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Information Needs of Agricultural Consultants in Ohio

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Abstract: The research reported here aimed to better further a better understanding of Ohio agricultural consultants' information needs and use. Our sample represented private consultants from organizations of different sizes and types servicing various segments of the agricultural sector. Findings of an online survey show that a high demand exists for information related to crops and environment/conservation subject-matter areas. Agribusiness/economics information also ranked high in importance. Respondents were familiar with the services Ohio State University Extension provided and reported to frequently use Extension information. Most popular were print publications and electronic newsletters followed by visits to Extension websites.

Introduction

It has long been recognized that agricultural information and knowledge have become a critical factor for the financial success of farmers and other agricultural firms, particularly when tailored to specific agricultural markets and conditions (Boehlje, 1998; Salin, Thurow, Smith, & Elmer, 1998). Advances in information and communication technologies over the last decades coupled with decreases in the costs of information provision in general have led to a proliferation of both public and private sector agricultural information providers and services available to farmers today (Boehlje, 1998; Gloy, Whipker, & Akridge, 2000; Tucker & Napier, 2002; Wolf, 1998).

With farming information and resources readily available and accessible online, the ability to acquire, evaluate, and process information relevant for decision making in a timely fashion has become a task of critical importance for farm managers (Diekmann, Loibl, & Batte, 2009). Many farmers routinely turn to outside sources to aid in this process and employ the services of private sector consultants and information providers to seek "context specific" and "decision focused" (Boehlje, 1998) information and services to supplement their problem-solving and decision making capabilities (Botha, Coutts, & Roth, 2008; Foltz, Lanclos, Guenther, Makus, & Sanchez, 1996; Ortmann, Patrick, Musser, & Howard Doster, 1993). In Ohio,

for example, 38% of all farmers use private consultants for information and services related to their farm businesses (Diekmann & Batte, 2009).

Agricultural public sector information providers face the challenge of remaining relevant as the agricultural industry changes, while being constraint by declining federal and state budgets (Salin, et al., 1998). Private consultants are an important group to study for Extension because they play a significant role as information providers to the agricultural industry. They are vital partners for Extension in disseminating new knowledge and innovations to the farming community as agricultural scientists are often constraint by lack of available resources and skills for extending scientific innovations to farmers themselves (Guerin, 2000; Wolf, 1998).

While information sources and information strategies of farmers have been investigated in numerous studies (see, for example, Diekmann et al., 2009; Gloy et al., 2000; Jones, Batte, & Schnitkey, 1989; Suvedi, Jeong, & Coombs, 2010; Tucker & Napier, 2002), the information needs of private consultants as important users of land-grant information have received much less attention in the literature. The findings of a survey of agricultural consultants presented here should help fill this void.

Study Objectives

The data presented here were collected as part of a larger effort to assess the information needs of key clientele groups of Ohio State University Extension. More specifically, the goal of this study was (1) to assess current topics of interest, (2) to identify preferred sources and channels of agricultural information, and (3) to examine use of Ohio State University Extension programs and services by agricultural private sector consultants in Ohio.

Methods

For the study, agricultural consultants in Ohio were invited to participate in an online survey. The sample consisted of crop consultants, conservation specialists, and professional farm managers and rural appraisers in Ohio. The survey was conducted in spring 2007. A total of 520 professionals were contacted with an invitation postcard and email following best survey practices (Dillman, 2006). The survey instrument consisted of several sections and was aimed at collecting information about respondents' organizations, including information about industry sectors served and details about the services provided, demand for information in areas typically served, preferred sources of agricultural information, and use of information resources provided by Ohio State University Extension. A final section collected respondents' demographic and socio-economic information.

Data

A total of 236 professionals responded to the survey invitation. Sixty questionnaires were only partially completed and excluded from further analysis, leaving 176 completed questionnaires for data analysis resulting in a 34% response rate.

The sample represented private sector consultants working for a diverse range of agricultural organizations. Respondents worked most likely for a corporation (61%) and were least likely organized as partnership (2%) or sole proprietorship (less than 1%). About 70% of respondents were employed by organizations with gross revenues of \$1,000,000 and over. About a third of respondents worked for an organization that employed between 5 and 19 employees, and about a quarter worked for organizations with 100 and more employees.

