A LOAN SCHEDULE BASED ON TEXAS AND OKLAHOMA PRODUCER MARKET PREMIUMS AND DISCOUNTS

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Abstract

This analysis examines the extent to which inaccuracies in the Daily Spot Cotton Quotations (DSCQ) have casued the CCC loan schedule to misrepresent the Texas and Oklahoma producer cotton market premiums and discounts.

The general pattern that emerges is that the CCC loan schedule substantially over discounts qualities of cotton below base quality (color grade 41, leaf 4, staple 34, micronaire 3.5-4.9, and strength 24 & 25 grams/tex.). The CCC loan understates premiums above base quality somewhat.

Introduction

The CCC loan schedule is used to make non-recourse loans to cotton producers based on assigned loan levels for the base quality with premiums and discounts for various quality deviations from that base.

The schedule is also assumed to indicate *market* premiums and discounts for quality variations from base. If market participants look to the loan schedule as a price measure of quality differentials, it needs to be accurate.

Since the CCC loan schedule represents the average of the previous year's loan schedule and the average of the DSCQ, which has been shown to not represent the Texas-Oklahoma market (Hudson et al., 1996), the objective of this study was to determine the loan premium and discount structure for cotton qualities if the loan had been calculated using producer *market* prices.

Methods and Procedures

An alternative loan schedule to the CCC loan schedule for the Texas and Oklahoma markets was calculated using the USDA loan calculation procedures for each year, except the premiums and discounts for Texas-Oklahoma as measured by the Daily Price Estimation System (DPES) were used (Hudson et al., 1993; Hudson and Ethridge, 1995; Hudson et al., 1994) instead of the DSCQ.

The CCC loan schedule premiums and discounts beginning in 1989 were averaged with that year's first seven months average DPES (in place of the DSCQ) premiums and discounts to calculate the following year's loan schedule.

The same procedures as followed by USDA were used for the addition of strength in 1991 and the conversion of the composite grade into the separated leaf and color format in 1993.

Results

The process shows how the 1995 CCC loan schedule would have appeared had market premiums and discounts been used compared to the actual CCC loan schedule. The 1995 DPES and CCC loan schedules show substantial differences. To simplify the patterns of differences, Figures 1-6 present graphical comparisons of the 1995 DPES and CCC loan schedules across the first and second digits of the color grade, leaf grades, micronaire, strength, and bark. To show the pattern of one quality attribute between the two loan schedules, all other attributes were held constant at base quality (color grade 41, leaf 4, staple length 34, micronaire 3.5-4.9, and strength 24 & 25).

Color Grade

Figures 1 and 2 show the 1995 loan schedule differences across first and second digits of the color grade, respectively. Figure 1 shows the differences in the two loan schedules based on the first digit of the color grade. The DPES loan schedule had slightly higher premiums for whiter grades (below base 41) and significantly smaller discounts for darker grades (above 41).

Figure 2 shows the loan differences across the second digit of the color grade when the first digit of the color grade is held at 4. For grades further away from base quality (41), the CCC loan had increasingly larger discounts than the DPES loan schedule.

Leaf Grade

Differences in the loan schedule for leaf are illustrated in Figure 3. The DPES loan schedule indicated premiums for less leaf where the CCC did not. For leaf levels greater than base (4), the CCC reported increasingly larger discounts than the DPES.

Micronaire

Differences in the two loan schedules for micronaire (Figure 4) are very small in the 3.3 to 4.9 micronaire range. However, the CCC loan schedule discounts for cotton with lower than a 3.3 reading were progressively larger than the DPES discounts. For 5.0 and above micronaire, the magnitude of the differences is not pronounced.

Staple

Staple length premiums are shown in Figure 5. The DPES loan schedule indicated a lower discount for staple length shorter than the base quality (34). The CCC loan schedule

indicated slightly higher premiums for staple longer than base quality.

Strength
Strength premium and discount differences are shown in Figure 6. The DPES schedule shows significant;y lower discounts for strengths below the base quality (24&25 grams/tex.) and a slightly higher premium for strengths 28 grams/tex. and above.

Bark
Figure 7 shows bark discount differences between the CCC loan schedule and the DPES loan schedule for the two levels of bark. The 1995 DPES schedule shows smaller discounts for Level 1 bark than reported in the CCC loan schedule. However, the DPES loan schedule shows a heavier discount for Level 2 bark.

Summary and Implications

Since the loan schedule has been used as an industry accepted measure of price differentials, its accuracy is vital. Comparisons of the market driven DPES loan schedule and the DSCQ derived loan schedule show substantial differences. The CCC loan understates premiums for quality attributes above base quality. At the same time, it overstates discounts for qualities below base, often by large amounts. In conclusion, the CCC loan schedule fails to accurately reflect the market price structure for Texas and Oklahoma, especially in lower qualities of cotton.

