CCC stock

exchanges caused significant declines in market prices.

o Public acceptance. When certificates traded at large premiums there was much enthusiasm for them, particularly among farmers. With certificate prices above par, farmers were assured program payments higher than had the payments been made in cash. However, if certificate prices continue to trade at or near par, there will likely be pressure to allow early cash redemption for producers who are first holders.<sup>13</sup> In the long term, producers may see certificates as more bother than they are worth if certificate prices continue to trade around face value.

o Value of CCC stocks. Legally, the value of generic certificates must be backed by commodities held by the CCC. As CCC stock levels decline, the total value of potential certificate issuances declines as well.

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<sup>13</sup> It is possible that if early cash redemption were allowed, a large portion of certificate issuances would be exchanged for cash.

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