

Factors Influencing Cotton Producers' Choice of Marketing Outlet



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**Oklahoma Cooperative Extension Service
Division of Agricultural Sciences and Natural Resources
Oklahoma State University**

Texas A&M AgriLife Extension Service

Factors Influencing Cotton Producers' Choice of Marketing Outlet

Joint Extension Report

Oklahoma Cooperative Extension Service

Texas A&M AgriLife Extension Service

Jason D. Pace

Extension Agricultural Economist for the Oklahoma Cooperative Extension Service, Southwest Area Office, Duncan, OK

John R. C. Robinson

Professor and Extension Economist with Texas A&M University, College Station, TX



This report will summarize the findings from the mail survey titled “How—and How Well—Is Your Cotton Marketed.” The survey was administered to the population of cotton producers in Kansas, Oklahoma and Texas in the spring of 2012. The objective of this study was to reexamine cotton producers’ cash marketing outlet choices, and what influences those choices, in light of recent changes in price, extreme weather events and changes in worldwide supply and demand. The report will feature summary information about growers and farm demographics, regional and statewide breakdowns of marketing outlet allocations, and a discussion of results and their implications for producers and agribusinesses.

Average Grower Characteristics

Producer and Farm Demographics

Table 1. Selected Operator and Operation Characteristics.

	<i>Off-farm Income¹</i>	<i>Assets (mode, in thousands)²</i>	<i>Leverage³</i>	<i>Age⁴</i>	<i>Education Level (mode)⁵</i>	<i>Total Acres⁶</i>	<i>Percent Irrigated⁷</i>
High Plains	14%	500-999	37%	59	Some college	1019	47%
Rolling Plains	15%	500-999	30%	56	Some college	1203	20%
South Texas	17%	1,000-1,999	41%	54	Some college	1161	11%
Central/Other	22%	1,000-1,999	35%	58	Some college	883	10%
All Texas	17%	500-999	36%	57	Some college	1067	22%
All Oklahoma	18%	100-499	22%	62	High school	636	16%
All Kansas	26%	500-999	39%	46	Some college	754	28%

1 Percentage of total household income derived from off-farm sources. Average percentage reported.

2 Most frequently reported category of assets; "500-999" means \$500,000 to \$999,000.

3 Percentage of total dollars invested in operation that are borrowed.

4 Average age of principle operator.

5 Most frequently reported level of education.

6 Average size of entire cotton farming operation, in acres.

7 Average percentage of cotton farming operation acres that are irrigated.

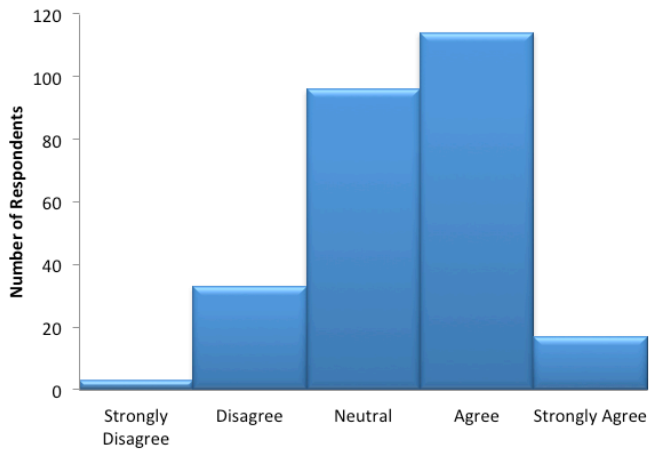
Risk Attitude, Perception and Belief Questions

Several questions on the survey asked respondents to rank their level of agreement with statements about risk sources and risk management strategies. Producers were also asked to self-characterize their level of risk tolerance relative to their peers. Responses to these questions were measured using a five-point scale. Many of the attitudes expressed by producers in this series of questions were related to their marketing outlet choices. The graphs and tables in this section show the average scores and frequency of responses

