Journal of Agricultural Education, 65(2), 398-412
https://doi.org/10.5032/jae.v65i2.2453

Perception and Usage of Extension Service by Southeast Georgia Farmers

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Abstract

This study sought to provide insight into whether Georgia Extension meets the needs of its clients farming in rural areas, specifically row-crop farmers in rural Southeast Georgia. This qualitative study utilized a semi-structured interview of four purposively selected Southeast Georgia row-crop farmers. Three themes and seven sub-themes emerged from the data. Challenges facing row-crop farmers were identified as (a) surmounting the current culture surrounding row-crop farming, (b) facing a lack of representation and consideration, and (c) coping with uncontrollable circumstances. Participants' perceptions and usage of the Extension Service differed based on their views of the local Extension Service office or the Statewide Extension Service. Areas in which farmers identified they would like to see the Extension Service improve include (a) an increase in applied research projects and programming and (b) a more consistent Extension presence. Respondents indicated that challenges are increasing in areas where the Extension Service could assist. While the view of the county Extension agent was highly positive, the farmers' opinions of statewide Extension leadership were less optimistic. The participants highly regard the unbiased research-based information delivered through county Extension personnel. However, the service provided through neighboring counties and state specialists shaped different views of the Extension Service among the group. Recommendations include conducting localized needs assessments, professional development for agents and specialists that address current trends and implications in Extension, farmer participation in agent and specialist evaluation, and replication of this study in each of Georgia's Extension regions.

Introduction

The United States Congress established Extension through the Smith-Lever Act of 1914 to provide the public with accessible, reliable, research-based information based on the latest scientific research in a language that anyone can understand (Karina, 1985; Smith-Lever Act, 1914; University of Georgia Extension, n.d.). Historically, Extension's charge was to expand rural America's vocational, agricultural, and home demonstration programs by "serving citizens with the latest information and programs while addressing needs and technologies as they change over time" (University of Georgia Extension, n.d., "Bringing University Knowledge" section, para. 3). As time progressed, the question of Extension's longevity and sustainability became a concern and an area of focus in research studies (Martin, 2019; McDowell, 2004; Warner et al., 1996). The resulting body of literature built a strong case that Extension must broaden its support base to continue and remain relevant (McDowell, 2004). McDowell (2004) explained that broadening the support base means finding ways to serve and collect from new audiences. Extension researchers have conducted studies to identify trends to assist the organization in doing just that.

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Trend research in Extension has highlighted advances and shifts in knowledge, technology, social changes, populations, communication strategies, and more as opportunities for Extension to serve broadened audiences more efficiently (Caillouet & Harder, 2021; Carroll et al., 2022; Cochran et al., 2012; Donaldson et al., 2022; Galindo-Gonzalez & Israel, 2010). There are also implications for current and future efforts to revisit some of the more traditional content, as populations are re-engaging with the journey of their food from farm to plate and are engaging in more do-it-yourself projects (Donaldson et al., 2022; Perez, 2015; Radford et al., 2023). In the face of these shifts and changes, Extension agents have "held onto the importance of delivering science-based information" (Caillouet & Harder, 2021, p. 213). However, a study by Cochran et al. (2012) noted trends in increased information source competition and limited resources in Extension, thus highlighting potential challenges in meeting clientele's needs. With shifts in focus, new competitors, and more accessible information for everyone, recent research has focused on these new trends to allow for a better understanding of how Extension is adapting and changing. While this is appropriate, simply inquiring into what Extension does well and how agents are viewed by their clients can be argued to have fallen out of the forefront of the literature.

Study Context

Since its inception, Georgia Extension has engaged in the initial charge, continued to build lasting relationships, and adapted to changes in culture, clientele, and population demographics to interact with clients in new and relevant ways to address more comprehensive needs (University of Georgia Extension, n.d.). Though Georgia's highest-grossing industry is agriculture (Kane, 2023), the rural population in the state is decreasing, primarily due to urbanization and the concentration of people in discrete areas (U.S. Environmental Protection Agency, 2015). According to the population census conducted in 2020, Georgia has 21% of its population living in rural areas, compared to 32% in the 1990s (Jasperse & Watson, 2021). These statistics show that U.S. population growth in the last 30 years justifies Extension's shifted definition and purpose. While rural Georgia is still a part of the target audience, it has become a lesser part of the scope. The question arises: Does Georgia Extension still meet the current clientele needs in rural areas, considering the changing state and Extension dynamics?