Most respondents provided services involving a product sale. Sixty-five percent of respondents reported to serve several agribusiness sectors, 56% served primarily agricultural producers. Government and trade associations were targeted by 10% of respondents, and food, processing, and other industries were served by 5% of respondents. The majority of respondents provided services related to crop production (e.g., crop protection and scouting, integrated crop management, nutrient management, cropping systems, and soil testing), livestock production (e.g., manure management, feed management, and ration management), and business and economics (e.g., marketing services, farm management services, and management consultancy). Conservation planning and environmental consultancy were other services that were frequently reported.

What Information Topics Are of Greatest Interest to Agricultural Consultants in Ohio?

The importance of various information topics to agricultural consultants was measured with the question, "How important is it for you to have access to professional information and services for each of the following areas?" Our list of 40 topics included six topics related to crop production, six topics related to livestock production, eight topics related to agribusiness/agricultural economics, two topics related to small and beginning farmers, six topics related to environment and conservation, 10 topics related to business administration, and two topics related to farm machinery management. Responses were rated on a seven-point Likert-type scale ranging from "not important"=1 to "very important"=7. Factor analysis was used to uncover the underlying themes using the principal components method. Item loadings under each factor were then examined for reliability using Cronbach's alpha. Table 1 presents the seven factors that emerged via factor analysis and the specific items reflecting the seven information themes.

Table 1.
Topical Factors Derived From Factor Analysis and Mean Scores of Importance

Measures (Cronbach's alpha scale reliability, factor loadings)	Mean (S.D.)
<i>Crops (0.905)</i> Soil fertility management (0.859), advances in crop production technologies (0.842), crop production (0.822), pesticide application practices, regulation, safety (0.726), soil tillage (0.698), nutrient planning (0.572)	5.30 (1.272)
<i>Livestock (0.913)</i> Advances in animal production technologies (0.902), animal nutrition (0.885), animal production and monitoring (0.843), animal health (0.883), range management and grazing systems (0.703), manure management (0.623)	5.19 (1.261)
<i>Agribusiness/economics (0.931)</i> Farm business planning (0.762), farm cost and return estimates (0.704), agricultural marketing (0.696), risk management (0.681), farm bill (0.598), land use policy (0.573), business management (0.523), farm succession (0.512)	4.72 (1.442)

<i>Small farms (0.909)</i>	4.44 (1.554)
Small farms (0.772), beginning farmers (0.761)	
<i>Environment/conservation (0.952)</i>	4.01 (1.713)
Environmental management (0.921), water quality (0.879), natural resources management (0.877), conservation practices (0.820), conservation planning (0.811), environmental regulation (0.809)	
<i>Business management (0.961)</i>	3.94 (1.658)
Expanding business and cooperatives (0.848), work force development (0.819), quality management (0.818), new business development (0.816), employee/employer relations (0.811), advances in business technology (0.800), leadership development, life skills (0.788), entrepreneurship (0.762), business management (0.686), effective technology use (0.615)	
<i>Farm machinery (0.724)</i>	3.12 (1.553)
Farm and ranch safety (0.662), farm machinery selection and management (0.618)	
Note: N=176; all items measured on a "not important"=1 to "very important"=7 scale, Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; Rotation converged in 7 iterations; Total variance explained: 78.6%; S.D. = Standard deviation	

Table 1 also presents the mean scores for each topical factor, showing that respondents reported the highest informational needs for environment/conservation-related information and crops-related information, followed closely by agribusiness/economics-related information. Seventy-four percent of the respondents rated crops-related information to be of high importance, and more than half of respondents indicated that environment/conservation-related information was of high importance to them. A third reported that access to agribusiness/economics-related information was of high importance. Information related to small farms was rated to be of high importance by 25% of respondents. Business management- and farm machinery-related information was ranked highest by 26% and 22% of respondents, respectively. In contrast, livestock-related information was rated high by only 9% of respondents.

What Are the Preferred Information Sources of Agricultural Consultants in Ohio?

To determine preferred information sources and frequency of their usage, survey respondents were asked to rate a variety of information sources available to agricultural consultants with the two questions, "To what extent do you use the following sources of professional information and services?" and "How often do you use the following sources of professional information?" Response options (32 items total) included (1) print-based sources such as trade magazines, agricultural newspapers, Extension publications; (2) interpersonal sources, including internal/company resources, professional associations, employee training programs/continuing education, family members, friends and neighbors, farmers, other consultants; (3) electronic sources, including Internet, computer software, subscriptions to market advisory services; and (4)

broadcast media sources, including television and radio. Responses were rated on a seven-point Likert-type scale ranging from "never"=1 to "always"=7.

