

# The Perceptions of Farmers Toward Fee-Based Extension Programs and Services

K. Kester<sup>1</sup>, J. S. Rayfield<sup>2</sup>, D. B. Croom<sup>3</sup>, P. Burke<sup>4</sup>, Z. Williams<sup>5</sup>, B. Wassel<sup>6</sup>, S. Reynolds<sup>7</sup>,  
J. G. Fuder<sup>8</sup>, R. Stewart<sup>9</sup>

## Abstract

This study used a descriptive survey design to explain U.S. agricultural producers' perceptions of how fee-based services would limit their access to Extension resources. Agricultural producers in the United States use Extension because of the free resources, troubleshooting, and competitively priced and high-quality lab services. Participants perceived immense value in research-based information available at no cost, especially for those who fell into the lower gross farm income brackets. Participants with higher-income farms were more tolerant of paying for commercial consulting services, likely due to having more capital to invest in such services. Despite their aversion to fees, participants supported paying for lab services that evaluated soil, plant, water, and feed samples. Such fees are expected as part of a standard business transaction yielding a tangible product or data, as one would experience when buying other goods. Participants were largely unaware of free commercial plant disease diagnosis services, which suggests an opportunity for agricultural agents to promote this more thoroughly in their counties. Overall, Georgia agricultural producers rely on Extension for free or affordable information that is high-quality and readily accessible. Producers count on their county agent to link them to a resource system providing valuable information in numerous formats to meet their needs.

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1. Kimberly Kester, Extension Livestock Educator, University of Wisconsin–Madison, Lafayette County – UW Extension 700 Main Street, #2, Darlington, WI 53530-1396, [kimberly.kester@wisc.edu](mailto:kimberly.kester@wisc.edu),  <https://orcid.org/0000-0001-6453-7139>
2. John S. Rayfield, Professor, Texas Tech University, Box 42131-Lubbock, TX 79409-2131, [john.rayfield@ttu.edu](mailto:john.rayfield@ttu.edu),  <https://orcid.org/0009-0001-3741-2637>
3. D. Barry Croom, Professor, University of Georgia, 2360 Rainwater Rd, Tifton, GA 31793, [dbcroom@uga.edu](mailto:dbcroom@uga.edu),  <https://orcid.org/0000-0001-7710-5212>
4. Paula Burke, County Extension Coordinator/ANR Agent Northwest District, University of Georgia, 900 Newnan Rd, Carrollton, GA 30117-6477, [pjburke@uga.edu](mailto:pjburke@uga.edu)
5. Zackary Williams, County Extension Coordinator, University of Georgia, 203 South Dixon Street, Ag Complex, Suite 3, Alma, GA 31510, [zackary.williams@uga.edu](mailto:zackary.williams@uga.edu),  <https://orcid.org/0009-0008-5580-2621>
6. Brooklyne Wassel, County Extension Coordinator/ANR Agent, University of Georgia, P.O. Box 397, Meansville, GA 30256, [brooklyne.wassel@uga.edu](mailto:brooklyne.wassel@uga.edu)
7. Shanna Reynolds, Shanna Reynolds County Extension Coordinator, University of Georgia, 55 Oglethorpe Drive, Crawford, GA 30630, [Shanna.Reynolds@uga.edu](mailto:Shanna.Reynolds@uga.edu),
8. Joshua G. Fuder, ANR Agent Northwest District, University of Georgia, 1130 Bluffs Parkway, Canton, GA 30114, [jfuder@uga.edu](mailto:jfuder@uga.edu)
9. Robyn Stewart, County Extension Coordinator, University of Georgia, 2080 Rowland-York Drive, Lincolnton, GA 30817, [rlstew2@uga.edu](mailto:rlstew2@uga.edu),  <https://orcid.org/0009-0007-0567-5567>

## Introduction and Problem Statement

The mission of Cooperative Extension has broadened in recent years in response to technological advances in the industry, societal needs, and the needs of the U.S. and the world economy (United States Department of Agriculture, 2023; West et al., 2009). Cooperative Extension mostly meets these needs through free services to agricultural producers, funded by tax dollars. Despite advances in Cooperative Extension programs and services, persistent problems remain in meeting stakeholders' needs when conditions call for conservative budgets and austerity measures (Narine et al., 2019). Extension agents struggle to keep pace with technological advancements because of limited resources for staffing, training, and development (Narine et al., 2019). In addition to these challenges, Cooperative Extension has to cope with increased competition from private agricultural consultants who provide on-demand services to U.S. agricultural producers for a fee (Ortmann et al., 1993; Rivera, 1996). For this study, we defined a commercial agricultural consultant, or scout, as a professional who provides expert advice and assistance to farmers, agribusinesses, and other organizations involved in agriculture.