Theoretical Framework

We used the diffusion of innovations theory (Rogers, 2003) as the framework for this study. Diffusion of innovations is a foundational framework for Extension-type efforts because it focuses on best practices for disseminating new ideas and technologies in a community (Hubbard & Sandmann, 2007; Rogers, 1963, 2003). Two main components of diffusion of innovation are adopter categories and attributes of innovations. Rogers (2003) proposes five categories of adopters, as found in Figure 1.

Early and late majority adopters are shown to be one standard deviation from the mean (average adopter), and the innovators, early adopters, and laggards are two to three standard deviations from the mean (Rogers, 2003). Early research efforts by Jones (1963) found that farmers typically reside in the more conservative adopter categories. Since then, progress has been made in the adoption of best practices in farm production, even as a portion of farmers in the United States still maintain a hesitant and conservative attitude toward the most recent technological advances (Baumgart-Getz et al., 2012; Masud Cheema et al., 2023; Pandit et al., 2012; Prokopy et al., 2008).

The attributes of innovations are a component of the diffusion of innovations process that contributes specifically to the adoption rate. These attributes focus on how the potential adopter views characteristics of the practice under investigation (Hubbard & Sandmann, 2007; Rogers, 2003). Rogers (2003) categorizes these attributes into five areas: complexity, compatibility, trialability, relative advantage, and observability. Table 1 describes each of the categories.

Figure 1

Bell-Shaped Graph Depicting Adopter Categories (from Rogers, 2003)

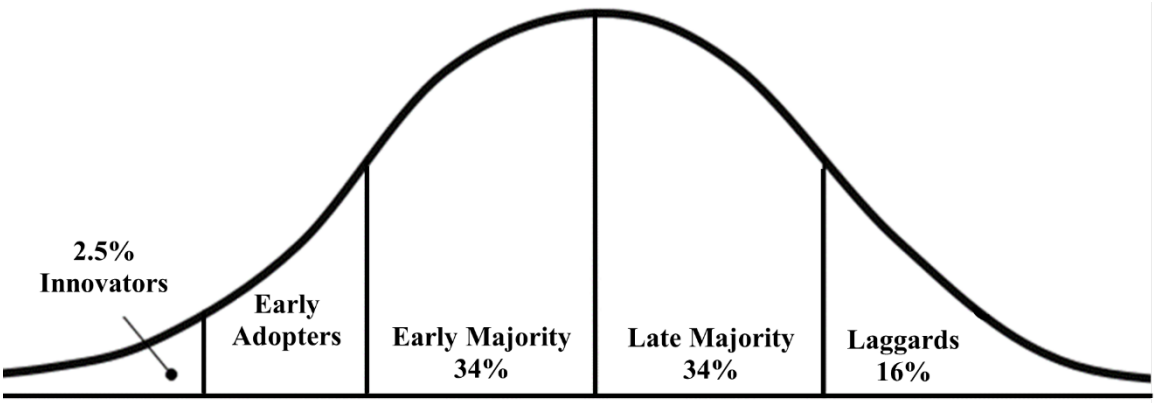

Table 1

Attributes of Innovations (Rogers, 2003)

Attribute	Description
Complexity	The degree of difficulty in understanding and implementing the practice from the perspective of the potential adopter.
Compatibility	Concerns itself with a host of factors relating to the degree to which the practice is compatible with the current objectives and philosophies of the program participant.
Trialability	The potential to experiment with the practice on a smaller, less intensive scale.
Relative Advantage	The possibility of increased income, reduced cost, or other factors may make adopting this practice advantageous over other alternatives, including doing nothing.
Observability	The degree to which the potential adopter has had the opportunity to see the practice implemented or the results.

The attributes speak to what Extension can offer its clients: a competitive advantage. A competitive advantage allows an organization to generate more value and impact than its competitors by (a) continuing to be engaged with individuals and communities to ensure early recognition of trends and emerging issues, (b) supporting scholarship and innovation, and (c) continuously improving processes and programming with a focus on clients (Martin, 2019). The author additionally found that the distribution network, client support, and product quality contributed to competitive advantage. Extension does this for farmers through several programming efforts. This includes, but is not limited to, hands-on demonstrations, on-farm research, and dissemination of information about new technology and practices. This approach allows

farmers in all adopter categories to experience innovation without any perceived risks and encourages trust between the agents and the growers (Rogers, 2003).