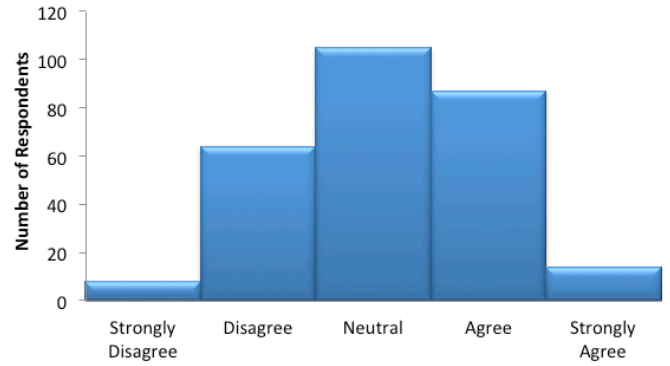
for six selected questions. For example, for the statement "Pre-harvest marketing strategies will, on average, result in a higher price than selling at harvest," 114 respondents answered that they "agreed" with the statement, 96 said they were "neutral," 33 disagreed with the statement, 17 strongly agreed with the statement, and 3 strongly disagreed with the statement. Below is a screenshot of this question from the actual survey, followed by a graph showing the frequency of each response to the statement.

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>
1) Pre-harvest marketing strategies will, on average, result in a higher price than selling at harvest.	1	2	3	4	5

"Pre-harvest marketing strategies will, on average, result in a higher price than selling at harvest."



"I am willing to accept a lower price to reduce price risk."



"Co-op seasonal pools tend to give an average price."

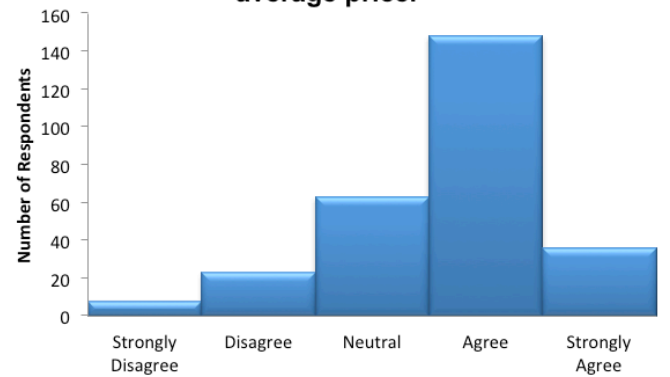
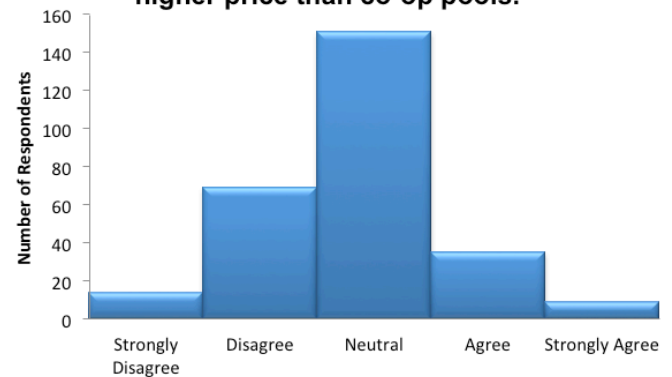


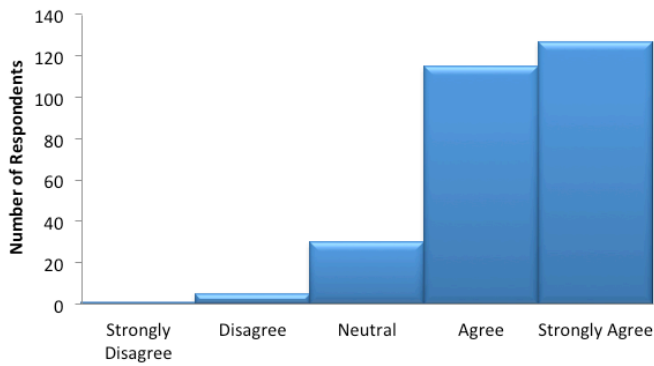
Table 2. Average Scores for Select Attitude, Perception and Belief Questions.

<i>Statement</i>	<i>Average Score</i>
"Pre-harvest marketing strategies will, on average, result in a higher price than selling at harvest."	3.4
"I am willing to accept a lower price to reduce price risk."	3.1
"Co-op seasonal pools tend to give an average price."	3.7
"Merchant pools will probably get a higher price than co-op pools."	2.8
"Price risk is the greatest source of revenue risk."	4.3
"Relative to other farmers, how would you describe your willingness to take on risk in your farm business?"	3.2

"Merchant pools will probably get a higher price than co-op pools."



"Price risk is the greatest source of revenue risk."



Cash Marketing Outlet Choices

Respondents were asked to indicate what percentage of their crop (2010) they allocated to each of four cash marketing outlets:

- 1) Merchant Forward Contracts
- 2) Merchant Pool Contracts
- 3) Cooperative Pool Contracts
- 4) Cash Contracts (either harvest-time or post-harvest, including recap contracts and CCC loan equity contracts, and spot contracts to independent, local buyers).

