

## **The Leadership Proficiency of Commissioners of Agriculture**

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### **Abstract**

The purpose of this mixed methods study was to determine the self-perceived proficiency level of Commissioners of Agriculture in six leadership skill areas. Major findings noted their proficiency in these areas. Researchers recommend providing professional development opportunities and software training for Commissioners at their annual conference.

### **Introduction**

Directors, Commissioners, and Secretaries of Agriculture (Commissioners) are elected or appointed government officials who are the leaders of agriculture for their state. They promote the agricultural industry and ultimately determine its future, while protecting consumers and the environment (National Association of State Departments of Agriculture, 2011). Their leadership is needed because Departments of Agriculture (Departments) in the United States are going through a period of great change due to environmental controversies, advances in technology and budget deficits (Adrian, Shannon, Noorwood & Mask, 2004; Carlson, 2010; Reganold et al., 2011).

This study utilized a mixed methods approach to identify and define the leadership skills of Commissioners (Fraenkel & Wallen, 1996). Quantitative research methods were used to describe Commissioner's self-perceived proficiency levels in six leadership skill areas. Qualitative research methods were used to make meaning of the quantitative results.

### **Theoretical Framework**

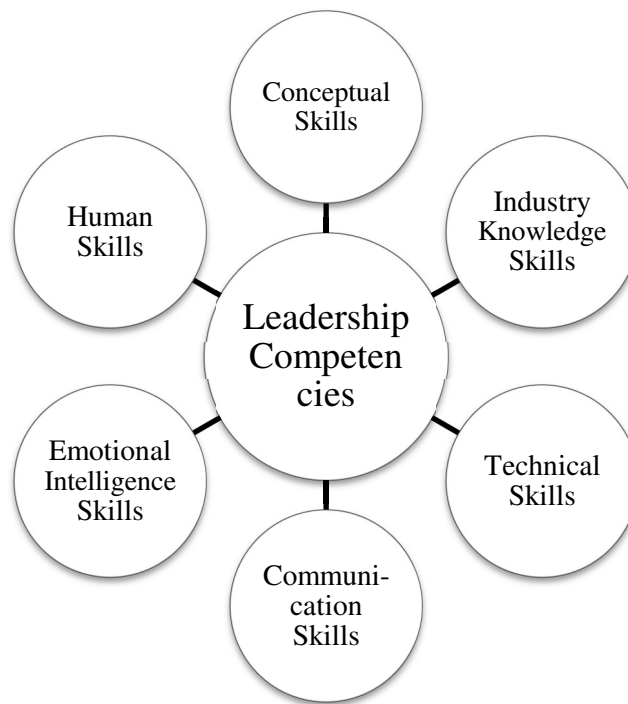
Numerous studies have been conducted about leadership skills and competencies needed by leaders in the business and agriculture fields. Commissioners are involved in each of these fields because they oversee the Department and agricultural productivity in their state.

The theoretical framework (see Figure 1) for this study is based on Moore and Rudd's (2004) study of the leadership skills and competencies of Extension directors and administrators. It also includes Jones' (2006) study of the leadership skills of academic program leaders in colleges of agricultural and life sciences.

In Moore and Rudd's study (2004) a purposive sample of administrators responsible for hiring Extension leaders in state director/administrator positions from land-grant institutions participated in qualitative interviews. The interviews identified the leadership skills necessary to be a leader within the Cooperative State Research, Education, and Extension Service. Six major leadership skill areas were identified. Forty-five leadership skills were clustered into one of the six leadership skill areas and then a total of 80 leadership competencies were developed. Interrelationships existed between the leadership skills within and between skill areas, supporting the notion that "leadership cannot exist in a vacuum" (Moore & Rudd, 2004, p. 32).