Study Purpose

Even with the attributes of competitive advantage at hand, identifying what topics and technologies are most important to farmers and how to best interact with them has become increasingly inconsistent as a result of Extension's broadened target audience, scope of services, and agents' broad areas of individual expertise (Velandia et al., 2010; Worley et al., 2022). We conducted this qualitative research study to provide insight into whether Georgia Extension meets the needs of its clients farming in rural areas, specifically row-crop farmers in rural Southeast Georgia.

Methods

We implemented a descriptive phenomenological approach with this study, as we sought to study what Husserl (2013) outlines as "how people describe things and experience them through their senses" (Patton, 2015, p. 116). More specifically, phenomenology can be summarized as the study of lived experience, or what we experience "without resorting to categorization or conceptualization, and quite often includes what is taken for granted or those things that are common sense (Husserl, 1970). The study of these phenomena intends to… perhaps uncover new and/or forgotten meanings." (Laverty, 2003, p. 22). Specifically, this study seeks to understand the participants' construction of reality regarding their challenges as farmers and the Extension services available to them.

Sampling and Recruitment

We chose Southeast Georgia row-crop farmers as the population of interest. The southeast portion of Georgia Extension covers 39 counties and is a primarily rural area, with only 15.4% of the counties being urban. This region was a prime location to gauge rural agriculturalists' perception and usage of Extension. Farmers have multiple sources of information at their fingertips, so it seems imperative to understand where Extension's efforts are meeting their goals and where opportunities are to meet the growers' needs better. Due to the study's methodology and objectives, a typical purposeful sample (Merriam & Tisdell, 2016) was selected based on farmers' geographical location and row-crop farming practices. No other selection criteria were considered. Four Extension agents in the Southeast Georgia District Extension Office assisted the research team by identifying a farmer they thought would be an ideal participant for the study.

Creswell (2013) suggests a reasonable sample size may range from 3–25 participants for a phenomenological study. We emailed four farmers and asked them to participate in the study. One farmer did not respond to the invitation. The agent that recommended this farmer offered a second farmer who agreed to participate in the study. The email outlined the research and gave an overview of what to expect during interviews and why their participation was crucial to this study. The solicitation email was inspired by the social exchange theory, which indicates that the likelihood of participation increases when individuals know their valuable role in the study (Cook et al., 2013). We gave participants five days to review the study's consent form. Once we had each participant's consent to participate in the study, we scheduled interviews through email or text messaging.

Instrumentation and Data Collection

We approached the data collection processes with an emergent design strategy to allow for a natural openness between the clients and the interviewer (Merriam & Tisdell, 2016). We created a semi-structured interview protocol to assist the interviewing researcher in guiding the data collection process. The flexible nature of the semi-structured interview protocol allowed the researcher to create a natural flow to the conversation and explore concepts that emerged during the interviews (Merriam & Tisdell, 2016). Extension literature and researchers' experiences in Extension informed the initial content of the protocol,

and the questions were reviewed by a panel of Extensionists. Questions solicited information regarding participants' farming operation history and goals (e.g., *Please describe your future goals for your farming operation*.) and their experiences with and perceptions of Extension services (e.g., *How has your relationship with Extension changed or stayed the same since the relationship began? What can Extension do better in terms of helping farmers succeed in farming?*). Following simultaneous data collection and analysis procedures, the protocol content was reviewed and updated as themes emerged in the data collection process (Merriam & Tisdell, 2016).

The lead researcher interviewed the participants on their farms to create a safe and comfortable environment for the participants. Upon arrival at the participant's farm, the farmer signed a printed consent form before the face-to-face interview. The researcher recorded the interviews using an audio recording device and handwritten field notes. We destroyed audio recordings after transcription. Interviews generally lasted between 60–100 minutes. We terminated data collection after four interviews based on data saturation, available participants, and study resources (Lincoln & Guba, 1985; Merriam & Tisdell, 2016).

Identifying information was removed or coded to provide confidentiality. The participating farmers represented different age ranges, had different experience levels, different crop rotations, and farmed in separate counties, as outlined in Table 2. These have allowed for a better representative sample of the diverse population of Southeast Georgia row-crop farmers. We gave each participant a pseudonym to ensure confidentiality.