Results are broken out into four regions and depicted graphically. The Lower Rio Grande Valley and the Coastal Bend were grouped into a single "South Texas" region. A few counties in the Edwards Plateau and Trans-Mountain areas were grouped with either the High Plains or the Rolling Plains. The "Central Texas/Other" region crosses three different NASS reporting districts.

SHARES OF PRODUCTION ALLOCATED TO MARKETING OUTLETS by region.

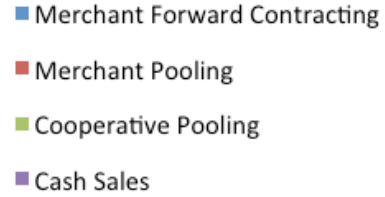
HIGH PLAINS

Merchant Forward Contracting—11%

Merchant Pooling—12%

Cooperative Pooling—62%

Cash Sales—16%



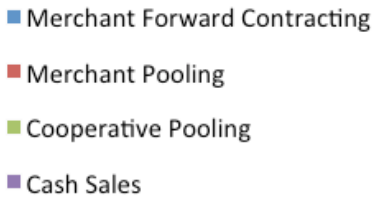
ROLLING PLAINS

Merchant Forward Contracting—12%

Merchant Pooling—3%

Cooperative Pooling—69%

Cash Sales—16%



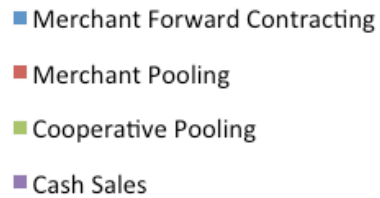