However, for Cooperative Extension to mitigate the effects of its challenges and compete with private-sector consultants, a fee-based service delivery system may be necessary, despite farmers' apprehensions. A study from Washington State University Extension found that farmers agreed that WSU Extension was valuable to their community and was an appropriate use of public funding. However, when asked how much they would be willing to pay for Extension services in taxes, participants selected a range of answers below the actual cost of those services (Hoag, 2005; Lawrence & Mandal, 2016; Weiler et al., 2006).

To address its challenges and compete with private-sector consultants, Cooperative Extension may need to implement a fee-based service delivery system despite farmers' concerns and unwillingness to pay the total cost of its services. Nevertheless, are farmers ready for a fee-based delivery system?

## Conceptual Framework

How might farmers respond to the transition to a fee-based Extension service? This new approach to providing Extension expertise is a significant structural change from traditional program delivery methods. Extension professionals utilize the diffusion of innovation theory (Rogers, 2003) as the vehicle for adopting new technologies in agriculture (Koutsouris, 2018). Suppose Cooperative Extension were to implement strategies based on the diffusion of innovation theory to promote the adoption of a fee-based system. Would this new approach help alleviate the challenges faced by local Extension professionals and enhance the level and quality of services provided to producers?

## The Status of Extension in Georgia

In the state where we conducted this study, farmers produced over 13 billion dollars of agricultural products and services in 2022 (Kane, 2023). To maintain a high level of productivity in the agriculture industry, that state, with local and federal partnerships, has established a robust Extension system. In 2023, Extension professionals contacted 482,376 people and conducted 42,798 on-site consultations (University of Georgia Extension, 2023).

In the state where we conducted this study, agricultural producers currently do not pay for the advisory services they receive from agricultural Extension agents. They only pay out of pocket for lab services, where their local Extension office ships soil, water, plant, and feed samples to the University of Georgia labs, and a registration fee for organized programs or classes they choose to attend.

However, setting the fees for Extension services depends on the market. As demand and the cost of inputs fluctuate, the fee would also fluctuate (Laurent et al., 2006). If Cooperative Extension cannot match the market fee price, an Extension fee-based system becomes unworkable. Furthermore, while promising to make Extension advisory services more self-supporting, a fee-based system competes with consulting services in the agribusiness industry (Laurent et al., 2006). The human toll of a competitive market for advisory services is steep, driving qualified Extension professionals into burnout and subsequent departure from the profession (Feldhues & Tanner, 2017).

## Purpose

This study described agricultural producers' perceptions of establishing fee-based services for extension resources in Georgia.

## Methods

This study used a descriptive survey design to explain agricultural producers' perceptions about how fee-based services would limit their access to Extension resources. The study's target population included all agricultural producers in Georgia who had interacted with Extension personnel or participated in Extension programs and services. Based on 42,439 reported farms in Georgia (National Agricultural Statistics Service, 2019), the ideal sample size (95% confidence interval, 5% margin of error) was 381 respondents. The survey involved producers known by their county agents who attended an Extension event where a county agent shared the survey instrument or was on the county agent's mail/email list. According to Cypress (2017), purposive samples can improve the transferability of the results to the population. Extension's county-delivery system increased the odds of collecting responses from agricultural producers familiar with Extension resources (Fraenkel et al., 2012).

At the end of the data collection phase, 235 surveys were initiated, with 185 fully completed. Any respondent who completed more than two-thirds of the survey instrument was considered

a sufficient partial respondent and remained in the dataset for analysis, bringing the total number of responses to 222. These partial responses provided data points that spoke directly to the research question about methods of access to Extension resources.

Multiple choice questions asked respondents for their perceptions about the potential limited access to resources due to an entirely fee-based system or the cost of lab services. Using Vagias (2006) as our guide, we set the response anchors as not at all limited, slightly limited, somewhat limited, and very limited.