Table 2

Descriptors of Participants

Pseudonym	Approximate Age	Years of Experience	Crops	County
Darrell	45	Grew up on a row-crop farm. Full-time since 2002.	Corn, Cotton, Peanuts	Bulloch
John	30	Grew up on a row-crop farm. Full-time since 2013.	Corn, Cotton, Soybeans, Wheat	Effingham
Bo	40	Grew up on a row-crop farm. Full-time since 2015.	Cotton, Peanuts	Screven
Abe	35	Grew up on a timber farm. Full-time since 2016.	Corn, Cotton, Peanuts, Soybeans	Long

During the interview session, we asked farmers about their history related to farming, what led them to their current role, and the challenges they faced while farming. Questions then transitioned to their experiences with and views of Extension. In answering these questions, they framed their experiences as stories (Lewis & Hildebrandt, 2019). These stories are quintessential in qualitative research, as stories are central to human experience and understanding (Lewis & Hildebrandt, 2019).

Data Analysis

We followed the phenomenological data analysis techniques of bracketing, the setting aside of bias and judgment; horizontalization, the treatment of all data with equal importance; clustering, the grouping of data into themes and subthemes; and textualization, the writing of the essences (Merriam & Tisdell, 2016). The interviews were transcribed verbatim using Otter.ai, an artificial intelligence text transcription software, and were reviewed for accuracy by the lead researcher. NVivo, a qualitative data analysis software, was used to assist in the data analysis.

At the onset of data analysis, the researchers engaged in bracketing by writing their reflexivity statements. Additionally, using the NVivo software facilitated bracketing by adding a level of removal between the researchers and data in the initial clustering process. During horizontalization, we examined the interview transcripts, the lead researcher's field notes, and notes taken during the simultaneous data collection and analysis process with equal weight. We followed deductive and inductive strategies to code the data for clustering, as Saldaña (2021) outlined. We deductively identified three parent themes for inductive analysis of the participants' stories in NVivo. The researchers examined the final data analysis for accuracy before textualizing the identified essences.

Study Rigor and Ethics

We established study rigor through internal validity, external validity, and dependability strategies. Two independent, external peer reviews during data analysis supported internal validity. This process allowed the researchers to check personal biases and confirm data themes (Lincoln & Guba, 1985). External validity, or "the extent to which the findings of one study can be applied to other situations" (Merriam & Tisdell, 2016, p. 253), was supported through purposeful sampling and adequate description of the sample and themed data to provide enough context and information for the reader to make transferability possible. Dependability determines if "results are consistent with the data collected" (Merriam & Tisdell, 2016, p. 251). This was upheld through peer examination and by creating and maintaining an audit trail for confirmability and dependability audits. The University of Georgia Institutional Review Board reviewed and approved this study, including the guided questions used in the interview and the template email sent to the farmers.

Researchers' Reflexivity Statement

The researchers in this study have experience in Extension. In our work with clients, we have developed strong preferences for providing high-quality and timely information and advice to clients. We live, work, and participate in rural communities where agriculture is the predominant industry, and the populations reflect the participants in this study. Two researchers in this study have a formal influence and authority in Extension, which can impact their relationships with community members. However, we are committed to actively listening to the voices and experiences of those we work with, empowering them to be equal partners in the research process. We acknowledge potential unintended consequences or harm arising from research activities.

Consequently, we critically evaluated the potential risks and benefits of this study. We sought to mitigate any adverse impacts and promote positive change by engaging in strategic qualitative study design and rigor strategies and upholding ethical practices. We respect the rights and autonomy of participants and prioritize their well-being.

Limitations

We recognize the potential limitations in this study and made efforts to mitigate their potential impacts through study design and research processes when possible. Data collection was terminated due to study resources, including time, available personnel, and participants; however, inductive thematic saturation supported the decision to cease data collection (Lincoln & Guba, 1985; Urquhart, 2013; Given, 2016; Merriam & Tisdell, 2016). Saturation in this context refers to the point at which additional data does not lead to any new emergent themes (Urquhart, 2013; Given, 2016). We acknowledge the potential impact of sample size and general demographic representation of Southeast Georgia farmers on the data. We also note that some participants may not have been able to comfortably or adequately articulate their experiences with Extension to the interviewer, a known Extensionist. Because of the regional focus of this study and the limited number of participants, we acknowledge that the findings are not generalizable in a quantitative understanding of the term. Readers are, therefore, cautioned not to generalize the results beyond the scope of this study. We do encourage the reader to engage in qualitative extrapolation, or going "beyond the

narrow confines of the data to *think about other application of the findings*…modest speculations on the likely applicability of findings to other situations under similar, but not identical, conditions" (Patton, 2015, p. 713).