Jones' (2006) study of academic program leaders in colleges of agricultural and life sciences further exemplified the leadership skills needed by leaders in the agriculture field as noted in Moore and Rudd's study (2004). Academic program leaders determined their proficiency in the six leadership skills using a leadership skills questionnaire (Jones, 2006). Data was gathered from 56 academic program leaders to determine the academic program leaders' perceived leadership skill proficiency. Thus, the major leadership skill areas that served as the basis for this study included human, conceptual, technical, communication, emotional intelligence, and industry knowledge skills (Moore & Rudd, 2004; Jones, 2006).

Figure 1  
*Theoretical Framework*



### **Purpose**

Although the skills of leaders from land-grant institutions and Extension have been researched, an assessment of leadership competency of Commissioners in the 50 states of the United States has not been conducted. By studying their leadership skills, it will draw a clearer picture as to what Commissioners need in order to lead their state Department of Agriculture effectively through a changing agricultural era. This study will contribute to the general body of knowledge related to leaders and leadership. This study is important because it could demonstrate what leadership skills should be further developed by Commissioners and at which leadership skills they are proficient. In practice, the results of this study could lead to a better understanding about the skills needed by leaders in the field of agriculture.

Commissioners are the individuals responsible for leading their state's Department through a controversial and changing agricultural climate. With this significant responsibility in mind, the purpose of this study was to identify and define the leadership skills needed by Commissioners. This research addressed the following objective: Assess the self-perceived proficiency level of current Commissioners in each of the six leadership skill areas (Moore & Rudd, 2004).

## Methods

This study utilized a mixed methods approach to identify and define the leadership skills of Commissioners of Agriculture at the state level (Fraenkel & Wallen, 1996). The population for this study included Commissioners denoted in the directory of the National Association of State Departments of Agriculture for a total of 50 for the population.

Quantitative research methods were used by employing an electronic survey instrument to describe Commissioners perceived proficiency in the six leadership skill areas. These categories were developed after reviewing the relevant literature on leadership skills and competencies. Researchers utilized the Jones (2006) instrument; each leadership skill area had seven questions with the exception of the emotional intelligence area, which had nine questions, and the instrument contained seven demographic questions. The researchers followed Dillman's (2000) Internet and Interactive Voice Response Surveys Design Methodology to enhance participants' response rate. The first step was to send a brief e-mail of introduction to Commissioners notifying them of the electronic questionnaire and encouraging their participation in the study. The researchers included a link to the questionnaire containing directions for completing the study, the informed consent notice and the leadership skills questionnaire. The leadership skills questionnaire was open for a 6-week period. One week after the initial e-mailing, a reminder e-mail was sent from the Commissioner of Agriculture in North Carolina to all participants of the study. After week one, reminder e-mails were then sent from the researcher each week until six weeks after the initial e-mail was sent requesting their participation in the study. Thirty-five responded to the research for a response rate of 70%; t-tests examined differences between early and late respondents, and there were no differences in the mean scores for the two groups (Miller & Smith, 1983). Descriptive statistics were used to analyze the data collected by the instrument.

Qualitative research methods were used to enhance the quantitative results (Jick, 1979). After administering the instrument, semi-structured phone interviews were conducted with 15 participants over a three-month period to further explore the six leadership skill areas, while continuing the search for meaning. The researchers used an interview protocol, which was not shared with the participants prior to the interview. Interviews lasted between one-half and one hour. Each interview was tape-recorded and transcribed in its entirety following the interview. The traditional method of constant comparative analysis was used for the qualitative portion of the study (Merriam, 2009). Each phone interview was coded to retain confidentiality. The codes are included in parentheses in the

findings section after a quotation is given by an interviewee. The codes are part of the audit trail and provide trustworthiness confirmability.

## Findings

Results are presented by leadership skill area. The scale for proficiency used was: No Proficiency (1), Below Average Proficiency (2), Average Proficiency (3), Above Average Proficiency (4), and Very Proficient (5). In order to make meaning of this quantitative data, triangulation was used by the researchers. The quantitative data is presented first followed by appropriate triangulation and corroborating qualitative data. The codes from the audit trail correspond to the interviewee who made the statement, and the corresponding page number of the transcription.