As a follow-up to the fee-based question, participants were asked what fee they would tolerate for troubleshooting services and selected a range of costs. The ranges were designed to encompass the average cost of a scout for peanuts, blueberries, and other crops on a per-acre basis. This was followed by several questions about whether participants had previously used a private consultant to scout crops, why they prefer a private consultant or commercial scout over a county agent, and whether they have ever participated in a Georgia Extension on-farm trial. Finally, the survey gathered data about gross farm income, commodities produced, and county of operation to reveal farm size and type trends.

Construct validity was established after the survey instrument was reviewed by three experts familiar with Extension agents' work. Face validity was confirmed when the survey instrument was piloted by 26 county agents and other practitioners working closely with Extension (School of Education & Human Development, 2020).

Using Dillman et al. (2014) as our guide, we emailed the anonymous link to the online Qualtrics (Provo, UT) survey to Extension offices and county agents across Georgia. The first follow-up email on September 7, 2022, contained another request for county agents to share the survey instrument with their producers, plus a printable version and a promotional graphic with a QR code. We sent a second follow-up email on October 27, 2022, and a final reminder on December 12, 2022. This last reminder was impactful as it yielded responses from 54 late responders.

We hand-coded open-ended responses into key themes or sentiments. Following spelling corrections and coding, we imported the dataset into IBM SPSS Statistics, version 29. For results clustered by commodity group, individual commodities were assigned to agritourism, forestry, fruits and nuts, livestock and aquaculture, ornamental horticulture, poultry, row and forage crops, or vegetables. The groupings were consistent with pre-determined groups within the Georgia Farm Gate Survey interface.

## Findings

### General Results & Demographics

Most of the 222 respondents reported as White (94.59%). Three respondents indicated they were Hispanic or Latino (1.35%) in addition to one of the other races. The average age was

54.34 years, compared to the National Agricultural Statistics Service (NASS) average of 58.9 years. The NASS data showed that 71.88% of agricultural producers were male and 28.12% were female. At the same time, this study included respondents who were, as a group, 66.7% male and 33.3% female – a perfect two-thirds and one-third split. About 81.2% of participants reported they have reliable internet at home, allowing them to access this survey and online Extension resources. The sample was considered representative of the target population.

Respondents indicated how long they have personally been involved in farming and how many generations their family has been farming. The most common answer for personal farming experience was *0 – 10 years* (36.0%), and a good portion of respondents were *4th-generation or more* farmers (33.3%), followed by *1<sup>st</sup>-generation* (26.6%). Slightly more than one-third of the respondents may be entirely new to farming or are part of a family's younger generation that has historically farmed. Of the 23 *Other* responses, 18 explained that their parents' generation skipped farming, four listed a generation beyond the fourth instead of selecting *4<sup>th</sup> generation or more*, and one respondent stated they do not farm but still utilize agricultural Extension resources for work.

Additionally, respondents shared how often they utilized Extension resources over the past five years. Most agricultural producers used Extension resources twice or thrice a year (42.3%) or monthly (29.3%). However, 3.2% reported they have not used Extension resources within the past five years, despite the survey being delivered through county Extension agents and the University of Georgia employees.

### Fee-Based Services

The prospect of fee-based services, or paying a fee for an on-farm troubleshooting visit by Extension professionals, was perceived as a limitation for agricultural producers. Over 74% of respondents indicated that if they were to pay for farm visits made by Extension professionals, paying for farm visits would make their access to Extension resources somewhat limited or very limited (see Table 1). In this scenario, gross farm income did appear to affect the participants' perceived limitations. Most participants with gross income less than \$1,000,000 selected somewhat limited or minimal access, whereas participants with farms grossing over \$1 million tended towards only slightly limited access due to fee-based services (see Figure 1).