Findings

In our efforts to provide insight as to whether Georgia Extension meets the needs of its clients in rural areas, specifically row-crop farmers in rural Southeast Georgia, three themes arose from the data set: (a) predominant issues faced by southeast Georgia row-crop farmers, (b) perceptions of Georgia Extension by Southeast Georgia farmers, and (c) potential areas of improvement for Georgia Extension to meet Southeast Georgia farmers' needs. Seven sub-themes emerged across these research objectives.

Predominant Issues Faced by Southeast Georgia Row-Crop Farmers

Through the interview process, participants identified challenges they encountered in their operations. We themed these challenges as (a) surmounting the current culture surrounding row-crop farming, (b) facing a lack of representation and consideration, and (c) coping with uncontrollable circumstances while farming.

Surmounting the Current Culture Surrounding Row-Crop Farming

Farmers thought about how the current culture of Extension programming focuses on row-crop production practices. Participants expressed the need to break the current row-cropping model in Southeast Georgia. As the cost of farming and inputs have risen, the continued desire to have growers aim for higher yields has translated to pressure on growers. John stated,

> We're all guilty of looking at what everybody else has got. And we're also guilty of believing so much in our operations, technology that we rely on today, and products that are available, that we almost get stuck in this rut to where we think that bad things aren't supposed to happen anymore. Nobody makes base-grade cotton anymore. Well, you
> know, how does that work on somebody's mental state?

Abe echoed John by sharing a memory from a few years ago. He saw other farmers in their farmer Facebook group who completed planting operations on time and were celebrating. He remembered looking at 200 more acres to plant, and with the insurance deadline for planting fast approaching, he felt stressed and angry. Bo said he dislikes the "farmers feed the world" statements meant to instill pride in farmers. He pointed out that while farmers feed communities and sell their produce or animals elsewhere, feeding the world is not precisely what a row-crop farmer does. Bo said, "No, we don't have to feed the world. That's not my job." The pressure felt while row-crop farming was expressed heavily through the findings. Bo brought up the aspect of Extension holding the keys to break that culture—the culture of having to do farming a certain way. Darrell summarized the issues with the pressure and current culture surrounding row-croppers that goes beyond the labor aspect of farming with the statement, "And the hard part isn't really in it [doing the work]. It's the thinking about it."

Facing a Lack of Representation and Consideration

Urbanization is starting to take hold in counties with rapidly increasing populations. The farmers all explained that they were beginning to feel the pressure of fighting to farm. Darrell stated,

> [Urbanization] that's where our stress comes from. Farming up around all these houses and everything. I mean, I'm still in a lawsuit with someone that sued me down in a nearby County for allegedly spraying their tomato plants. It stresses me out. Who's the next person that's going to sue me?

Darrell also shared his thoughts on how urbanization and a lack of understanding in the community could impact his kids' futures.

> That's kind of hard to think about that. My kids won't have the same opportunity that I had here to do this [farm]…. And they tell you they want to be a farmer, but when they get old enough to do that, what do you tell them then? I don't know if there'll be anything for them to farm. We don't own enough land for one person to farm. It's not a sustainable operation as it stands today.

Bo shared similar thoughts, saying, "I have one kid. If she wants to be here, maybe there'll be an opportunity for her in the future, but it's not guaranteed… there's barely enough here for us now." Abe and John mentioned how much smaller their field sizes are in comparison to other areas of Georgia. They must farm whatever they can, and not all the available land is suited for row crops, which makes things even more difficult. Darrell felt he was left out on a limb, not having the support he needed locally. Darrell shared this,

> I tell them [County Officials] my concerns. But if they don't know nothing about it. They do not care. They do not understand what kind of liabilities and issues that we face. They don't understand, and they don't care enough to try. And I'm like, why do I not matter enough?

Coping with Uncontrollable Circumstances While Farming

Weather emerged as an underlying cause of most intractable problems, as discussed by each farmer. Though the weather is the cause, Bo outlined the subsequent issues that arise by saying, "I'd say the most stressful parts of it are having a good crop and then not being able to get the crop." Abe said the same, having missed several fungicide applications due to heavy rainfall and poor field conditions. Weather impacting field conditions has even been a factor in Darrell letting go of some of his fields. He said, "I mean, then in the County next door, the last year we were down there, it got so wet, we couldn't get in the field." Participants also said that extreme heat and drought during parts of the growing season and hurricanes are issues they had to overcome. Bo expanded on what it feels like when these uncontrollable circumstances occur by stating,

> Accepting the fact that hey, we did a good job, but we're not gonna have the pounds to show for it. Or okay, we got the pounds, you know, we had a good year in terms of pounds, but the prices just suck, you know, so that's been kind of stressful to deal with.

