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## Extension Educators' Perceptions of Risk Management Training Needs

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## **Extension Educators' Perceptions of Risk Management Training Needs**

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Risk management is a key issue for farmers and also receives significant national and local political attention. Because much of the outreach in this area is delivered through the Cooperative Extension Service, research on how Extension educators perceive their clients' needs and their own demand for additional training is important for educational programming.

The Risk Management Agency (RMA) and the Cooperative State Research, Education and Extension Service (CSREES) of the United States Department of Agriculture (USDA) initiated a risk management education competitive grants program during 1998. The information reported here is partial output from one of the surveys conducted by the "Understanding Farmer Risk Management Decision Making and Educational Needs" project (Coble, Knight, Patrick, & Baquet, 1999; Patrick, Coble, Knight, & Baquet, 2000; Vergara, Coble, Knight, Patrick, & Baquet, 2001). Institutions participating in the project are Mississippi State University, Purdue University, University of Nebraska, and Texas A&M University.

### **Sampling Procedure**

The county/area Extension educator risk management survey was conducted in Indiana, Mississippi, Nebraska, and Texas during the fall of 2001. This survey targeted Extension agents involved in agricultural education. Initial mailings included the questionnaire and a cover letter that solicited participation and a follow-up questionnaire mailed 2 weeks later. A total of 505 educators were included in the population, and 351 questionnaires were returned, for a response rate of 70%.

Table 1 shows the Extension educator sample distribution. Of the 296 useable responses from Extension educators, 46.3% are currently working in Texas, followed by 19.2% in Indiana, 18.2% in Mississippi, and 16.2% in Nebraska. Nearly three-quarters of the respondents reported having a graduate degree and an average of 16 years of Extension experience (Vergara, Martin, Patrick, Baquet, Knight, & Coble, 2002).

<b>Table 1.</b> Distribution of Extension Educators by State, 2001				
<b>State</b>	<b>Population</b>	<b>Percent of population</b>	<b>N</b>	<b>Percent of sample</b>
Texas	250	49.5	137	46.3
Indiana	92	18.2	57	19.2
Mississippi	82	16.3	54	18.2
Nebraska	81	16.0	48	16.2
<b>Total</b>	505		296	

### Characteristics of Extension Training

Table 2 shows the percent of overall Extension educational training presented by Extension educators, university personnel, and private industry. Most Extension educators share their producer training responsibilities with university personnel, private industry, or a combination of both. In all four states, Extension educators relied heavily on university personnel when they held producer training sessions: on average, university personnel present 45% of the material. Extension educators present 25% of the material. The training materials presented by a partnership among the Extension educator, university personnel, and private industry accounts for 19% of the training producers receive. Finally, the private sector provides 11% of the training at Extension meetings.

<b>Table 2.</b> Percent of Educational Training Presented by Extension Educators, Universities, Private Industry, and Jointly Self/University/Private, 2001					
<b>Providers of Educational Training</b>	<b>Mississippi</b>	<b>Indiana</b>	<b>Nebraska</b>	<b>Texas</b>	<b>Total</b>
Self	25	25	31	22	25
University personnel	35	50	45	46	45
Private industry	17	12	8	11	11
Jointly self/university/private	23	13	16	21	19
<b>Total</b>	100	100	100	100	100

Nearly three-fourths (73%) of the Extension educators responding to the survey had received some type of training in risk management. For those educators who received training, Table 3 shows the percentage receiving training in each risk area. In all four states, most of the training had been in the areas of financial, price, and production risk management. Overall, 85% had received training in financial risk, followed by 74% in production risk, and 67% in price risk. A substantially lower percentage of Extension educators had received training on legal, human resources, or other sources of risk.

**Table 3.**  
Percent of Extension Educator Risk Management Training  
Received, 2001

<b>Training programs in risk management</b>	<b>Mississippi</b>	<b>Indiana</b>	<b>Nebraska</b>	<b>Texas</b>	<b>Total</b>
Production risk	94	57	68	74	74
Financial risk	88	84	71	87	85
Human resources risk	8	18	25	17	17
Price risk	62	66	82	62	67
Legal risk	20	21	17	12	16
Other risk	0	3	8	10	7

Slightly more than half (52%) of the Extension educators had provided some type of training in risk management. For those educators who provided training, Table 4 shows the percentage offering training in each risk area. As expected, in all four states most of the Extension educators trained producers in the same risk management areas in which they had been trained. Few Extension educators provided training in legal risk or human resources risk.

