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Farmer, Agent, and Specialist Perspectives on Preferences for Learning Among Today's Farmers

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Abstract: Few studies have examined the types of educational delivery methods preferred by farmers (Eckert & Bell, 2005; Eckert & Bell, 2006). The research project reported here explored the preferred learning methods of farmers in Louisiana, Tennessee, and Virginia. Data on learning methods collected directly from farmers were compared with preferred teaching methods of Extension agents and specialists. The findings should shape agent and specialist perspectives on appropriate educational delivery methods when educating farmers and working towards farmer adoption of new practices.

Few studies have examined the types of educational delivery methods preferred by farmers (Eckert & Bell, 2005; Eckert & Bell, 2006). Such studies have typically used quantitative methods for very specific groups of producers. In contrast, the participatory action research project reported here explored the preferred learning methods of a variety of farmers, including rice, beef, tobacco, dairy, and organic fruit and vegetable producers in Louisiana, Tennessee, and Virginia. Data on learning methods collected directly from farmers were compared with preferred teaching methods of Extension agents and specialists. Because most educators tend to teach the way they prefer to learn (Davis, 2006), the findings should shape agent and specialist perspectives on appropriate educational delivery methods when educating farmers and working towards farmer adoption of new practices (Hall, Dunkelberger, Ferreira, Prevatt, & Martin, 2003; Rogers, 1960). While much research is available on farmer learning preferences, such data must be updated because farmers' demographics and information technologies are constantly changing.

Methodology

Using a participatory research model, a steering committee of farmers and Cooperative Extension specialists and agents guided the project in each state because participatory research often garners more valid data than traditional researcher-centered approaches (Gillespie & Gillespie, 2006; Greenwood, 1993). The committees helped determine research methods, assisted with focus group participant recruitment and logistics, and assisted with data collection, analysis, interpretation, and dissemination of results.

As an illustration of this participatory approach, steering committee members reviewed key themes for completeness and accuracy. To gain enough perspectives across three states (Krueger & Casey, 2009), 15 focus groups of 94 farmers and 21 Extension agents/specialists were conducted in Louisiana, Tennessee, and Virginia. Focus group participants also completed a written survey during the interview about their learning method preferences. Data analysis and interpretation followed steps outlined by Bogdan and Biklen (2003), including using analytical questions for the focus groups, such as, "How do you go about solving a problem on your farm?," "Do you prefer to learn alone or in groups and why?," and "How do you prefer to learn a new farming method or way of operating?"

Findings

How Do Farmers Prefer to Learn?

Eighty-six of 94 farmer focus group participants completed a survey and discussed the ways they prefer to learn. The top six preferred learning methods were: hands-on (99%), demonstration (96%), farm visit (94%), field day (88%), discussion (87%), and one-on-one (85%). Farmers had mixed preference for online-Web, newsletters, books/manuals, on-farm tests, meetings, and lectures. Finally, four ways these farmers do not prefer to learn are: games (80%), comics (78%), role playing (77%), and radio (63 %).

What Are Extension Agent/Specialist Perceptions of How Farmers Learn?

Twenty of 21 agents/specialists who participated in focus groups completed a survey and discussed the ways they believe farmers prefer to learn. The top five preferred learning methods, as perceived by agents/specialists, were: farm visits (100%), one-one-one (100%), demonstrations (95%), field day (90%), and on-farm tests (90%). Mixed preferences were discussion, networking, question and answer, workshops, experiment, and hands-on. Agents/specialists indicated that farmers least often preferred: comics (80%), role-playing (80%), and games (75%).

How Are Agent/Specialist and Farmer Learning Preferences Different from Each Other?

In focus groups, farmers' top preferences for learning methods did not totally match agent/specialist perception of how farmers prefer to learn (Table 1). This was also found in a survey of Virginia Extension agents/specialists, where agents and specialists indicating most often used the following with farmers: demonstration (96%), lecture (88%), field trip (71%), experiment (67%), and problem solving (58%). Agents and specialists responding to the survey said they least often used the following teaching methods with farmers: online presentation (0%), creative arts (2%), debate (2%), online tutorial (2%), and simulation (4%).