Perceptions of Georgia Extension Service by Southeast Georgia Farmers

When we asked the farmers about their experiences with and perceptions of Extension, their responses differed based on the level of Extension—local or state—being discussed.

Perceptions of the Local Extension Service

John and Bo grew up with their Extension agent coming and assisting on the farm. John discussed the meaningful relationships built with their Extension agents over the years. He pointed out that not all the agents were a good fit for the community, and this hindered the ability of agents to relate to their clients.

> I still feel the same way about Extension as I've always had. We've had multiple agents since the first agent I met. Nothing against them personally, but we just really didn't have that personal relationship. We currently have a pretty good agent, and he's up and coming, seems to be very motivated, very willing to learn and stay on the cutting edge. That's something we really appreciate in this county and seems to be a good fit to us.

Darrell learned about Extension through 4-H, which he explained helped him grow in confidence. It was where Darrell was around kids like him in his youth—the same passions, backgrounds, and ambitions. He attributes his success in school to being brought up in 4-H and their agent's impact in creating a tremendous 4-H program. Abe had not experienced the Extension Service until three years prior to this study.

> I had heard about the Extension Service when I started farming, but I had no idea what it could do, or how it was run, or what it was even for, really. 2020, that was when things started changing…I was getting a very good idea of, wow, I wish my County had one of these. You know, for us [that

> County Agent and I] to be this close for three years, it sure seems like we've had a lot of in-depth conversations, more so than most people I've known since kindergarten.

Being a new farmer exposed to Extension for the first time, Abe reflected on receiving a simple peanut production guide, "I'm not gonna say anybody takes anything for granted, but I had never had that, so that was big."

When asked what comes to mind when they hear "Extension Service," Darrell responded, "My agent. somebody to call, someone there you can call when you don't know what to do." Abe elaborated on why he calls his agent,

> I feel like an Extension agent can be—if anybody can be unbiased, it would be an Extension agent. They're not trying to sell you anything. They're trying to help you. Now that I have one, I like it.

Darrell, John, and Bo used "consultant" when describing their Extension agent. All four farmers believed that when agents visit the farm and immerse themselves in the farming operations, it helps build trust and strong relationships. Darrell explained his time and experience with his county agent,

> I know what it's like not to have an Extension agent. And I can see the tremendous amount of value that there is in it because when you have one and have a good one, it's incalculable. I can't tell you how much how much money our agent has probably made us with just diagnosing a problem and telling me what the right thing is to use.

The farmers also all viewed their local Extension Service as sources of truthful, unbiased, science and experience-based information, even as far as being described as giving the "best information" by Darrell. All the farmers mentioned using the local Extension Service as a resource serving broader needs than row-crop production practices. Darrell stated, "I don't know what to spray on the [lawn] grass to kill the dollar weed… whenever my wife is fussing because the yard has weeds in it… But [our agent] does."

Perceptions of Statewide Extension Service

Darrell expressed his opinion of Georgia's Extension Service saying, "I really do think we have the best Extension Service in the whole nation." John listed specific benefits the Georgia Extension Service provides, such as the pesticide handbooks, production manuals, and publications available to growers. However, he continued by explaining his positive and negative views of production meetings. "Extension is very valuable to us year after year to give us these [commodity] update meetings… to talk about new challenges that are on the rise because we want to be ahead of the curve." The negative experience at a production meeting left John feeling like his farm was insignificant,

> Georgia Extension is really downplaying certain crop production in the state…. It says a lot about how Extension feels about certain crops when your specialist bolts to downplay to a grower and say, 'Well, there's only so many acres planted in the state of Georgia… so they [issues with that crop] are not that important.' No matter how big or how small a client you're talking to, you don't downplay anything they do on their farm. To that man, that might be his livelihood.

Bo also shared his experience with statewide Extension, mentioning his displeasure with how some state specialists have talked and interacted with him. He used "arrogance" when describing "tenure Extension folks." He further explained how that disappoints farmers and has changed their view of Extension at a state level,

> Most of my problems, in general, have been more of a broad problem with Extension relating to the specialist. I used to think, "We got some help here." Once I started doing this full-time, the thought has changed to "We may have some help here." The service is not as open-minded as what I thought they were and what I think it should be.

