ANALYSIS OF CCC WAREHOUSE REGULATIONS

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Abstract

The 2006 changes in CCC regulations on warehouse charges and reimbursements may affect growers with cotton in the loan program. This paper uses survey data collected from Texas warehouses to estimate the potential impact on Texas producers. This paper also discusses the possible impacts of additional policy proposals and their outcomes. Texas cotton warehouses have relatively low warehousing costs, which may reduce the impact of the rule changes. However, the probability of West Texas production exceeding CCC approved warehouse capacity implies occasional policy impacts from rule changes related to outside storage.

Background

In August of 2006, the USDA announced changes to the Commodity Credit Corporation Marking Assistance Loan (MAL) program (Federal Register, 2006). The CCC was established in 1933 with a purpose to support farmers and protect prices and farm income. The activities of the CCC are carried out by the Farm Service Agency (FSA) at the USDA. The purpose of loan program is to provide producers with financing during harvest. Producers may enter the loan program holding their cotton as collateral. Farmers have nine months to decide how to market their cotton and repay the loan, or must forfeit their cotton to the CCC (USDA-FSA, 2006). The CCC has specific policies related to interest, storage, and other warehousing-related costs for cotton in the CCC loan. The pre-2006 policies are summarized here:

> "In general, the producer must pay interest charges at the time the loan is repaid; the producer is also responsible for all charges accrued at the warehouse. However, the CCC will waive interest charges and pay some or all of the storage charges that accrued during the loan period that are necessary to make the loan repayable at the lower of: (1) the loan rate plus storage and interest costs, or (2) the AWP. In the event of forfeiture of the loan to CCC, no interest is charged, and CCC assumes responsibility for the warehouse storage charges that accrued during the period the cotton was under loan. At forfeiture, the producer pays any unpaid receiving charges and any unpaid storage charges outside of the loan period (USDA-FSA, 2003)."

The August 2006 rule change affected the type and level of reimbursement of storage charges during the loan period for loan cotton that is forfeited. The purpose of this paper is to analyze the impacts of this specific policy change in Texas. Cotton is the major cash crop in Texas, with the State producing approximately a third of U.S. production (Robinson and McCorkle, 2007). We also examine several other proposed rule changes by the USDA related to the cotton loan program.

Data Development

Warehouse survey. This study used primary data consisting of a survey of Texas cotton warehouse managers (Robinson et al., 2007). These survey data were collected in the following manner. A draft survey instrument was developed after considerable consultation with and review by Texas cotton warehouse managers. The population being surveyed included the entire population of Texas cotton warehouses, who were identified from the USDA Commodity Credit Corporation list of approved cotton warehouses (USDA-FSA, 2007b). The four page mail questionnaire, cover letters, and stamped return envelope were mailed to South Texas cotton warehouses in September 2006 and West Texas in October 2006. Reminder post cards and follow-up surveys were mailed to late or non-respondents. The returned survey information was coded and compiled in MS Excel and summary statistics were estimated. Questions were asked about warehouse operations, charges, receipts, and domestic and export shipments.

The authors received fifteen survey packets out of 30 mailed for a response rate to date of 50%. The fifteen surveys account for 43 separate warehouse facilities with, significantly, a total warehouse capacity of 4,371,664 bales. Over the 2005-06 crop year, these 43 warehouse facilities report receipt of 6,066,758 bales total and 404,450 bales on average and shipment of 6,251,596 bales total and 416,773 bales on average. For comparison, respondents were asked to provide a three year average of bales received. From 2003-2005, these warehouses report combined average receipts of 4,592,853 bales. This level of volume is significant as it represents two thirds of the average 6.8 million bales per year produced in Texas during 2003-2005. Thus these 43 warehouses are handling a majority of the volume of bales produced, stored, and shipped in Texas. The warehouse facilities surveyed reflect the geographical distribution of Texas cotton production (Robinson et al., 2007).

The weighted averages of the representative warehouse charges are shown in Table 1. The weighted averages for the charges are $3.00 for receiving, $1.97 for storage, $5.08 for loading, $8.19 for compression, and $0.90 for late charges. The receiving, loading, and storage costs are very much in line with secondary data on Texas warehouse tariffs (Lubbock Cotton Exchange, 2007). Producers are generally liable for paying all of the charges unless otherwise negotiated with buyers.

Table 1. Average Tariffs from Texas Warehouse Survey.

Receiving/Bale	$3.00
Storage/Bale/Month	$1.97
Loading/Bale	$5.08
Compress/Bale	$8.19
Late/Bale	$0.90
Late/Day	$0.33

For validation purposes, Table 2 shows comparable warehouse charges reported by the cotton merchant sector (Mitchell, 2007). These include receiving, loading, compression, and storage charges for Arizona, Texas, Arkansas, Alabama, and North Carolina. The charges estimated for Texas compare very closely with the Texas Warehouse Survey averages in Table 1. According to the industry figures, Texas has the lowest cost in receiving charges and the second to lowest cost in storage, and loading. However, the compression charges are the highest in Texas.