Table 1.
Comparison of Agent/Specialist and Farmer Perceptions of Farmer Learning Preferences

	Agent/Specialist Perception of How Farmers Learn	Farmer Response
Prefer	<ul style="list-style-type: none"> • Farm visit (100%) • One-on-one (100%) • Demonstrations (95%) • Field Day (90%) • On-farm test (90%) 	<ul style="list-style-type: none"> • Hands-on (99%) • Demonstration (96%) • Farm visit (94%) • Field Day (88%) • Discussions (87%) • One-on-one (85%)
Not Prefer	<ul style="list-style-type: none"> • Comics (80%) • Role-Playing (80%) • Games (75%) 	<ul style="list-style-type: none"> • Games (80%) • Comics (78%)

		<ul style="list-style-type: none">• Role-Playing (77%)• Radio (63%)
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Teaching methods used with farmers often depend on the individual agent and specialist, the context, or the farmer's type of business. One agent said, "We all know what is best for teaching farmers, but we don't always do what is best because of the constraints on our time."

What Should Extension Agents/Specialists Change or Reinforce in Teaching Methods or Educational Experiences to Align with Farmer Preferences?

For meaningful educational experiences and opportunities, farmers want the following from Extension.

Help with Interpreting Information

- Unbiased opinions
- Translate information into lay terms
- Validate or disconfirm information from other sources
- Help farmers understand how to apply information
- Remember that farmers have a short attention span
- Realize farmers are kinesthetic learners

Knowledge

- Research-based knowledge
- Knowledgeable agents and specialists
- Participation in and use of Extension/Land Grant research
- Technical assistance and advice to improve marketing

- Expanded educational offerings in both content and process
- Cutting edge and relevant
- Farmers seek out trusted sources of information
- Extension is a valued information provider, but may not be the primary provider
- Increase online learning resources

Relationship Building

- Agents and specialists need to create networks between agricultural groups and service providers
- Agents and specialists need to build a relationship with farmers
- Organize farmer-to-farmer networks
- Provide opportunities for socialization as part of educational events
- The needs of female and organic farmers are not being met by Extension
- Hire agents/specialists with people and group process skills

Support

- One-on-one attention on the farm
- Agents who honor and respect farmer's lifestyle goals and values
- Be available for immediate problem-solving
- Increase support for Extension so agents can spend more time with farmers
- Be sensitive to all types of agribusiness

- Know the audience they are working with
- Focus education on the local context
- Realize the agricultural industry is changing

Time and Money

- Provide timely research results so farmers can quickly use them for decision-making
- Help farmers save time and money
- Provide educational programs that reveal the economic feasibility of practices

Agents and specialists want Extension to understand and/or do the following to support better learning for farmers.

Dynamics of Learning

- Learning is what you do with information
- Farmers collect information in many places and ask the agent to check it
- There are a wide variety of learners and ways they prefer to learn

Provide and Extend Resources

- Technology resources for agents/specialists, including instructional technology
- Have "master" programs to train farmers and/or volunteers to help deliver Extension education.
- Set up strong mentoring programs for new agents

Recognize and Remove Barriers

- Better communication between specialists and agents
- Intense time helping new farmers and farmers new to the area

- Eroding and fluctuating Extension budgets are compromising Extension's ability to use farmers' preferred learning methods
- Streamline reporting requirements
- Agent turnover, age, and experience affects the ability to teach farmers
- Job demands change as demographics and the nature of the work changes
- Agents assigned to larger geographic areas have more difficulty building local trust

Discussion

The following observations based on the focus group discussions with farmers, Extension agents, and specialists should enhance farmer learning.

Provide Relevant and Localized Teaching

Teaching methods should be relevant to the farmer and his/her context. Towards that end, agents should take into account the producers' amount of experience with farming, their level of education, and their geographic location. Further, information disseminated to farmers should be understandable regardless of education and experience levels and specifically tailored to their context.