Perceptions of the Gaps Between Georgia Extension Service and Fully Meeting Southeast Georgia Farmers' Needs

The farmers expressed two areas of improvement for Extension services: (a) an increase in new applied research projects and programming and (b) a more consistent Extension presence.

More Applicable Research Projects and Programming

All four participants desired localized research conducted on their farm or nearby. The farmers all responded that on-farm field trials could be one of their farms' most significant contributions received from the Extension Service. Each grower indicated that the research stations are not close enough to accurately represent growing environments that can apply to them. Bo gave an example to explain this thought further,

> Nothing's extremely local to go off of [research-wise in conservation practices]. They've done a real good job; they've been available and working to help a farmer. But I want part of the narrative to change and the way they go about help.

To further express the importance of on-farm trials, Darrell and Abe shared how much of a stress relief on-farm trials work with agents. It freed them up to do what they needed to get done, and they could trust it was left in good hands to plan and execute. Darrell also added,

> East Georgia is just different… we don't get all the support we need on the research side out of Tifton and it's not their fault. They can only do so much, and they do it…where they are at.

Darrell also highlighted the need for financial literacy, business planning, and farm management programs. He expressed the desire to be able to pick up the phone and call their agent to ask business and budgeting questions, such as, "What is my fixed cost supposed to be given this is my operation?" Based on the business aspect, John raised two needs in this area. The first is to educate those interested in farming about the financial support and resources someone can afford to start row-crop farming. He explained that this is important, especially in his county, where the number of farmers is rapidly declining. John also expressed the need for estate planning resources,

> [Farmers need to conduct] Estate planning, [because of] their lack of secession plans, and the lack of control. And that's something that doesn't get talked about much at all either, but it's a very real thing. And it's detrimental to families. That tears families apart. It tears American agriculture apart.

Uniform Extension Presence in County

Growers expressed that there needs to be more uniformity in Extension from county to county. John explained that the Extension administration discontinued having production meetings in every county, and county officials must request production meetings. He reflected,

> I think that if we can have more localized meetings, it would be not only more helpful to our growers, but it might even help with participation out of our county. Nothing against the neighboring counties and having meetings over there, but you lose that personal connection with Extension or your Extension agent.

John continued by saying that there is a level of social anxiety for some growers to have to go to a county that is not theirs, sit in a room of farmers with twice the yields and infrastructure, and even sit beside a grower in that other county that has been steady renting up all the usable acres in his [John's] county. Abe also mentioned a similar problem with visiting an Extension office that is not in his county.

> I had to go to another county to seek help, and I kind of looked at it like they probably thought, "Oh great, here comes this out-of-county farmer wanting to see what kind of programs are available. They are going [to] cut our local farmers out of it."

Abe explained that he also had to travel over an hour and a half to the mandatory pesticide meeting because budget efficiencies required fewer and more regional meetings.

> And if you miss the class, you gotta go another two hours to the closest one. So, if something were to come up that day that I missed it, well, now I am having to drive further to another class. If you

> take somebody that their primary means of income is not 100% relying on the farm and they've got another job, that's when it becomes hairy.

This discussion transitioned to each farmer expressing the need for the county agent. John stated, "I think it's kind of sad…that there is not as many Extension offices or services as available as it used to be." Abe shared what it was like before meeting his county agent. "I did a lot of stuff wrong. I mean, a lot of stuff wrong, like a plant date starting in June. It was kind of like, wow, what in the world happened? Everything." Darrell shared how, even though he had an agent, he knew several farmers who either did not have one or their agent did not attempt to have a relationship with them. The farmers acknowledged the hiring struggles with Extension agents, as they have seen agent turnover in nearby counties. Darrell noted,

> I know that [agents] are partially compensated, at least in some counties, by the county. And I'm sure that's how they got our agent now to come here. And I got no problem paying property taxes to pay my Extension. However, every county can't do that.

Abe summarized, "They need to…hire more [agents]. So that everybody can just have a better experience."