**Table 1**

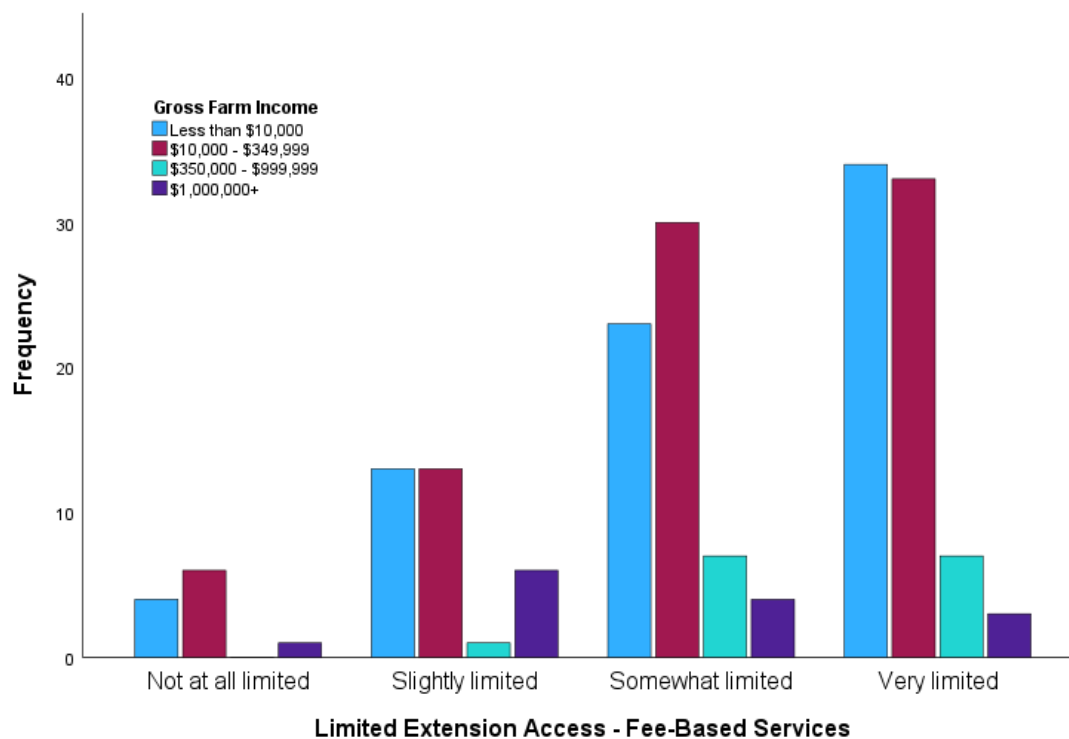
*Frequency and Percentage of Total (N = 222) for Perceived Limitation of Access to Extension Resources as a Result of Fee-Based Services*

Degree of Limitation	<i>n</i>	%
No response	9	4.1
Not at all limited	12	5.4
Slightly limited	36	16.2
Somewhat limited	73	32.9
Very limited	92	41.4

There were slight shifts in tendency when farms were categorized by commodity group. However, most selections remained somewhat limited or had minimal access. Farmers who focused on forestry, livestock, aquaculture, poultry, and row and forage crops indicated their use of Extension resources would be limited, followed by somewhat limited, and slightly limited. Most of the participants whose operations focused on agritourism, fruits and nuts, ornamental horticulture, and vegetables indicated that the use of Extension resources was somewhat limited, followed by very limited and slightly limited..

**Figure 1**

*Frequency for Perceived Limitation of Access to Extension Resources Due to Fee-Based Services, Clustered by Self-Reported Gross Farm Income (N = 185)*



### Fee Tolerance

We asked respondents to indicate their tolerance level for fee-based on-farm troubleshooting. An equal number of responses selected \$0 (32.4%) and \$1 to \$25 (32.4%), while 18.0% and 9.0% of respondents would tolerate fees of \$26 to \$50 and \$51 to \$100, respectively (see Figure 2)

**Figure 2**

*Frequency and Percentage (N = 222) for Tolerated Fee for a Troubleshooting Visit*