### Human Skills

Table 1 lists the response mean score and the standard deviation for each of the seven questions in the human skills area. Commissioners believe their human skills are in the *Average to Above Average Proficient* category of leadership skills. Respecting others scored the highest in the human skills area, while evaluating impact of personnel scored the lowest.

Table 1

*Human Skill Self-perceived Proficiency Item Response Scores*

	$\mu$	$\Sigma$
Identify personal strengths and weaknesses	3.89	0.52
Evaluate the impact of personnel	3.78	0.64
Respect others	4.50	0.65
Create an environment in which you, as the leader are approachable and open to new ideas	4.33	0.59
Be an effective team member	4.14	0.59
Environment that values the diversity of others	4.09	0.70
Create an environment in which team members are willing to share ideas	4.39	0.60

*Note:* Scores measured using Likert scale; 1 (Not Proficient) to 5 (Very Proficient);  $n=35$

- **Diversity** – Commissioners appreciate the wide range of diversity in their respective state; they take diversity into account when working with others and believe they are proficient at working with the diverse groups in their state to accomplish various tasks.

I like the diversity of my job. In the course of the day I can deal with [a large] commercial dealer [or a small] grower...and everything in between (I11.M.3).

We have a wide range of people and interests...it's very diverse across the state (I12.F.2).

- **Impact of Personnel** – Commissioners show their appreciation for their personnel at the Department and desire for them to succeed. They emphasize the need of a strong personnel base; they provide skills that often the Commissioner may not possess.

I'm very proud of the fact that I probably have the most skilled professional staff than any other Department (I1.M.4).

I surround myself with really smart people who take care of the expert stuff and I trust them and they educate me (I8.M.7).

- **Encourage Members to Express Themselves** – Commissioners take the time to get to know their personnel and provide opportunities for them express their concerns or opinions. They develop relationships with their personnel, which in turn encourages them to express themselves.

I tell my staff always, if you come into my office and you think I have made a bad decision somewhere you tell me and let me know. If you don't stimulate my thinking then I can be off base with the decision that I made for that situation (I1.M.4).

I eat lunch with the folks in the cafeteria every day, so you have a chance to meet with the people who are working for the Department. It's important that they know the Commissioner is out and about...I give them an opportunity to share (I14.M.3).

### **Conceptual Skills**

Table 2 lists the response mean score and the standard deviation for each of the seven questions in the conceptual skills area. Commissioners believe they are *Above Average Proficiency* in the conceptual skills area. They believe they are most proficient in the ability to think strategically, while they are least proficient in setting goals and helping others support organizational change.

Table 2  
*Conceptual Skill Self-perceived Proficiency Item Response Scores*

	$\mu$	$\sigma$
Create a long term vision for the organization	4.14	0.71
Think strategically	4.49	0.61
Set goals	3.95	0.74
Help others support organizational change	3.97	0.64
Be decisive	4.35	0.68
Attitude that supports and that welcomes organizational change	4.38	0.68
Achieve goals	4.05	0.62

*Note:* Scores measured using Likert scale; 1 (Not Proficient) to 5 (Very Proficient);  $n=35$

- **Setting and Achieving Goals** – Commissioners set goals for themselves and the Department. They continuously evaluate their goals and believe they are proficient in goal setting, which allows things to be accomplished at the Department and ensures the success of their state’s agriculture industry.

I have weekly goals...of things that I want to get accomplished...Every year, which I got this from my old high school football coach, I try to write down three to five things I want to do better over the upcoming year (I11.M.6).

I try to set some goals for the [Department] that can be aspirational and inspirational so people find greater meaning in the work that they do (I5.M.2).

- **Strategic Planning** – Commissioners encourage working together amongst staff members and believe their Departments are successful because they understand which employees to utilize on a team in order to accomplish goals.