Conclusions and Recommendations

The findings of this study demonstrate that Georgia Extension is engaging with its row-crop farmers in the Southeast region of the state, providing them with opportunities for competitive advantage, as described by Martin (2019). The agent is well-positioned to inform farmers about newer management practices and technologies. Each farmer referenced their agents as having the information they needed to succeed in their operations and residentially. However, each spoke more about the importance of the quality of the farmer-agent relationship. Rogers (2003) highlights the importance of trust between the diffuser and adopter to facilitate the diffusion of innovations. Each farmer indicated they currently have or have had a positive relationship with their Extension agent. They explained that the quality of an agent's performance was essential in developing rapport with farmers. For John, the inconsistencies in agent knowledge were enough to limit the use of Extension to nothing more than production meetings and publications.

Extension has traditionally set itself apart as a source of unbiased research-based information that farmers can trust (Caillouet & Harder, 2021). Each of the farmers spoke to the value of the information and expertise they receive from their local agent. Abe specifically spoke about how the lack of Extension services earlier in his career resulted in him doing "a lot of stuff wrong," and John noted the decline in Extension presence and services from his perspective. What farmers like Abe and John may be trying to communicate to Extension leaders and policymakers is that their trust in Extension is only as strong as the knowledge, skills, and availability of a local agent. According to Rogers (2003), these components can affect farmers' engagement with and, ultimately, their decision to adopt or pass on an innovation.

The findings revealed that the professional disposition of the local agent was also a factor. Among the participants in the study, the most favorable experiences with agents were those where the agent demonstrated a professional disposition to continuous improvement and problem-solving. Agents gave participants in this study the impression that they were self-reflective, continuously seeking ways to improve the delivery of Extension programs and services. John and Bo spoke about their appreciation for and the value of Extension. However, they also had experiences with state specialists that left them feeling that the Extension Service at a state level is not pushing hard enough for innovation and applicable research and that their operations were insignificant. Growers' experiences with Extension could be improved to establish trust, meet the clientele's needs, and provide them with the competitive advantage they desire to be successful (Martin, 2019; Rogers, 2003).

This study's findings are consistent with those of Galindo-Gonzalez and Israel (2010), who state that the type of contact between agents and clients significantly affects both the quality perceived by the clients and the outcomes from their experiences, but not their overall satisfaction. The participants experienced overall satisfaction with the Extension Service, but this satisfaction did influence their views on the current quality of information and service provided by local agents and specialists. While overall satisfaction has not changed, the negative experiences with the Extension Service can reduce the competitive advantage with private consultants in the same fields (Cochran et al., 2012; Martin, 2019).

Recommendations for Practical Practice

The findings suggest that more localized needs assessments of row-crop farmers may be required to understand better the information and expertise they require to be successful. A study by Caillouet and Harder (2021) highlights the location-specific nature of needed professional development to meet clientele needs in Extension. Localized findings could then be shared to determine transferability to other locations. Topics identified in our study include succession planning, financial literacy/business planning, farm management, disease management, weed control, precision agriculture, fertility, and conservation. These topics were identified for the specific geographic area within this study and could be different outside that area.

A second recommendation for practical practice is that Extension policymakers should provide for professional development designed to improve agents' and specialists' productivity and professional disposition. As the workload for Extensionists increases and, in many cases, resources decrease, professional development that assists them in navigating these implications, including work-life balance, should be considered for long-term success and retention. This aligns with recommendations for practice in studies of trends and implications for Extension (Cochran et al., 2012).

The findings of this study highlight the importance of the relationship between Extensionists and the producer and how that relationship may differ by location. To better reflect the successes of agents and specialists as change agents (Rogers, 2003), a third recommendation is to include farmer feedback in the assessment process. Regarding agents, not all county offices operate the same, so statewide performance standards for agents may be too difficult for Extension administration to gauge the agent's effectiveness at a local level. Regarding specialists, the localized farmer feedback could provide Extension administration with more holistic and accurate performance data for evaluation.

Recommendations for Future Research

The specialists' interactions with the farmers, expressed by those interviewed, suggest that the specialists also play an essential role in farmers' view of Extension. Based on the respondents, researchers should examine the uniformity of specialists' efforts, expectations, and quality of service provided. The attributes associated with adopting new practices and management strategies rely heavily on the quality of the information and the delivery (Rogers 2003; Hubbard 2007). Two final recommendations are on the replication of this study. An overarching takeaway from this study could be that Extension clientele all have life experiences that shape their views and opinions of the Extension Service. Adapting the study to other states or regions could provide insight on a more applicable basis. Replication of this study in each of Georgia's four Extension districts to explore factors of regional challenges, perceptions, and needs by row-crop farmers has the potential to describe further the perceptions of Georgia Extension by row-crop farmers.

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