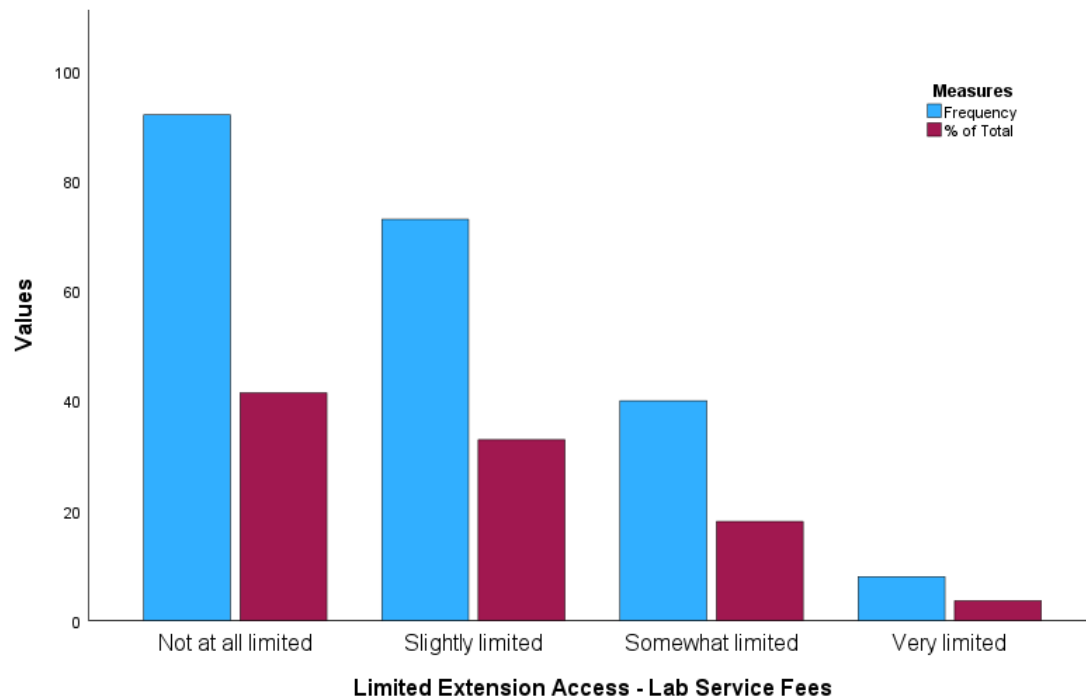
When clustered by gross farm income, most responses remained at \$0 and \$1 to \$25 as a tolerated fee. Farms grossing less than \$10,000 reported most frequently that they would accept a \$1 to \$25, followed by \$0 and \$26 to \$50. Those in the \$10,000 to \$349,999 and \$350,000 to \$999,999 brackets tended more towards \$0, followed by \$1 to \$25 and \$26 to \$50. Farms grossing over \$1 million appeared more divided, with their top selections split between \$0 and \$51 to \$100, followed by \$26 to \$50.

When clustered by commodity group, the same trends toward \$0 and \$1 to \$25 applied in most cases. However, vegetable growers indicated they would be more likely to tolerate a visit fee of over \$100 than a \$51 to \$100 fee. Row and forage crop producers showed a distinct drop-off in their preferences, where \$0 and \$1 to \$25 would mostly be tolerated, with little tolerance for any fee level above \$25.

Despite most responses showing that fees were primarily not tolerated for on-farm troubleshooting visits, responses suggested that lab services and testing expenses did not limit access to Extension resources (see Figure 3). Over 74% of participants indicated that lab service fees did not at all limit or only slightly limit their access. About 21.6% said that lab service fees charged through Extension made their access somewhat limited or very limited.

**Figure 3**

*Frequency and Percentage (N = 222) for Perceived Limitation of Access to Extension Resources Due to Lab Service Fees*



On a gross farm income basis, most responses also showed that lab services did not impact access to Extension resources. The only gross farm income bracket that reported their access would be very limited due to lab service fees, which was the less than \$10,000 income bracket.

### Utilization of Commercial Scouts

The questions included in the survey instrument offered valuable insight into the decision-making and Extension utilization of agricultural producers in Georgia. Most respondents have never used a commercial scout (57.2%) or have never used one but were considering doing so (7.2%). Only 27.5% reported using a commercial scout (see Table 2). Nearly 79% said they did not think commercial scouts provided more accurate information than ag agents.

**Table 2***Previous Use of Commercial Ag Scouts and Perceived Accuracy of Information (N = 222)*

Variable	<i>n</i>	%
<i>Have you ever used a commercial scout/consultant?</i>		
No response	18	8.1
No, but I am considering it	16	7.2
No, never	127	57.2
Yes, but not anymore	19	8.6
Yes, I still do	42	18.9
<i>Does a commercial scout/consultant provide more accurate information?</i>		
No response	18	8.1
No	175	78.8
Yes	29	13.1

We hand-coded an open-ended question about why or why not a commercial scout provides more accurate information than Extension professionals into central themes. For those reporting that a commercial scout does provide more precise information, the most common reason was due to their specialized training. In contrast, they considered agents more like generalists (see Table 3). A handful also mentioned that scouts provide more accurate information because they have "more skin in the game," from the standpoint that their pay or ability to be hired can fluctuate based on performance. The leading answers for those who believe that commercial scouts do not provide more accurate information were "my ag agent is better" or that agricultural agents and scouts offer the same information (see Table 4). Several participants also suggested that commercial scouts are inherently biased towards their company or associated product lines and are "only in it for the money."