<b>Table 4.</b> Percent of Extension Educator Risk Management Training Provided, 2001					
<b>Training programs in risk management</b>	<b>Mississippi</b>	<b>Indiana</b>	<b>Nebraska</b>	<b>Texas</b>	<b>Total</b>
Production risk	100	67	72	78	77
Financial risk	69	54	78	79	74
Human resources risk	25	8	25	13	16
Price risk	75	71	78	82	79
Legal risk	19	17	25	13	17

Table 5 shows the Extension educators' subjective evaluation of producers' sources of information on risk management, commodity prices, and farm management. According to the Extension educators, 64% of producers consider the private sector as their primary source of information on risk management techniques, followed by magazines/newsletters (59%), Extension/university (49%), other producers (12%), and Internet/computer (8%), respectively.

Again, Extension educators perceive the private sector as producers' primary source of information on commodity prices (83%), followed by internet/computer (46%), magazines/newsletters (38%), Extension/university (13%), and other producers (13%), respectively.

Finally, Extension educators perceive the Extension/university system as the producers' primary source of information on farm management (76%), followed by magazines/newsletters (55%), the private sector (47%), other producers (12%), and internet/computer (4%), respectively.

<b>Table 5.</b> Extension Educators' Evaluation of Producers' Information Attainment Methods, 2001					
Type of information	Percent information attainment method				
	Extension/University	Magazines/Newsletter	Private Sector	Internet/Computer	Other Producers
	Percent	Percent	Percent	Percent	Percent
Risk management information	49	59	64	8	12
Commodity price information	13	38	83	46	13
Farm management information	76	55	47	4	12

### **Extension Educators' Risk Knowledge and Evaluation of Producers' Risk Management Knowledge**

Extension educators in this sample were asked to self-assess their knowledge of risk management strategies on a Likert-type scale ranging from 1 (low) to 5 (high). Table 6 shows the percentage distribution of educators' level of knowledge and mean score.



<p><b>Table 6.</b> Extension Educators' Knowledge of Risk Management Strategies, 2001</p>										
Risk management strategy	Knowledge level (n=291)									
	Low	Medium				High	MS	IN	NE	TX
	1	2	3	4	5		mean	mean	mean	mean
Cash and other forward contracting	18.2	33.7	23.0	19.2	5.8		2.5	2.5	2.6	2.7
Futures and options	18.2	40.2	22.7	17.9	1.7		2.5	2.1	2.5	2.6
Crop yield/revenue insurance	20.3	34.4	32.3	10.7	2.4		2.5	2.1	2.4	2.5
Livestock marketing/production contracts	14.1	25.9	33.5	22.8	3.8		2.6	2.2	2.5	3.1
Financial management	10.7	21.7	38.5	24.7	4.5		2.9	2.8	2.9	2.9

Overall, the Extension educators gave themselves relatively low values for all categories. Only financial management and livestock marketing/production contracts obtained a score approaching 3.0, a medium level of knowledge. Extension educators considered themselves less knowledgeable in futures and options, and crop yield/revenue insurance. At the state level, financial management received the highest score in Mississippi, Indiana, and Nebraska (2.94, 2.82, and 2.91, respectively), while in Texas livestock marketing/production contracts received the highest score (3.11). In all four states, Extension educators perceived themselves having a low level of knowledge of risk management strategies such as crop yield/revenue insurance, futures and options, and cash and other forward contracting.

Extension educators were also asked to quantify their perceptions of producers' knowledge of risk management strategies on a Likert-type scale ranging from 1 (low) to 5 (high). Results are presented in Table 7. Similar to their own case, Extension educators qualified the producers' knowledge of risk management strategies as being low for all categories. Coble et al. found that crop producers gave themselves similar levels of risk management knowledge. Interestingly, with the exception of financial management and futures and options, Extension educators perceive producers as being more knowledgeable in the different risk management strategies than they perceive themselves to be.

**Table 7.**  
Extension Educators' Evaluation of Producers' Knowledge of Risk  
Management Strategies, 2001

Risk management strategy	Knowledge level (n=289)									
	Low	Medium			High	MS	IN	NE	TX	Total
	1	2	3	4	5	mean	mean	mean	mean	mean
Cash and other forward contracting	11.1	30.8	31.5	22.2	4.5	2.9	2.8	3.0	2.7	2.8
Futures and options	24.2	40.5	27.3	7.2	0.4	2.4	2.1	2.4	2.1	2.2
Crop yield/ revenue insurance	9.3	27.3	33.6	25.3	4.5	3.0	2.6	3.1	2.9	2.9
Livestock marketing/ production contracts	7.3	30.6	41.3	19.4	1.4	2.8	2.7	2.8	2.8	2.8
Financial management	6.6	27.7	48.8	15.6	1.4	2.9	2.6	2.8	2.8	2.8

### Extension Educators' Interest in Risk Management Education and Evaluation of Producers' Educational Interest in Risk Management

Extension educators were asked to measure their interest in learning more about several risk management techniques and to provide a subjective measure of the producers' interest in learning more about risk management (Table 8).