On average, print media were perceived most important, with a mean score of 4.50 (S.D.: 0.984). Nineteen percent of respondents reported a high usage (rating 6 and 7) of print media, with 80% reporting a medium usage (rating 3 to 5). Interpersonal sources ranked second overall in importance (Mean: 4.46, S.D.: 0.916). Although they were highly used by only about 10% of respondents, 89% reported a medium usage. Electronic media were used highly by 21% of respondents, with 74% reporting a medium use of electronic media. The mean importance score was 4.44 (S.D.: 0.916). Broadcast media were least used as an information source and received an average score of 3.03 (S.D.: 1.585).

Asked about the preferred channel for receiving information, respondents reported to be most likely to prefer electronic media (Mean score: 5.57, S.D.: 1.262). They were also more likely to prefer personal contacts (Mean score: 5.38; S.D.: 1.514) and print media (Mean score: 5.03, S.D.: 1.358). Respondents were less likely to prefer formal training (Mean score: 4.98, S.D.: 1.335) and informal training (Mean score: 4.67; S.D.: 1.366) and least likely to prefer broadcast media (Mean score: 3.33, S.D.: 1.586) as preferred information delivery method.

How Frequently Are Extension Sources Used by Agricultural Consultants in Ohio?

The survey measured agricultural consultants' experience with Ohio State University Extension with a question assessing frequency and type of contact with informational and educational services provided, asking "Please indicate how often you have contact with OSU Extension." We categorized the various ways agricultural consultants accessed Ohio State University Extension resources into 12 items listed in Table 2. Responses were rated "none"=1, "less than once a year"=2, "once a year"=3, "twice a year"=4, "3-11 times a year"=5, "every month"=6, and "every week"=7.

The majority of respondents (90%) reported to be familiar with Ohio State University Extension and the services provided; the remainder had heard about but reported not to use any services. Table 2 summarizes responses to type and frequency of contact with Ohio State University Extension. Respondents reported that overall print publications and electronic newsletters were their preferred source of Extension information. As presented in Table 2, the most popular information source was to read Extension publications and to receive electronic newsletters. Visiting an Extension website was also an important source. Less popular information sources were Extension reports on the radio and on TV, visits by Extension educators/specialists at the consultant's business office, and serving on Extension committees.

Table 2.

Mean scores for type and frequency of contact with Ohio State University Extension

Factor	Mean (S.D.)
Read an OSU Extension publication	5.54 (1.050)
Received an (electronic) OSU Extension newsletter	5.24 (2.026)
Visited an OSU Extension website	5.03 (1.294)
Called or spoken with an OSU (county) Extension educator	4.71 (1.393)

Attended an OSU Extension meeting or workshop	4.34 (1.051)
Called or spoken with an OSU (state) Extension specialist	4.24 (1.397)
Visited an OSU Extension county office	4.21 (1.552)
Listened to an OSU Extension report on the radio	3.27 (1.947)
An OSU Extension (county) educator visited my business/organization	2.46 (1.607)
Watched an OSU Extension report on the TV	2.24 (1.467)
Served on an OSU Extension planning or advisory committee	2.05 (1.703)
An OSU Extension (state) specialist visited my business	2.02 (1.348)
Notes: N=176; Scale "none"=1, "less than once a year"=2, "once a year"=3, "twice a year"=4, "3-11 times a year"=5, "every month"=6, "every week"=7; S.D. = Standard deviation	

Conclusions

As the private sector's role in packaging and disseminating of agricultural information expands, learning more about the needs of private consultants as users of agricultural information is essential in order to better serve this group. The study reported here aimed to highlight consultants' demand for agricultural information and services provided by Extension.

Analysis of the survey responses resulted in several key observations that are of particular relevance to Extension professionals.

Most agricultural consultants in Ohio were familiar with the services Extension provides. The majority of respondents reported to regularly consult Extension resources and reported a favorable view of Extension programs and services, which was also expressed in many of the comments received.