**Table 3***Reasons Why a Commercial Scout Does or Does Not Provide More Accurate Information (N = 222)*

Variable	<i>n</i>	%
<i>Why does a scout provide more accurate information?</i>		
No response	187	84.2
Specialized training	23	10.3
Available / in my fields more	7	3.2
Skin (\$) in the game	5	2.3
<i>Why does a scout <u>not</u> provide more accurate information?</i>		
No response	142	64.0
An agricultural Agent is better than a consultant	19	8.6
Do not use	12	5.4
Scout and Agent are the same	11	5.0
Not educated enough in my commodity	9	4.1
In it for the money	9	4.1
Company/product bias	8	3.6
No local connections	5	2.3
It depends on the specific scout	4	1.8
Spread too thin over the territory	2	0.9
Too specialized	1	0.5

'Yes or no' questions regarding profits were also posed. Most responses showed that they think commercial scouts do not increase their profits and that agricultural agents do increase their earnings (see Table 4).

**Table 4***Indication of Whether Commercial Scouts or County Agents Increase Agricultural Producers' Profits (N = 222)*

Variable	<i>n</i>	%
<i>Does using a scout increase your profits?</i>		
No response	18	8.1
No	134	60.4
Yes	70	31.5
<i>Does using an agent increase your profits?</i>		
No response	20	9.0
No	50	22.5
Yes	152	68.5

Next, we asked participants why they chose Extension resources and provided any other commentary not otherwise captured in the rest of the survey. We also asked why they decided to use a scout, the results of which closely aligned with answers about why they think a scout

provides more accurate information than an Extension agent. Most pro-Extension responses cited high-quality information and services as the top reason for using Extension, besides being locally accessible, backed by research, and free or low-cost.

Three participants indicated they do not use Extension because of various perceived deficiencies within Extension. One statement said, "I cannot get the Extension officer to come to my farm. He's always too busy and never has time for me. I've finally given up and utilized other community resources." Another said, "I don't use them because I'm a beekeeper, and I feel that the University of Georgia Apiary Department doesn't help commercial beekeepers." A third respondent expressed concern over the lack of available funding for county operations and indicated that this was why they chose not to use Extension resources.

## Conclusions, Discussion, and Implications

Our findings conclude that agricultural producers were not adamantly opposed to a fee-based Cooperative Extension Service delivery system. Farmers in the state where this study was conducted could tolerate a moderate fee to access the knowledge and skills of Extension agents, especially if the consulting leads to higher yields and increased profits. This is consistent with the findings of Anderson and Feder (2007). The agricultural producers will significantly limit their reliance on Extension services if the Cooperative Extension Service moves to a fully fee-based delivery system, especially farmers who are unable to afford such services. Agricultural producers have a low tolerance for any fees charged for Extension agent consultations above a modest amount that covers a fraction of the actual expense of the services. Any abrupt and significant fee increase would likely lead to dissatisfaction and reduced engagement with Extension services. However, producers indicate they are willing to pay a small fee for lab assays and services if they perceive a clear benefit or value. This implies that the perception of the value of Extension services is a key element in a producer's decision to use Extension services.

Under the current funding model, agricultural producers believe that agents are a good value and benefit for their services. Extension agents are experts in their field and can transfer knowledge and skills to farmers, providing them with the information and resources they need to improve their practices and increase productivity. Agricultural producers who use commercial scouts instead of Extension agents do so because of concern about the quality of the service they receive from Extension. This implies that Cooperative Extension has not sufficiently identified and addressed these perceived quality issues.

Agricultural producers who use Extension services do so because of the free resources, troubleshooting, and competitively priced, high-quality lab services. Producers perceived immense value in research-based information available at no direct cost, a primary reason many choose Extension over commercial scouts.

## Recommendations

Cooperative Extension should continue to provide low-cost or no-cost services to agricultural producers, but should experiment by offering some services at a modest fee designed to recoup the cost of services rendered. Participants were largely unaware of free commercial plant disease diagnosis services, which suggests an opportunity for agricultural agents to promote this more thoroughly. The Extension should also continue a tiered service model where some services remain free to producers and additional high-value services are offered at a reasonable fee. Furthermore, Extension professionals should address quality issues associated with their services. This can be accomplished through further research and customer feedback surveys. Finally, Extension should focus outreach efforts on educating producers about the benefits of Extension services.

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