SOUTH TEXAS

Merchant Forward Contracting—32%

Merchant Pooling—3%

Cooperative Pooling—55%

Cash Sales—9%



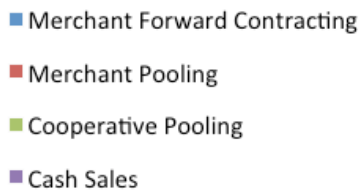
TEXAS—CENTRAL/OTHER

Merchant Forward Contracting—38%

Merchant Pooling—9%

Cooperative Pooling—48%

Cash Sales—5%



TEXAS—STATEWIDE

Merchant Forward Contracting—23%

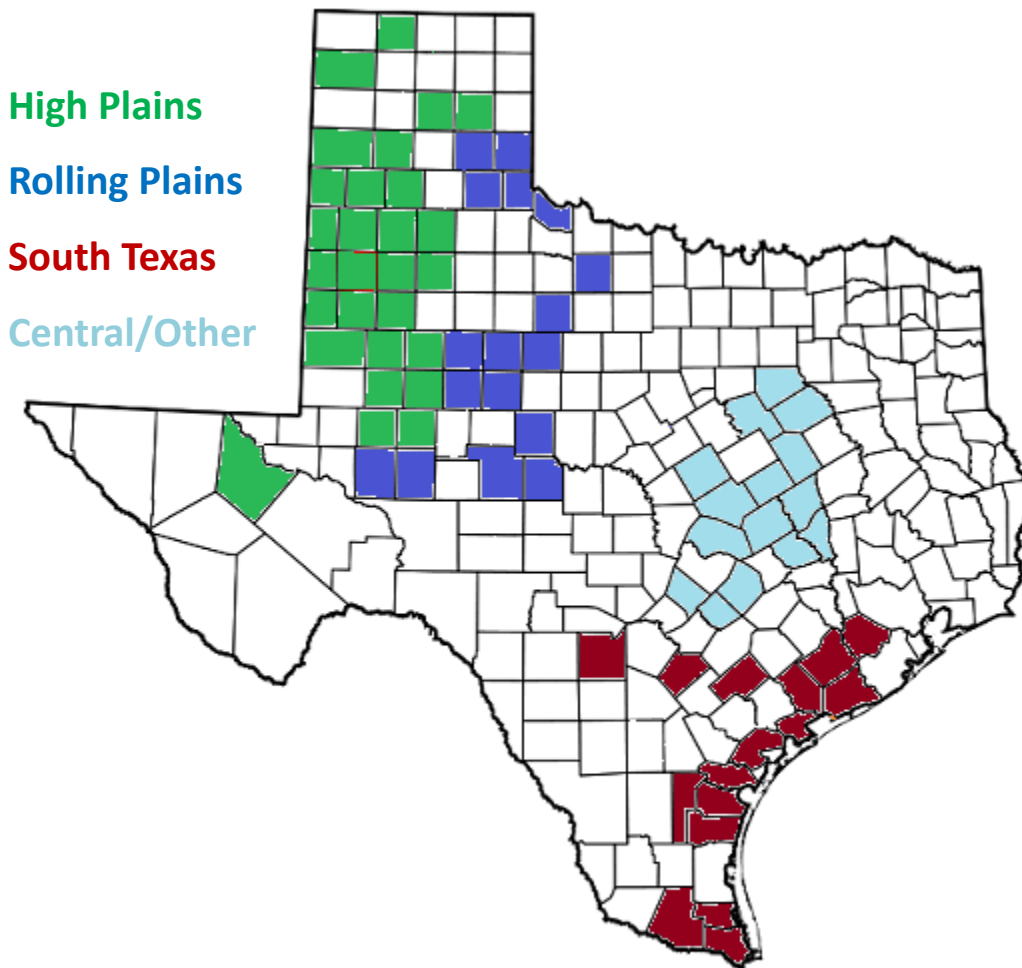
Merchant Pooling—7%

Cooperative Pooling—48%

Cash Sales—12%



- Merchant Forward Contracting
- Merchant Pooling
- Cooperative Pooling
- Cash Sales



OKLAHOMA

Merchant Forward Contracting—14%

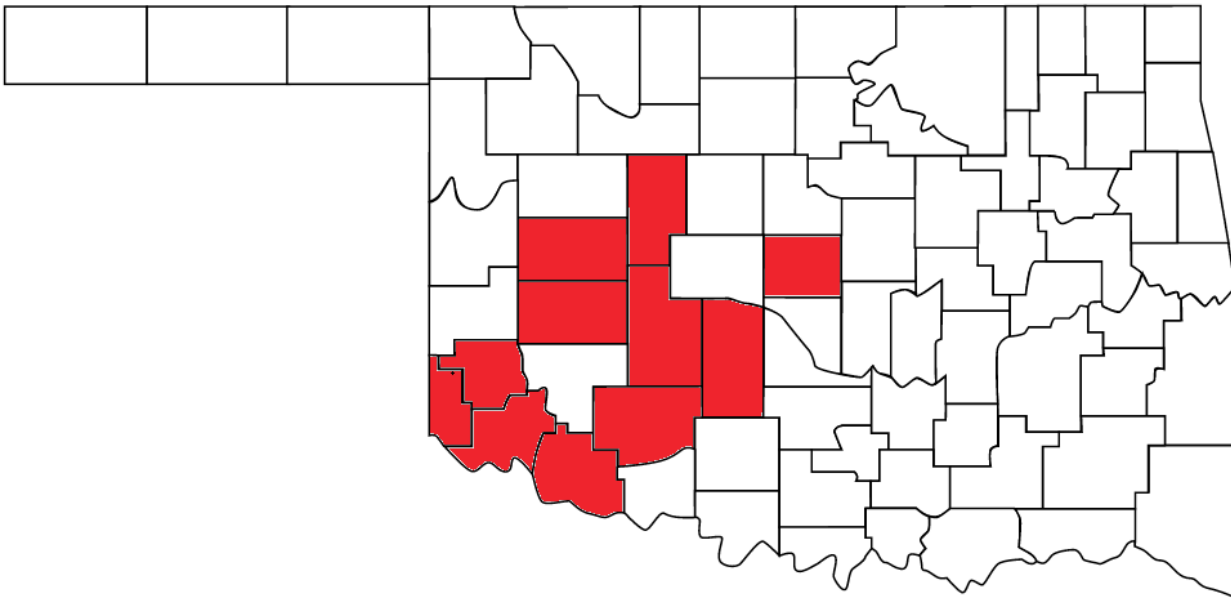
Merchant Pooling—0%

Cooperative Pooling—63%

Cash Sales—23%



- Merchant Forward Contracting
- Merchant Pooling
- Cooperative Pooling
- Cash Sales