I’ve been here for ten months and I’ve initiated a strategic planning process (I5.M.1).

I have a strategic planning team made up of eleven people, which include our division directors and our senior level management (I8.M.3).

- **Decision Making** – Commissioners gather input and bring in other people during the decision making process. They come to the decision making process without bias, but rather information. Commissioners pride

themselves in utilizing numerous groups and people both in and out of the Department.

Sometimes decisions are no-brainers and sometimes I have to have a lot of help (I9.M.4).

I've got a good circle who helps me make decisions, my wife is probably ahead on the list. She has a very keen ability assess and advise probably for the political ramifications and things as much or more than I did (I10.M.6).

### Technical Skills

Table 3 lists the response mean score and the standard deviation for each of the seven questions in the technical skills area. Commissioners believe their technical skills are in the *Average Proficiency to Above Average Proficiency* category of leadership skills. The technical skills area was ranked the lowest in perceived proficiency compared to the other leadership skill areas. Commissioners believe they are most proficient in interpreting and explaining organization budgets, and they are least proficient in effectively integrating computer software programs.

Table 3  
*Technical Skill Self-perceived Proficiency Item Response Scores*

	$\mu$	$\sigma$
Develop budgets for all levels within the organization	3.72	0.94
Effectively use computer software for word processing	3.58	0.84
Interpret and explain organizational budgets	4.00	0.68
Effectively use and search the internet	3.69	0.92
Effectively use computer software for spreadsheets	3.19	1.06
Effectively use computer software for databases	2.92	0.87
Effectively integrate computer software programs (i.e. merge files)	2.70	1.00

*Note:* Scores measured using Likert scale; 1 (Not Proficient) to 5 (Very Proficient);  $n=35$

- **Budgeting** – Commissioners identify that dealing with budgeting in the Department is the most challenging aspect of their job. Commissioners are proficient in the budgeting process and must deal with these situations on a regular basis because the Department is a government organization.

Probably one of the biggest decisions I make...is budget reductions. They are very difficult because the governor says that every Department has to



propose a six percent budget cut, that's almost 2 million dollars that we have to cut out of the budget (I8.M.5).

My ideal Department of Agriculture would mean that we have an unlimited budget! I've been here six years and every year we've cut budgets. We had to let people go and that's hard when you see your Department increasing and you have reduced resources to meet that burden (I4.M.6).

- **Policies in State Government** – Commissioners identify that dealing with policies in state government is challenging for the Department. Commissioners are constantly making changes and developing new policies with the help of staff members, which has emerged as a new technical skill for Commissioners. Commissioners believe they have a high proficiency level in this skill.

I admire what [my staff does] and their handicaps they have to work under, like the bureaucracy label...Half of our work we do is regulatory, consumer affairs protection (I3.M.2).

I am responsible for helping to develop regulatory legislation that helps the Department accomplish our duties and mission (I7.M.1).

### **Communication Skills**

Table 4 lists the response mean score and the standard deviation for each of the seven questions in the communication skills area. Commissioners perceive themselves as being *Average Proficiency to Above Average Proficiency* in the leadership skills area of communication. Commissioners believe they are most proficient in interacting and communicating with people who have divergent points of view, while they are least proficient at writing for various organizational purposes.

Table 4  
*Communication Skill Self-perceived Proficiency Item Response Scores*

	$\mu$	$\sigma$
Interact and communicate with people who have divergent points of view	4.51	0.56
Identify barriers to listening	3.92	0.60
Write for various organizational purposes (i.e. technical writing, professional publications, etc.)	3.42	0.81
Read and comprehend a wide range of publications	3.97	0.77
Reduce barriers to listening	3.81	0.75
Recognize and effectively use nonverbal cues or behaviors	4.06	0.67
Write for various audiences	3.62	0.86

*Note:* Scores measured using Likert scale; 1 (Not Proficient) to 5 (Very Proficient);  $n=35$

- Interact and Communicate with People with Divergent View Points** – Commissioners believe they do an excellent job of including people with different viewpoints in discussions and believe their proficiency in interacting and communicating with people who have divergent points of views has contributed to the success of their respective Department.

