

Extension Farm Management Programs

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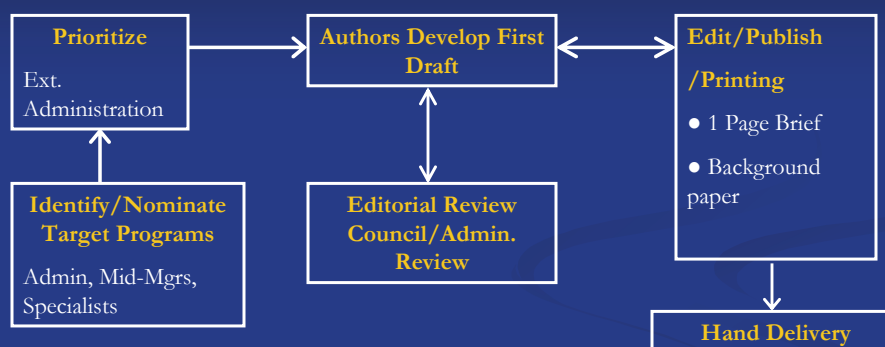
Economic Impact of Texas Cooperative Extension

- Full-time position (2004)
- Measuring economic impacts of Extension
- All Extension program areas

Some Parameters & Challenges

- The target audience
 - Must be able to understand our methods/results
- Broader benefits of this
- Cost of doing this
 - Cost of not doing this
- Low-hanging fruit
- Deliverables
- How much attributed to Extension?

The Process of Developing Impact Studies (TCE)



TCE Studies

Ag. & Natural Resources

Forage Sorg. Silage Alternative	Master Marketer
Cotton Variety/Quality	Boll Weevil Eradication
Beef Cattle Production Practices	Chipotle Pepper (Vert. Integ)
Trade Adj. Assistance (Shrimp)	Catfish Production Expansion
Cotton Stalk Destruction	Increase in Meat Goat Prod.
Gourmet Quail	

TCE Studies (Cont'd)

Family & Consumer Science

Diabetes Education	Increased Physical Activity
Passenger Safety (safety seats)	Nutrition (ENP)

4-H & Youth Development

Officer Leadership Skills	
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General

Value of Ext. Volunteers (leveraging resources)	
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<http://agecoext.tamu.edu/econimpact/>

ECONOMIC IMPACT BRIEF

**Cotton Variety Boosts Grower's Income:
Producers Strive to Meet Higher Quality Market
Demands**

Quality Discounts = Lower Net Returns

- The loss value due to cotton quality price discounts to Texas producers have ranged from \$20 million to \$120 million a year.
- From 1970 to 1998, the percentage of the Texas cotton crop below base grade ranged from a low of 37% in 1973 to a high of 94% in 1981.
- Narrow profit margins and increasing demand for high quality cotton have raised concern among cotton producers, spinners, and textile mills.

The Extension Response: Educating Cotton Growers About a Particular Cotton Variety's Advantages

- Incorporated specific cotton varieties developed by the Australian agricultural research agency into result demonstration trials.
- Educated growers about the quality characteristics of the FiberMax varieties and the potential economic benefits.
- Developed and administered over 10,000 result demonstration handbooks to cotton producers in the state.
- Reached at least 2,000 producers through various educational meetings, farm shows, and other similar events.

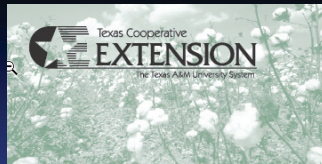
Economic Impact of the Program

- FiberMax cotton varieties received an estimated \$0.05 per pound in cotton quality adjustments over traditional varieties grown.
- With 56% of the acres planted to this line of varieties, the economic benefit, measured in terms of the change in net income, was estimated at \$109 million in 2005, and \$72 million in 2006.
- Total economic output (gross business sales) associated with this level of increased income was estimated at \$125 million in 2005 and \$83 million in 2006.
- This level of economic impact helped to support an additional 700 jobs statewide.
- The long-run effect of the introduction of these higher-quality lines of cotton seed is a general improvement in the fiber properties of all seeds.



A detailed article (*Cotton Variety Boosts Grower's Income - MKT-3557C*) on the economic analysis will be available soon at <http://www.extension.tamu.edu>. Click on *Economic Impact Series*.