KANSAS

Merchant Forward Contracting—0%

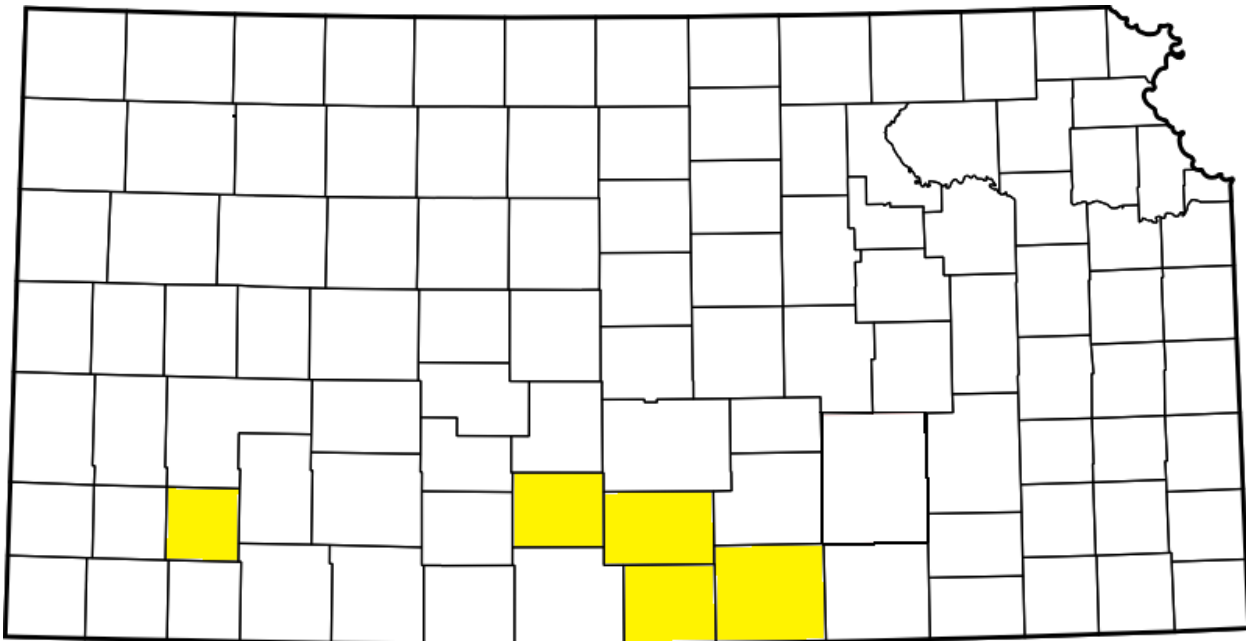
Merchant Pooling—0%

Cooperative Pooling—100%

Cash Sales—0%



- Merchant Forward Contracting
- Merchant Pooling
- Cooperative Pooling
- Cash Sales



Price Discussion

Respondents were asked to report the price they received for the primary marketing outlet they used 2010. Graphs and discussion of the reported prices and comparisons with observed futures prices follow.

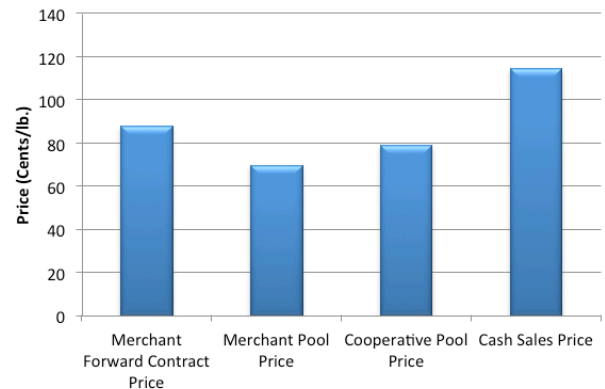


As seen in the above graph, December 2010 futures prices throughout the spring and summer of 2010 hovered in the 70 to 80 cent range. Prices broke 80 cents in August and commenced their record increase to more than 150 cents in November. Further, the March 2011 contract price peaked at more than \$2.00/lb. Thus, it is not surprising that producers who sold on the post-harvest cash markets received the highest price. What is particularly confounding about prices received in 2010 is that producers who forward priced appear to have fared much better than producers who were in a pool. If pools were selling into the trend to obtain an average price for the season, one would think a producer in the pool would receive a higher average price than one who contracted at planting time. One possible explanation is that pools contracted most of their anticipated crop in the spring, while some producers who forward contracted but waited until August or September to set their price received a price well over 80 cents. The average post-harvest cash price of 114 cents can likely be explained by the differences in planting and harvest times between the different cotton growing regions. Cash customers in South Texas would have received a lower cash price at harvest (80 to 90 cent range) than cash customers in the Rolling Plains and High Plains (possibly 130 cents or greater).