Table 2. Example Regional Warehouse Costs (Circa Spring 2007)

Cost Variations by Region					
	AZ	TX	AR	AL	NC
Receiving	n/a	3.10	3.35	2.75	4.00
Loading	8.00	5.00	10.25	5.75	4.00
Compression	7.25	9.25	8.00	6.00	n/a
Storage/Month	3.60	1.95	3.25	2.00	1.70

Policy Scenarios

Changes to Storage Credit

Storage credits are issued to farmers to reimburse storage costs when prices are below the AWP to ensure competitiveness. Starting with the 2006 crop season, the new CCC regulation capped the storage credit rate for monthly storage costs of loan cotton that is forfeited. Texas farmers are now billed for any accrued storage charges based on the lesser of the warehouse tariff rate or $2.66 per bale per month (applicable to all states outside California and Arizona) (National Cotton Council, n.d.;USDA-FSA, 2007c). As the $2.66 cap is higher than the average monthly storage rate in Texas (Tables 1, 2) this regulation change should have little impact in Texas. It appears that the $2.66 cap may impact warehouses in the Delta region (Table 2).

In addition to the 2006 CCC rule change, the Bush FY08 budget proposal suggested elimination of the use of storage credits entirely (Laws, 2007). Such a policy would impact farmers even in areas like Texas with relatively low warehouse storage costs. The Bush proposal was evaluated by considering the likelihood of the loan rate exceeding the AWP. USDA-FSA has unofficial national, state, and county data on cotton enrolled in the loan program, outstanding loans, and forfeited loans from 1999 to present. State-level data is organized by loan count, quantity, and total dollar amount(USDA-FSA, 1999b-2006b). To estimate the impact of total elimination of storage credits, the weighted average of storage charges from the Texas Warehouse Survey was multiplied by 1) the total bales in the loan, 2) months in the loan program, and 3) the percent of the time that the AWP was below the loan rate. Table 3 shows the amount, in dollars, of storage charges that Texas producers would have had to pay if storage credits had been eliminated from 1999 to 2006, i.e., if the Bush Administration budget proposal had been the policy over the last eight years. From 1999 to 2003 Texas farmers would have been liable for an aggregate $1,862,475 in un-reimbursed storage charges. Storage costs from 2004-2006 would have been much more significant than previous years due to the extremely large bumper crops that occurred during those growing seasons. In 2004, storage costs were estimated to be $6,046,300. In 2005, storage costs were estimated to be $11,046,853 and in 2006, storage costs were $13,496,749 (Table 3). As in many agricultural policy studies, the incidence of these losses in aggregate income would be heavily concentrated in rural agricultural areas of western and southern Texas.

Table 3. Aggregate Texas Farm Gate Impact of Elimination of Cotton CCC Storage Credits.

Elimination of Storage Credits	
1999	$ 2,503,369.62
2000	$1,324,512.91
2001	$ 382,819.30
2002	$3,778,954.47
2003	$1,322,719.38
2004	$ 6,046,300.83
2005	$11,046,853.80
2006	$ 13,496,749.74

Changes to Compression Charges

The 2006 CCC rule changes required that the farmer will be billed for any unpaid compression charges if cotton is forfeited (National Cotton Council, n.d; USDA-FSA, 2007c). Prior to the CCC regulation change, compression charges followed the bale, were billed to the buyer by the warehouse, and presumably priced (albeit implicitly and perhaps not as accurately) into the equity offer that the buyer (only able to anticipate forfeiture) negotiated with the grower for the loan cotton.

Loan forfeiture data from the USDA-FSA (USDA-FAS, 1999a-2006a) were used to estimate the dollar impact that incurred compression charges will have on Texas producers. Forfeited loan data is organized by quantity (in bales) and dollar amount. In 2006, the quantity of forfeited loans was 2,838 bales. Multiplying that by the estimated compression charge of $8.19 per bale from the Texas Warehouse Survey shows that farmers paid $23,243 extra in compression charges. From 1999 to 2005, an average of 4,473 bales were forfeited which could have resulted in extra charges to producers of $36,633. In 2005 alone, 21,164 bales were forfeited to the CCC. Texas producers would have had to pay $173,333 in extra charges. These aggregate impacts are much smaller relative to the Bush Administration budget proposal discussed above. However, the potential impact of paying $8.19 per bale in 2006 may have encouraged most growers to accept negligible or even negative equity offers for their 2006 cotton that was placed in the loan. Thus this facet of the CCC rule change may have effectively reduced the non-recourse aspect of the cotton loan program. That is, unreimbursed compression charges are acting as a penalty for forfeiture.

