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)

- Prioritize
  - Ext. Administration
- Identify/Nominate Target Programs
  - Admin, Mid-Mgrs, Specialists
- Authors Develop First Draft
- Editorial Review
  - Council/Admin. Review
- Edit/Publish /Printing
  - 1 Page Brief
  - Background paper
- Hand Delivery
### TCE Studies

#### Ag. & Natural Resources

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<tbody>
<tr>
<td>Forage Sorg. Silage Alternative</td>
<td>Master Marketer</td>
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<tr>
<td>Cotton Variety/Quality</td>
<td>Boll Weevil Eradication</td>
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<tr>
<td>Beef Cattle Production Practices</td>
<td>Chipotle Pepper (Vert. Integ)</td>
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<td>Trade Adj. Assistance (Shrimp)</td>
<td>Catfish Production Expansion</td>
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<td>Cotton Stalk Destruction</td>
<td>Increase in Meat Goat Prod.</td>
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<td>Gourmet Quail</td>
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### TCE Studies (Cont’d)

#### Family & Consumer Science

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<tbody>
<tr>
<td>Diabetes Education</td>
<td>Increased Physical Activity</td>
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<tr>
<td>Passenger Safety (safety seats)</td>
<td>Nutrition (ENP)</td>
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#### 4-H & Youth Development

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<td>Officer Leadership Skills</td>
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#### General

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<tr>
<td>Value of Ext. Volunteers</td>
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<td>(leveraging resources)</td>
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[http://agecoext.tamu.edu/econimpact/]
Cotton Variety Boosts Grower’s Income:
Producers Strive to Meet Higher Quality Market Demands

Quality Decides = Lower Net Returns

- The low-cotonearlier in the season-quality-price dynamics in Texas producers have ranged from $5.32 million to $8.77 million a year.
- Texas' 1991-1992, the percentage of the Texas cotton crop below first standard was 14.78 percent in 1991 and 13 percent in 1992.
- Farmers profit despite todays increasing demand for high quality cotton, low residual sorption among cotton producers, prices, and market sales.

The Extension Response: Educating Cotton Growers About a Particular Cotton Variety Substitution

- Incorporated specific varieties, rotations developed in the Australian rotational research program into small demonstration fields.
- Provided assistance with the quality characteristics of the Pineland variety and expansion of sorption benefits.
- Developed and evaluated over 15,000 small demonstration land blocks to cotton producers in the area.
- Pushed at least 2,500 producers through various educational workshops, farm tours, and other media events.

Economic Impact of the Program

- The high-yield variety was estimated at $6.97 per pound in cotton.
- The 10% of the area planted in the low-oil cotton, the economic benefits estimated to the change in sorption, was estimated at $1.89 million in 2005 and $1.1 million in 2006.
- Total economic output (gross farm income) associated with the low-oil cotton was estimated at $1.2 million in 2005 and $1.1 million in 2006.

- This level of economic impact helped to support additional 500 area farmers.
- The long-term effect of the use of this higher quality land cotton seed is a major improvement in the fiber properties of all cotton.

Improved Cotton Quality Boosts Growers’ Income

Chan A. McCullough, Carl Bednarski, Larry Potter, Jackie Burch, Farley Stovall, Michelle Adams, and Steve Schurman

The Problem

Seed growers, cottonists, investors, and researchers are some of the factors that can affect the quality. Prior to 1970, the percentage of Texas cotton crop below first standard was under 10 percent. In the late 1970s, the proportion began to rise, peaking at over 40 percent in 1981. The percentage during the period was 37 percent. In October 1982, it rose to 40 percent. The percentage of cotton in Texas decreased from the 1970s to the 1980s, but it has increased since then. In 2005, cotton producers sold $5.9 million to $10.6 million cotton to eastern cotton producers.

Table 1: Percentage of cotton production below first standard

<table>
<thead>
<tr>
<th>Year</th>
<th>Texas</th>
<th>U.S.</th>
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<tbody>
<tr>
<td>2005</td>
<td>35%</td>
<td>20%</td>
</tr>
<tr>
<td>2006</td>
<td>30%</td>
<td>15%</td>
</tr>
<tr>
<td>2007</td>
<td>25%</td>
<td>10%</td>
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Extension’s Educational Effort

Data for the 2005-2006 period showed that the improved yield and quality characteristics of growers cotton, production, and marketing is in one area that is needed in Texas to increase the overall yield. There were several ways to improve the quality and quantity of cotton production, including the following:

- Improve breeding programs
- Use improved irrigation
- Increase irrigation efficiency
- Use improved fertilizers
- Use improved pest management
- Use improved soil management
- Use improved harvesting methods
- Use improved ginning methods

The results of this study have been published in several Extension publications, including the Texas Agricultural Extension Service's "Cotton Quality Improvement Manual," and also delivered at the Cotton Field Schools, etc.
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, defendable, 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 ½ 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

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

<table>
<thead>
<tr>
<th>Did you have/use:</th>
<th>Before Master Marketer</th>
<th>After Master Marketer</th>
<th>Percent Change</th>
</tr>
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<tbody>
<tr>
<td>Marketing Plan</td>
<td>35%</td>
<td>87%</td>
<td>140%</td>
</tr>
<tr>
<td>If yes, written marketing plan?</td>
<td>9%</td>
<td>37%</td>
<td>329%</td>
</tr>
<tr>
<td>Determine costs of production?</td>
<td>42%</td>
<td>79%</td>
<td>79%</td>
</tr>
<tr>
<td>Include profit and/or growth needs?</td>
<td>31%</td>
<td>66%</td>
<td>110%</td>
</tr>
<tr>
<td>Fundamental Analysis</td>
<td>20%</td>
<td>87%</td>
<td>419%</td>
</tr>
<tr>
<td>Seasonal price?</td>
<td>51%</td>
<td>92%</td>
<td>80%</td>
</tr>
<tr>
<td>Technical analysis</td>
<td>38%</td>
<td>79%</td>
<td>301%</td>
</tr>
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**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