We brought together for the first time ever all of the agriculture groups in [state]... The opportunity to bring in all that diversity and varied interest and get them to agree on a common message that we then delivered to the governor was pretty cool (I2.M.2).

Even when there are groups that I don't agree with I'm still willing to meet with them and see if there are some areas of common interest which is very important (I8.M.2).

- Speaking Skills** – Commissioners identify that they are good public speakers. They enjoy speaking but also appreciate having a dialogue with someone. Commissioners believe they are proficient in their speaking skills; this is necessary because they are the voice of agriculture for their state.

I still think most of my communication skills are in those direct appearances where I speak to groups...or when I'm doing an interview with a radio station (I7.M.5).

It's great for me to go out and give speeches...but I [really like when] I get some open-end comments and it's much more interactive where there are questions (I12.F.3).

- **Electronic Communication** – Commissioners or their respective Department do an excellent job of keeping up with the changing technology. They utilize electronic communication frequently and value the convenience of this technology. Being highly proficient in electronic communication ultimately allows the Commissioner and the Department to successfully broaden their reach to constituents.

I think technology is changing the way we communicate, emails and text messages I use quite frequently...I didn't text, and now I send several hundred a day (I6.M.4).

We have worked with our extension system [to have a webinar]...We were able to attract people and it is all archived so people are still able to tune into that and watch it (I9.M.3).

- **Social Media** – Commissioners have made it a point to use social media at their respective Department to reach more of their constituents. Some of the Commissioners have personal social media accounts as well. Social media like Facebook, Twitter, and blogs are utilized the most in the Department.

We really try to use social media here. I started a blog a couple of months ago and that has been very successful and well received. The public affairs people told me they are going to teach me how to use twitter so I can tweet when I'm out on the road (I12.F.2).

I have a twitter account and...Facebook page. I'm just getting started with it so I'm not yet reaching the masses but it's the little things like that and...being available (I8.M.4-5).

### **Emotional Intelligence Skills**

Table 5 lists the response mean score and the standard deviation for each of the eight emotional intelligence skills questions. Commissioners believe they are *Above Average Proficiency* in the majority of the emotional intelligence skills. It is important to note that Commissioners rated setting priorities to effectively manage personal time as the lowest of the emotional intelligence skill items, while they rated having a high level of motivation as the highest.

Table 5  
*Emotional Intelligence Self-perceived Proficiency Item Response Scores*

	$\mu$	$\sigma$
Set priorities to effectively manage personal time	3.91	0.89
Resolve conflict	4.11	0.63
Make use of constructive criticism without becoming critical and angry	4.14	0.65
Separate personalities from behaviors	3.94	0.73
Negotiate agreement	4.17	0.62
High level of motivation	4.49	0.56
Control emotions in emotional situations	4.23	0.73
Set priorities to effectively manage organizational time	4.03	0.57
Respect for the time commitments of others	4.03	0.71

*Note:* Scores measured using Likert scale; 1 (Not Proficient) to 5 (Very Proficient);  $n=35$

- Resolving Conflict** – Commissioners understand that one of their roles is to resolve conflict in their state and they must take the initiative. By having a high proficiency in the ability to resolve conflict, the Commissioners are able to move the agriculture industry forward in their respective state.

I chaired [a national] association for a number of years...I initiated the first telephone communication with all the state's representatives in order to solve problems (I1.M.2).

I am here to solve problems, give counsel and advice (I1.M.6).

- Emotional and Personality Recognition** – Commissioners have a high level of proficiency in recognizing their emotions and personality. They understand when it is appropriate to let their personality and emotions appear during a situation, especially when dealing with staff and the public. The Department upholds its positive reputation when Commissioners are proficient in recognizing their emotions and personality.