Connect Farmers and Experts

The nature of Extension work is changing. Agents and specialists must meet the needs of a wide variety of producers from conventional agriculture to alternative agriculture to part time farmers and those who hire others to work their operation. Extension is no longer seen as the only source of information and education for farmers. Therefore, agents and specialists increasingly need to facilitate farmer-to-farmer networks and other group processes to help farmers and experts learn from each other.

Provide Connected, Trusted, and Knowledgeable Agents and Specialists

Extension agents and specialists need to be well connected to agricultural groups, agencies, and resource people. They should also have a wide variety of agricultural content and build deep and trusting relationships with a diverse array of farmers.

Honor Farmers' Values

Agents and specialists need to be willing to work with farmers who hold a wide range of values and use a variety of production methods.

Care About and Respect Farmers, Their Goals, and Their Lifestyle

Farmers appreciate agents and specialists who take time to show they care about them as individuals, their profession, their dreams, and who they are in the world. Agents and specialists need to understand farmers and their agribusinesses before they are ready to learn with and from them. Agents and specialists also need to understand farmers' work ethic and values before they start teaching.

Farmers Enjoy Teaching Each Other

Peer teaching and learning, including apprenticeships and work with experienced farmers, are valued by farmers. Agents and specialists should use this interest in peer teaching as an educational delivery method and as a way to enhance adoption of new practices.

Implications

The project reported here gave farmers the opportunity to voice their ideas for enhancing the delivery of Extension educational programs. The data suggest the following improvements and changes for Cooperative Extension.

Administration

- New agents/specialists need people skills, not just a focus on sharing information.
- Extension needs to give new agents/specialists time to build relationships with key farmers.
- New agents/specialists need a deep local orientation with key contacts to be socialized into farmer networks.
- Agents need to be good generalists trained in areas outside their specialty to meet a wide variety of farmers' needs.
- New agents/specialists need to be freed from bureaucratic duties to build relationships and get to know the farmers' context.
- As state Cooperative Extension Systems have fewer agents and specialists, they need to work across states to share information and learning opportunities.
- Because there is value in building deep and long-term relationships with farmers, Extension should enhance incentives to retain agents and specialists.
- Extension agents/specialists' professional development should equip them with tools and experience to meet farmer learning preferences and needs.

Agents/Specialists

- Extension's educational program delivery should reflect farmers' preferred learning styles.
- To build relationships with farmers and agencies, Extension agents and specialists should learn group process and facilitation skills.
- Agents/specialists should add incentives to educational programs.
- Farm visits are important to initiate and maintain relationships with and among farmers.
- Extension agents and specialists should use the Internet for teaching those farmers who preferred this learning method (in the study reported here, 73%).
- Extension agents and specialists need to facilitate on-farm research, farmer and industry relationships, and farmer-to-farmer networking.
- Extension should provide focused newsletters for specific agribusinesses rather than general "one-size-fits-all" content.
- One-on-one and face-to-face educational delivery is highly valued by agents and specialists. Because they have less time for field visits than in the past, they need to develop volunteers to expand their work.
- Eroding Extension budgets compromise the ability to meet preferred farmer learning needs. Therefore new partnerships are needed to maintain and expand farmer relationships and learning.
- Extension agents and specialists need to realize that farmers are not highly motivated to attend meetings unless their needs are directly and specifically addressed.

Conclusion

Extension agents and specialists need to not only be experts in a particular subject matter but also be architects of relationships, learning processes, and environments that directly meet farmers' needs to catalyze transformative learning (Franz, 2003; Percy, 2005). The farmers interviewed and surveyed in the study reported here were generally supportive of Cooperative Extension's educational efforts. However, to better meet farmers' educational needs, they believe Extension needs to more often use farmers' preferred methods of learning in delivering educational programs, including a larger on-line presence. Finally, Extension also needs to continue helping farmers gain and interpret new information/knowledge, helping farmers build relationships with experts, providing educational support for farmers, and helping them save time and money to maintain a comfortable quality of life.

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