Special Treatment of Bales

The region of West Texas covered by USDA-NASS crop reporting districts 1S, 1N, 2S, and 2N has an official storage capacity of 4,932,628 bales according to the CCC Approved List of Warehouses (USDA-FSA, 2007a). The 2004 and 2005 seasons were record-breaking years in cotton production for the 4 districts. In 2004, production reached record numbers at 5.7 million bales and in 2005, production reached 6.7 million bales. Due to the lack of storage, cotton had to be stored outside. Because of this record breaking-phenomenon, the CCC made changes to

their regulations of cotton being stored outside. Currently, in the event of another record-breaking crop season, farmers may now store their crops outside for a period of 15 days in regions that are declared by the CCC to be "storage deficit areas". Such cotton receives no storage credit for the period that the bale is stored outside, and the latter period is recorded on the bale's electronic warehouse receipt (EWR). After the 15th day, the cotton must be transported to another warehouse location. The producers are in charge of paying the transportation costs, as well as the storage fees (USDA FSA, 2006).

To estimate the probability of having another bumper crop, data was used on cotton production and planted acres from 1999 to 2006 (USDA-NASS, 1999-2006). A regression analysis on a .05 critical value showed no trend. A multivariate empirical distribution was used to predict yields for the 2007 harvest based on historical data of total production and total planted acres. No trend was found. The mean of total planted acres was used to make a stoplight chart that shows the probability of the 1S, 1N, 2S, and 2N statistical reporting districts exceeding production of 4.8 million bales.

Figure 1 shows a 40% chance, represented by the green area, of production exceeding the storage capacity, and a 22% chance of production falling below 3.8 million bales, represented by the red area. This chart reflects the high degree of variability in West Texas production. The 40% chance of exceeding CCC approved storage capacity suggests that West Texas may be periodically affected by the 2006 CCC rule change concerning outside storage. Because the penalties (non-reimbursement of storage costs) are contingent on a number of variables, it is difficult to calculate aggregate impacts. However, the non-reimbursement of storage costs for a few days or weeks may not be as significant as the simple record (required on the electronic warehouse receipt) of the cotton being stored outside at all, i.e., the "scarlet letter" effect.

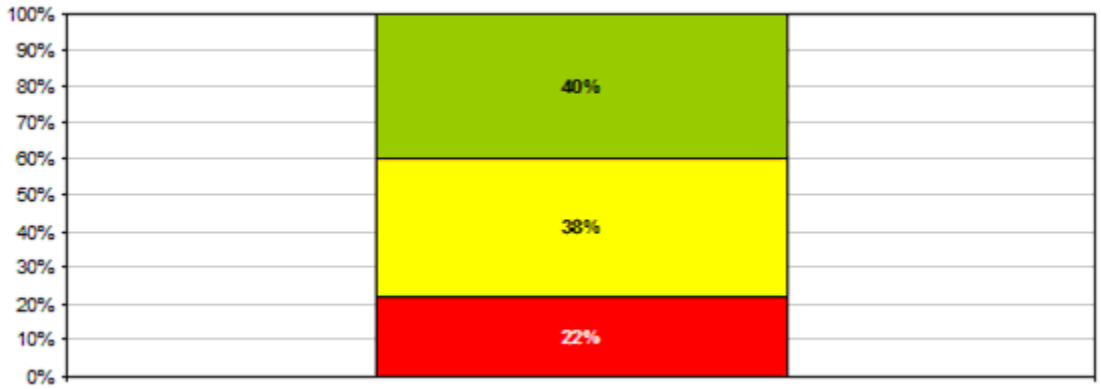

Figure 1. Graphical Probability of Cotton Production in West Texas (NASS Districts 1N, 1S, 2N, and 2S) Being Lower than 3,800,000 Bales or Higher than 4,800,000 Bales of Warehouse Capacity

A Lubbock Online article says that, "roughly 340,000 bales of last season's cotton still sits in the Farmer's Cooperative Compress's expanding warehouse space. The compress was expanding to 11 million square feet of storage space, and leasing more room in Lubbock and Plainview, he said. But rules requiring merchants to store cotton inside could make things tight (Blackburn, 2007)." This article highlights concerns of having a lack of storage for the 2007 crop year. As of December 31, 2007, the USDA reported 18,543 bales of loan cotton in the open yard (USDA-FSA, 2007d).

Conclusions

In 2006, the CCC made regulation changes that could heavily impact farmers and their pocketbooks. Starting with the 2006 crop year, Texas producers have had to pay extra fees resulting in the regulation changes. Farmers will be billed for any unpaid storage and compression fees. In the past, storage credits have been issued to farmers when prices are below the AWP to provide some income support. The Bush Administration has suggested the CCC eliminate storage credits. An estimation of the storage costs show that in 2006 Texas producers would have had to pay $13,496,749.74 in storage costs if the storage credits had been eliminated. In 2006, farmers that forfeited their cotton had to pay $23,243.42 in compression charges. The CCC has also tightened rules regarding outside storage,

a problem that warehouses have been struggling with since 2004. Due to the extremely large size of the 2004 to 2006 cotton crops, the CCC will now allow cotton to be temporarily stored under certain conditions, and with some penalty. Data used on production estimates a 40% chance of cotton exceeding warehouse storage capacities and a 22% chance of a failed crop.

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