When I address staff, I always use humor in even the most serious matters (I10.M.6).

Focusing on the job and not yourself carries you a long way (I10.M.8).

**Industry Knowledge Skills**

Table 6 lists the response mean score and the standard deviation for each of the seven questions in the industry knowledge area. Commissioners self-perceived proficiency in the industry skills area is *Above Average*. Their ability to explain the political environment of the state and the implications for the Department was ranked highest in proficiency, while identifying the needs of various client groups in the state was ranked as the lowest.

Table 6

*Industry Knowledge Self-perceived Proficiency Item Response Scores*

	$\mu$	$\sigma$
Create linkages within both traditional and non-traditional audiences	4.38	0.49
Depth of knowledge in a content area	4.18	0.72
Identify the needs of various client groups within the state	4.00	0.77
Explain the political environment of the state and the implications for the Department	4.59	0.56
Relationship between statewide programs	4.12	0.64
Evaluate the impact of programs for each client group	4.12	0.64
Being able to explain the founding principles of the Department of Agriculture with constituents	4.29	0.84

*Note:* Scores measured using Likert scale; 1 (Not Proficient) to 5 (Very Proficient); *n*=35

- Interactions with the Constituent Base** – Commissioners are highly proficient in meeting new constituents and interacting with them in their respective state. Commissioners ultimately believe that their strong tie to agriculture helps the Department to be viewed as a credible source of information for their constituent base.

That has been my focus, to be the face of the Department, to get out and be with the people; that’s the part I love (I2.M.4).

I think the fact that my family has been in agriculture for so many years gives me credibility with my fellow farmers (I10.M.4).

- Knowing the Political Environment Influencing the Department** – Commissioners are proficient at understanding the political environment that influences the Department which allows the Commissioner to lead the Department to accomplish its goals.

I work with all of our elected officials...If they have a question about agriculture policy or how our policy might affect [state]...they (get input from me) on those issues (I7.M.3).

One of initiatives that we started this year to foster our relationships and educate people is called “Harvesting with the Ag Stars.” The goal is to get all of our urban legislators paired up with a farmer and invite them out to ride in the columbine and talk about agriculture...It’s good to let them know what we are doing (I2.M.4-5).

- **Understanding the Importance of the Department at a National and International Level** – Commissioners have an excellent understanding of the importance of the Department at a national and international level. This allows the Commissioners to successfully lead the Department and expand their contact with other organizations outside of their respective state.

Through my role as Commissioner, I have been on various national committees (I1.M.2).

[A] rewarding part about my job is in the promotional area and what we’ve been able to do over-seas to promote [state] as a brand within the U.S. commodity category (I7.M.2).

Scores for each self-perceived leadership skill area are presented in Table 7. Each construct was converted to a 100-point scale by dividing the sum of the responses by the total possible response score for each skill area. The overall mean for self-perceived proficiency in the six leadership skill areas was 80.03, with a standard deviation of 5.17. In all areas of self-perceived proficiency of leadership skills Commissioners indicate that they are proficient in these six leadership skills. Commissioners believe that they are least proficient in technical skills ( $\mu=68.00$ ,  $\sigma=6.31$ ), while they are most proficient in industry knowledge skills ( $\mu=84.80$ ,  $\sigma=4.66$ ).