References

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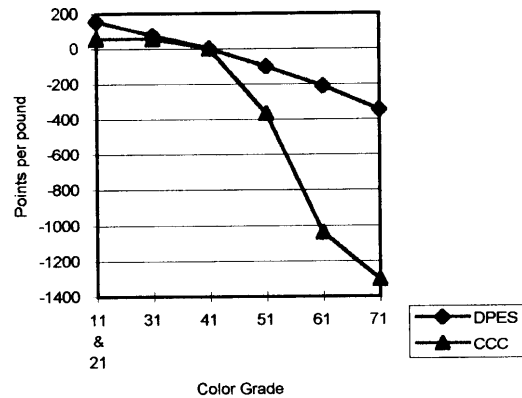
Acknowlegments

Figure 1. Loan Differences Across the First Digit of the Color Grade, (Second Digit=1, Leaf=4, Staple=34, Micronaire=3.5-4.9, Strength=24&25).
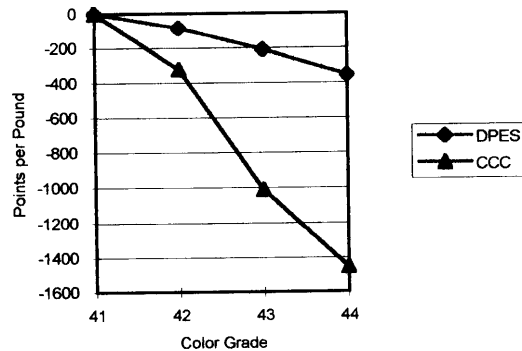

Figure 2. Loan Differences Across the Second Digit of the Color Grade, (First Digit=4, Leaf=4, Staple=34, Micronaire=3.5-4.9, Strength=24&25).
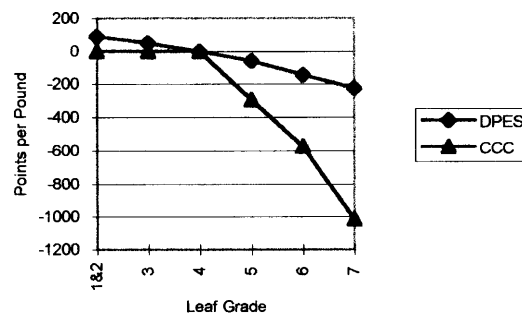

Figure 3. Loan Differences Across the Leaf Grade, (Color Grade=41, Staple=34, Micronaire=3.5-4.9, Strength=24&25).
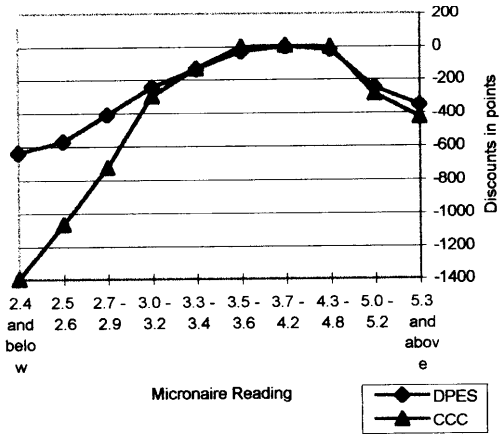
Figure 4. Loan Differences Across Micronaire Reading, (Color Grade=41, Leaf Grade=4, Staple=34, Strength=24&25).
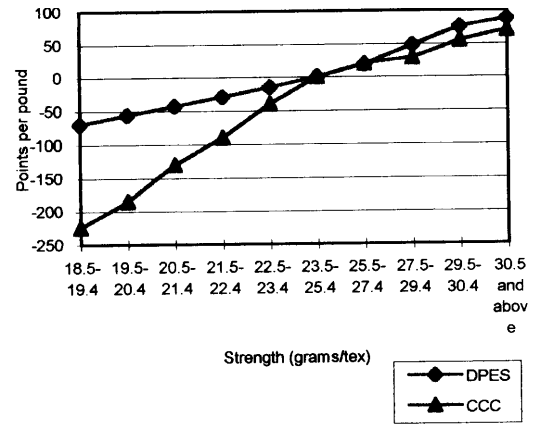

Figure 6. Loan Differences Across Strength, (Color Grade=41, Leaf Grade=4, Staple=34, Micronaire=3.5-4.9).
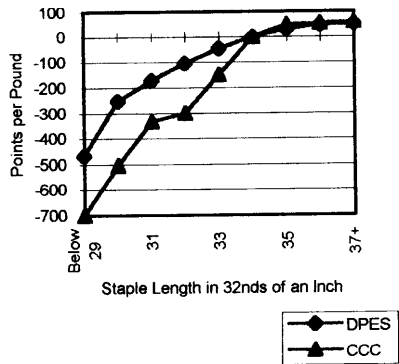

Figure 5. Loan Differences Across Staple, (Color Grade=41, Leaf Grade=4, Micronaire=3.5-4.9, Strength=24&25).
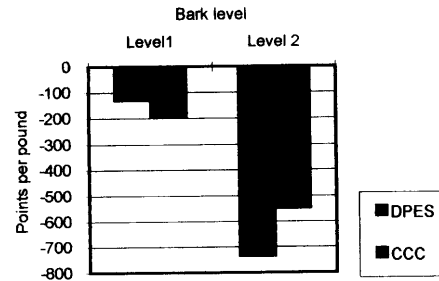

Figure 7. Loan Differences Across Bark Levels, (Color Grade=41, Leaf Grade=4, Staple=34, Micronaire=3.5-4.9, Strength=24&25).