<p><b>Table 8.</b> Extension Educators' Interest and Evaluation of Producers' Interest in Obtaining Additional Education of Risk Management Strategies, 2001</p>										
Risk management strategy	Percent level of interest									
	Mississippi		Indiana		Nebraska		Texas		Total	
	Ext.	Prod.	Ext.	Prod.	Ext.	Prod.	Ext.	Prod.	Ext.	Prod.
Cash and other forward contracting	33	42	38	40	38	58	27	34	32	40
Futures and options	54	50	59	72	36	37	47	37	49	46
Crop yield/ revenue insurance	27	44	33	26	36	39	28	35	29	36
Livestock marketing/ production contracts	46	33	30	26	45	40	59	47	49	40
Financial management	41	31	41	36	44	26	39	45	41	38

Forty-nine percent of the Extension educators are interested in learning more about futures and options and about livestock marketing/production contracts. This is followed by 41% who are interested primarily in learning about financial management. On the other hand, Extension educators perceive producers as being primarily interested in learning about futures and options (46%), followed by an equal interest in learning more about cash and other forward contracting and livestock marketing/production contracts (40%). These results correlate well with results from the previous crop producer survey (Coble et al., 1999).

At the state level, Extension educators in Mississippi and Indiana are interested primarily in learning about futures and options (54% and 59%, respectively), and perceive their producers as being equally interested in futures and options training (50% and 72%, respectively). In Nebraska and Texas, Extension educators are primarily interested in learning about livestock marketing/production contracts (45% and 59%, respectively). On the other hand, producers in Nebraska are perceived to be more interested in learning about cash and other forward contracting (58%), while producers in Texas are perceived to be more interested in learning about livestock marketing/production contracts (47%).

Extension educators in Mississippi are least interested in learning about crop yield/revenue insurance (27%) and perceive producers as being least interested in learning about financial management (31%). In Indiana, Extension educators are least interested in livestock marketing/production contracts (30%) and perceive producers as being least interested in learning about either crop yield/revenue insurance or livestock marketing/production contracts (both 26%). In Nebraska, Extension educators are least interested in both futures and options or crop yield/revenue insurance (36%) and perceive producers as being least interested in learning about financial management (26%). In Texas, Extension educators are least interested in crop yield/revenue insurance (29%) and perceive producers as being least interested in learning about cash and other forward contracting (34%).

Extension educators were also asked to quantify their preferred method of risk management education and to provide a similar subjective measure of the producers' preferred risk management learning method (Table 9). A high proportion of the Extension educators (87%) indicated that their preferred method of risk management education was in-depth training by risk management experts.

A similar result was obtained when Extension educators were asked to quantify the producers' preferred risk management learning method: 65% of the Extension educators agreed that producers would prefer learning risk management through in-depth training by risk management experts. This response was similar across states.

<p><b>Table 9.</b> Extension Educators' Preference and Evaluation of Producers' Preference in Risk Management Learning Methods, 2001</p>										
Learning methods	Percent level of preference (n=283)									
	Mississippi		Indiana		Nebraska		Texas		Total	
	Ext.	Prod.	Ext.	Prod.	Ext.	Prod.	Ext.	Prod.	Ext.	Prod.
In depth training by risk management experts	94	67	91	65	91	67	82	62	87	65
In depth materials to study on own your time	35	47	26	26	42	43	30	41	32	39
Farm magazines/ newsletters	15	26	7	41	4	37	20	38	14	36
Internet/computer- based education materials	21	12	39	12	40	15	27	19	30	15
Marketing clubs/ groups of producers	29	43	38	57	22	37	38	38	34	42

## Conclusions

Risk management education has increased in importance since the passage of the 1996 Federal Agricultural Improvement and Reform (FAIR) Act. Although 73% of Extension educators have received training related to risk management, only 52% have provided producers with training. There are differences and similarities between Extension educators and producers with respect to risk and risk management educational needs. Educators tend to conduct training in areas in which they have been trained. However, they consider themselves to be not as knowledgeable as producers in several areas of agricultural risk management, possibly creating a barrier to needed producer training.

Risk management education is a complex topic. Because Extension educators consider themselves and producers as not being well prepared in the different risk management techniques available, there is an opportunity for the university system to fill the void. The university system must take a more active role in providing Extension educators with the training they need in order to increase their level of risk management educational abilities.

Extension educators identify risk management experts as their preferred source of risk management education. Thus, risk management experts currently working in the university system need to become more active in collaborating with their Extension colleagues to develop the required risk management training. Development of self-study materials and Internet/computer based educational materials can also help fill educational needs of producers and facilitate educator's work with producer groups. Extension educators perceive private industry as a major source of producer information attainment. However, on average, only 11% use private industry in their Extension educational programs. Thus, Extension educators might partner with private industry to deliver programs related to price and crop marketing, freeing up more of their limited resources to focus on risk related farm management programs.

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