Table 7  
*Leadership Skill Self-perceived Proficiency*

	$\mu$	$\sigma$
Human Skills	83.20	4.29
Conceptual Skills	83.80	4.68
Technical Skills	68.00	6.31
Communication Skills	78.03	5.02
Emotional Intelligence Skills	82.33	6.09
Industry Knowledge Skills	84.80	4.66
Total Proficiency Scale	80.03	5.17

*Note:* The possible scores for self-perceived proficiency range from 20 to 100. Scores that fall between 80 and 100 are *Above Average Proficiency* and *Very Proficient*. Scores falling between 60 and 80 are *Average Proficiency*. Scores falling below 60 are *Below Average Proficiency* (Jones, 2006).  $n=35$

## Conclusions

This study sought to assess the self-perceived proficiency of leadership skills, as determined by Commissioners. They were asked to assess their proficiency in the six leadership skills areas from *Below Average Proficiency* to *Above Average Proficiency*. The industry knowledge skills proficiency area ranked the highest ( $\mu=84.80$ ) followed by conceptual skills ( $\mu=83.80$ ), human skills ( $\mu=83.20$ ), emotional intelligence skills ( $\mu=82.33$ ), and communication skills ( $\mu=78.03$ ); technical skills was rated as the least proficient ( $\mu=68.00$ ). These findings were similar to Jones' (2006) and Moore and Rudd's (2004) studies of extension and academic program leaders. Four of the six leadership skill areas had means for self-perceived proficiency that fell between *Above Average Proficiency* to *Very Proficient* category, and the remaining leadership skill proficiency areas fell in the *Average Proficiency* category.

These findings demonstrate that Commissioners believe they have the least amount of proficiency in technical skills, but they believe they have a great deal of proficiency in the area of industry knowledge. Commissioners realize having knowledge about the agriculture industry is important. It is encouraging that Commissioners believe they are *Above Average* in the industry knowledge area because they are elected or appointed to serve the agriculture industry in their state. Through the interviews, the researchers found that Commissioners believe they are proficient in understanding the role of the Department at a national and international level; they must be well-versed in issues impacting their state's agriculture industry and Department.

Through the interviews, the researchers found that Commissioners believe their Department is proficient in utilizing social media and electronics to communicate with their constituents. Some Commissioners are making an effort to learn how to use social media and electronics; however, they often do not have the time to devote to these tools. Thus, they designate personnel in the Department to manage these tools. Commissioners believe their Department will fall behind in the industry if they are not utilizing social media and other technologies to communicate with their constituents. When communicating with constituents, commissioners emphasized the need to use honesty, which allows constituents to trust the Commissioner and the Department.

Though technical skills were ranked lowest in proficiency level, Commissioners still discussed a working knowledge of budgeting. They identified the most challenging part of their job is dealing with cuts in the Department's budget followed closely by policy making. Commissioners must have a working knowledge of government policies that their Department is required to enforce. Though they have personnel in place to handle the majority of the technical skills,

they must still be proficient in technical skills that involve policies and budgets as decision makers.

### **Implications and Recommendations**

The existing Commissioners attend a National Association of State Departments of Agriculture conference each year. To strengthen proficiency, the researchers recommend bringing professional development workshops, trainings, and bringing in speakers to the conference related to the leadership skill areas that are most deficient. For instance, a state Department of Agriculture that is effectively utilizing technology could bring a speaker to discuss how other Departments can use technology and social media to reach their constituents.

The existing Commissioners were most deficient in the technical skill area. Commissioners believe they are least proficient at utilizing software programs. Researchers recommend that at the annual conference Commissioners are provided a presentation highlighting the newest software programs Departments could utilize to be more effective and efficient. Commissioners were also deficient in the communication skill area. Commissioners should work on communication to effectively reach various audiences.

Commissioners participated in the leadership skills questionnaire and/or a phone interview during one point in time. Commissioners may perceive their leadership skill proficiency differently depending on particular situations or events happening in the Department or in their personal life. Future research should be conducted about the environmental, personal, and situational variables that might influence their perceptions of leadership skill proficiency, which were not reported in this study.



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**Kristen Baughman** is a recent graduate from North Carolina State University and is from Charlotte, North Carolina. She started graduate school at NC State University in January 2011 and received her M.S. in Extension Education. She is interested in the field of Family and Consumer Sciences and student leadership.

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