Crop-related information was rated the most important information topic category, followed by environment/conservation- and agribusiness/economics-related information. Respondents indicated a lower demand for information related to business management, small farms, farm machinery, and livestock topics.

Respondents indicated preferring to receive information via print and electronic media. Extension publications, electronic newsletters, and Extension websites were highly ranked as information sources for this group. Survey comments shared by respondents indicated also that consultants frequently used information from other states' Extension services. With regard to the current online presence, respondents offered both critique and complements about information and services provided by Ohio State University Extension relative to Extension programs in other states. Often these included issues related to currency of content, site navigation, and search and retrieval of documents and information, and underscored the importance of online information for this group. Personal contact with Extension personnel (county or state specialists) was mid range in importance. Agricultural consultants indicated low reliance on formal and informal training through workshops and broadcast media.

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References

- Boehlje, M. (1998). Information and technology transfer in agriculture: the role of the public and private sectors. In S. A. Wolf (Ed.), *Privatization of information and agricultural industrialization* (pp. 23-38). Boca Raton, FL: CRC Press.
- Botha, N., Coutts, J., & Roth, H. (2008). The role of agricultural consultants in New Zealand in environmental extension. *The Journal of Agricultural Education and Extension*, 14(2), 125 - 138. doi: 10.1080/13892240802019147
- Diekmann, F., & Batte, M. T. (2009). Examining the information search strategies of Ohio farmers. *Journal of Extension* [On-Line], 47(6), Article 6FEA8. Available at: <http://www.joe.org/joe/2009december/a8.php>
- Diekmann, F., Loibl, C., & Batte, M. T. (2009). The economics of agricultural information: factors affecting commercial farmers' information strategies in Ohio. *Review of Agricultural Economics*, 31(4), 853-872. doi: 10.1111/j.1467-9353.2009.01470.x
- Dillman, D. A. (2006). *Mail and Internet surveys: the Tailored Design Method* (2nd ed.). Indianapolis, IN: Wiley.
- Foltz, J., Lanclos, K., Guenther, J., Makus, L., & Sanchez, W. (1996). The market for information and consultants in Idaho agriculture. *Agribusiness*, 12(6), 569-581. doi: 10.1002/(sici)1520-6297(199611/12)12:6<569::aid-agr6>3.0.co;2-1
- Gloy, B. A., Whipker, L. D., & Akridge, J. T. (2000). Sources of information for commercial farms: Usefulness of media and personal sources. *International Food and Agribusiness Management Review* 3(2), 245-260. doi: 10.1016/S1096-7508(01)00046-5
- Guerin, T. F. (2000). Overcoming the constraints to the adoption of sustainable land management practices in Australia. *Technological forecasting and social change*, 65(2), 205-237. doi: 10.1016/S0040-1625(99)00090-6
- Jones, E., Batte, M. T., & Schnitkey, G. D. (1989). The impact of economic and socioeconomic factors on the demand for information: A case study of Ohio commercial farmers. *Agribusiness*, 5(6), 557-571.
- Ortmann, G. F., Patrick, G. F., Musser, W. N., & Doster, H. D. (1993). Use of private consultants and other sources of information by large cornbelt farmers. *Agribusiness*, 9(4), 391-402. doi: 10.1002/1520-6297(199307)9:4<391::aid-agr2720090409>3.0.co;2-k
- Salin, V., Thurow, A. P., Smith, K. R., & Elmer, N. (1998). Exploring the market for agricultural economics information: views of private sector analysts. *Review of Agricultural Economics*, 20(1), 114-124. doi: 10.2307/1349537
- Suvedi, M., Jeong, E., & Coombs, J. (2010). Education needs of Michigan farmers. *Journal of Extension* [On-Line], 48(3), Article 3RIB7. Available from: <http://www.joe.org/joe/2010june/rb7.php>
- Tucker, M., & Napier, T. L. (2002). Preferred sources and channels of soil and water conservation information among farmers in three midwestern US watersheds. *Agriculture, Ecosystems & Environment*, 92(2-3), 297-313. doi: 10.1016/S0167-8809(01)00293-6

Wolf, S. A. (1998). Privatization of crop production information service markets. In S. A. Wolf (Ed.), *Privatization of information and agricultural industrialization* (pp. 151-182). Boca Raton, FL: CRC Press.

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