Table 3. Reported Average 2010 Price Received (cents/lb.), By Outlet.

Merchant Forward Contract Price	87.79
Merchant Pool Price	69.75
Cooperative Pool Price	78.83
Cash Sales Price	114.44

Reported Average 2010 Price Received (cents/lb.), By Outlet



Discussion of Research Findings and Implications

Several of the regression results fell in line with previous similar studies and economic intuition. Producers believing that pre-harvest pricing is important in reducing risk were more likely to forward contract their crop, and less likely to pool their cotton or sell on the post-harvest spot market. More risk-tolerant producers were more likely to sell on the spot market than forward contracting. Some more interesting results are as follows:

- 1) That historical co-op usage is a good predictor of future co-op usage is no surprise. As it turned out, historical co-op pool usage wound up being a better predictor of future usage than any other variable, including all risk-related variables. On a related note, producers who used co-ops as their primary marketing outlet reported being mostly indifferent as to the influence of dividends and book credits on their participation in the co-op. These suggest that historical affiliation with co-ops appeared to trump grower perceptions of the pools' risk-reducing properties and increasing farm revenue with dividends in determining the choice of co-ops. Several producers stated in an open-ended comments section¹ that the big-

¹ See last page for some anonymous narrative responses.

gest draw to co-op pools were the ease and simplicity of marketing through pools. The sentiment towards co-ops among many producers still seems to be that “the co-op markets my cotton so I don’t have to.”

- 2) Choice of co-op pools was found to carry with it less risk-tolerance than in previous cotton marketing studies. Researchers speculate this could be due to co-op pools being seen as a “safe choice” given the high market volatility and high yield variability of the last few years. Some producer comments on the survey also indicated dissatisfaction with co-ops for (allegedly) not capturing the late price rally of 2010.
- 3) All merchant customers, regardless of whether they pooled or forward contracted, affiliated themselves with merchants in some way. Producers who forward contracted stated they believed merchant pools were superior to co-op pools in maximizing revenue. Researchers hypothesized that increased production risk would make a producer less likely to do business with merchants, since it was reported (anecdotally) that merchants were drastically scaling back their contracting in areas most affected by the 2011 drought. This relationship turned out to not be significant in predicting producer marketing choice. When examining the graphs and maps, it appears that merchant affiliation and co-op affiliation is more dependent on geography. Central Texas, for example, sold the same amount of cotton to merchants (either through pools or forward contracts) as it did to co-ops—the only region represented in the study for which this was even close to being the case. Central and South Texas appear to be the most merchant-affiliated regions in the Southwest, while co-op pools are the clear leader in cotton marketed in North/West Texas, Oklahoma and Kansas.
- 4) There was some relationship between size of operation and merchant affiliation. This conforms to the idea that producers with more at stake in their cotton operations are more likely to forward price or, as some producers put it, “market on their own.”
- 5) Researchers posed the question of whether or not a producer’s relationship with his/her local merchant representative was more important in their affiliation with a merchant than the company itself. It was believed that merchant-affiliated producers would agree with this statement; however, no such relationship was statistically proven in the study.
- 6) Only 6 percent of respondents indicated they hedged a portion of their 2010 crop. This is compared with 14 percent reported in 2004 and 22 percent reported in

1999 for similar studies. This study differentiated from those previous studies in that hedging is looked upon as a complimentary strategy to cash marketing arrangements. No one particular cash marketing outlet made producers more likely to hedge. There has been a fair amount of academic work done in recent years with respect to why producers don’t hedge. Cash flow liquidity issues, lack of market information and lack of knowledge of how futures and options markets work are typically attributed to producers’ aversion to hedging. Since 2004, the increased availability and awareness of revenue-based insurance products, as well as increased volatility in the cotton market, likely caused the decline in reported level of hedging.

Respondent Narrative Statements

Respondents were given a section to leave open-ended comments on marketing issues on the back page of the survey. The goal in mind was to supplement the formal survey questions with answers that might help figure out why producers market cotton in the way they do. Some of the responses—kept anonymous—follow.

“Options help increase the bottom line but they are too expensive for cotton; however I have used them on other crops.”

“Spending money on hedging is [a] waste.”

“Since cotton is a small portion of my crop farming I like the ease of marketing to the PCCA pool and don’t have to watch price fluctuation.”

“Pool took huge hit in 2010, but 10 years previous were all better than independent marketing.”

“Being a dryland farmer, I find it unnerving to contract cotton before planting or even during the growing season.”

Acknowledgments

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