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**Improved Cotton Quality
Boosts Growers' Income**

Dean A. McCorkle, Carl Anderson, Larry Falconer, Jackie Smith,
Harvey Buehring, Michelle Niemeier and Dan Hanselka*

Cotton has long been the "king" of Texas crops. In 2005, gross cash receipts for cotton were \$1.8 billion, more than any other crop and second only to cattle among all agricultural commodities.

The economics of cotton production is affected by input costs, weather, market price and quality. Between 2001 and 2005, the value of cotton production fluctuated between \$740 million and \$2.13 billion.¹

Because of the narrow profit margins in the cotton industry and the demand by textile mills for higher quality fiber, cotton quality characteristics have considerable effect on the value of the product in today's markets. Thus, most producers have their cotton graded and classed before marketing it, even though grading cotton fiber is not mandatory unless a grower participates in USDA price support programs.

Cotton fiber is graded and classed on

- fiber length (staple),
- strength,
- micronaire,
- uniformity,
- extraneous matter,
- color, and
- leaf grade.

The Problem

Seed genetics, nutrients, insects, weeds, number of leaf units, and moisture are some of the factors that can affect fiber quality. From 1970 to 1998, the percentage of the Texas cotton crop that was discounted as below base grade (using the Agricultural Marketing Service's "tenderability" measure to make the estimate) ranged from a low of 37 percent in 1973 to a high of 94 percent in 1981. The average during this period was 67 percent.² As Table 1 shows, in 2004 and 2005 a higher share of production in Texas was discounted than in the U.S. as a whole. Since 1989, these quality discounts have cost Texas producers \$20 million to \$120 million annually in direct costs alone.³

Table 1. Percentage of cotton production classed below base grade.⁴

	Texas	U.S.
2004	38%	25%
2005	41%	29%

Source: USDA/AMS

Extension's Educational Effort

Extension learned of the improved yield and quality characteristics of particular cotton varieties produced in an area of Australia that is similar in climate to the Texas Coastal Bend. These varieties were developed by the Australian agricultural research agency, CSIRO, and distributed by Cotton Seed Distributors, Ltd.

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Farm Management Programs Challenges and Alternatives

- Clientele
 - Who comes to meetings/programs
 - What decisions are they making?
 - How do we value these decisions?
- Alternative Methods for Valuing Economic Impact
 - Ask participants for \$ benefit
 - Producer responses to questions
 - Secondary data
 - Applicable research results
 - Hybrid of all above
 - Assumptions
- What is reasonable, defensible, feasible, and cost effective
- Increasing use of web-based delivery – challenges
 - Lose face-to-face contact (not intensive)
 - Unknown users

Master Marketer Program

Amosson, Waller, Smith, Bevers, McCorkle

- 64 Hours of Intensive Marketing / Risk Management Education
- Producer Friendly Format
 - Combines Successful Concepts to get Results
 - Taught at a Highly Applied Level
 - Best Speakers
 - Creative Programming
- Not for the Novice
- 19 programs conducted since 1996

Master Marketer Evaluation 2 1/2 Year Post Survey

- Demographics, satisfaction, knowledge change, adoption of practices, economic impact
- Economic impact: change in price received
- Post-then-pre design
- Self-assessed
- Survey procedure: Dillman's methodology

Number of graduates	810
Response Rate	63%
Average Participant Age	45.8

Survey Avg. Response Use of Marketing Tools in Developing Market Outlook

Did you have/use:	Before Master Marketer	After Master Marketer	Percent Change
Marketing Plan?	35%	87%	146%
If yes, written marketing plan?	9%	37%	329%
Determine costs of production?	44%	79%	79%
Include profit and/or growth needs?	31%	66%	110%
Fundamental Analysis?	40%	87%	118%
Seasonal price?	51%	92%	80%
Technical analysis?	18%	73%	301%

Master Marketer Economic Impact

Mean Gross Farm Income:	\$744,676
Mean increased income attributed to Master Marketer training (\$/farm):	\$33,640
Cumulative benefits ('96-'07):	\$150 Mill.

FARM Assistance Program

Klose, et. al.

- Help producers evaluate strategic management decisions under risk
- Base analysis (current practices) 10 yr proj.
- Two alternatives – changes under consideration
- Value of decisions analyzed, relative to Base:
 - Projected impact on net worth (10 years out)
 - Of adopting, or not adopting, an alternative