"Extension Field Specialists:" Believable Label or Oxymoron?

 $\mathbf{B}\mathbf{y}$ 

George W. Morse
Professor of Applied Economics
University of Minnesota
and
Associate Dean and Director – Programs
University of Minnesota Extension
St. Paul, Minnesota
morse001@umn.edu

and

Adeel Ahmed
Community Economics Regional Extension Educator
University of Minnesota Extension
St. Cloud, Minnesota
ahme0004@umn.edu

Selected Poster Paper American Agricultural Economics Association

August 2007

### "Extension Field Specialists:" Believable Label or Oxymoron?

#### Abstract

Prior to a radical reorganization in 2004, Extension agents/educators in Minnesota engaged in their role as generalists with "specialist" titles. Their accountability was to the county and not necessarily to any area of focus or specialty. The reorganization of Extension due to a massive state budget deficit oriented 129 Extension educators to regional and statewide responsibilities in an area of expertise within a capacity area. Evaluating this change in regards to "field staff specialization" (through survey responses of 102 Extension regional educators) reveals benefits in the areas of recruitment; incentives to invest in human capital; closer working relationships with campus faculty; applied research and scholarship by field staff; program quality, development, and delivery; and credibility with the target audience. Disadvantages include: lack of cross-capacity work; more distant relationships with the target audience; and commuting time and travel.

# Extension Field Specialists Morse and Ahmed, May 2007

# **Contents**

Topic		Page
Introduction		2
History of MN Extension Field Specialization		3
Disappearing MS Specialists	3	
County Clustering and Specialization	4	
2002 Reorganization and Specialization	5	
Latest Policies.	6	
Survey Methodology and Characteristics of Respondents		7
Response Rates	8	
Time in Service	8	
Features of Extension Field Specialization		9
Areas of Expertise	9	
Advanced Degrees Related to Areas of Expertise	10	
Size of Geographic Area Covered	11	
Source of Funding	12	
Supervision by Subject Matter Specialists	13	
Statewide Program Teams	13	
Promotion Criteria and Scholarship	14	
Advantages of Extension Field Staff Specialization		15
Recruitment of Highly Qualified Applicants	16	
Greater Incentives to Invest in Human Capital	16	
Closer Working Relationships with Campus Faculty	17	
More Statewide Program Teamwork on Programs	20	
Greater Involvement of REEs in Applied Research	22	
Greater Scholarship Efforts by REEs	22	
Greater Credibility of Field Staff among Target Audiences	25	
Higher Quality of Educational Programs	27	
Disadvantages of Extension Field Staff Specialization		29
Lack of Cross-Capacity Work	29	
Relationships with Audiences	30	
Commuting Time and Travel	32	
Other Disadvantages	32	
Conclusions and policy implications for Extension Services		33
References		38

# "Extension Field Specialists": Believable Label or Oxymoron?<sup>1</sup>

#### Introduction

Given the world of unlimited demands and tight resources that most cooperative Extension services face, nearly all economists would argue that Extension field staff members should specialize in their areas of greatest comparative advantage. Increasing specialization of field staff has also been called for by Extension leaders and administrators for many years. The literature reports several attempts by state cooperative Extension services to encourage field staff specialization. Yet, none of this literature actually defines the conceptual dimensions of Extension field staff specialization nor measures this empirically.

The word *specialization* has various shades of meaning; without a clearly defined conceptual definition and good empirical measures of field staff specialization, it is impossible to evaluate whether structural changes to encourage more "specialization" yield greater gains. For example, in the early 1990s, some Minnesota field staff members who self-declared their "specialization" as community economic development worked four days a week as 4-H agents<sup>2</sup>. These individuals were selected for their skills and academic training as youth workers rather than for community economic development, yet they were labeled as "specialized" in community economic development. Some have suggested that the term "field staff specialist" was an oxymoron<sup>3</sup> rather than a believable label when applied to Minnesota extension field staff

<sup>&</sup>lt;sup>1</sup> By George W. Morse, professor of applied economics, University of Minnesota, and associate dean and director, University of Minnesota Extension; and Adeel Ahmed, community economics regional Extension educator, University of Minnesota Extension. Correspondence should be addressed to George Morse at <a href="mailto:morse001@umn.edu">morse001@umn.edu</a> or <a href="mailto:ahme0004@umn.edu">ahme0004@umn.edu</a>, but senior authorship is not assigned. The authors thank Richard Senese, Scott Chazdon, and Mary Marczak for assistance in designing the survey and Mary Hoff for doing a technical edit. The authors also thank the 102 REEs (79%) who responded to the survey. Prepared for AAEA Selected Poster Paper, AAEA Annual Meetings, Portland, Oregon, August 2007.

<sup>&</sup>lt;sup>2</sup> We use the term Extension agent and Extension educator synonymously because the agent term is used in so many other states. However, Minnesota uses only the educator term to highlight the main focus of their work.

<sup>&</sup>lt;sup>3</sup> An "oxymoron" is a rhetorical figure in which incongruous or contradictory terms are combined.

in 2001. While the authors believe this overstates the case, the survey results confirm that field staff in Minnesota are now much more specialized than in 2001 and before.

This paper is organized into six parts. The first part discusses the history of attempts to specialize field staff in Minnesota. Part two outlines the survey methodology used to examine specialization and the characteristics of the respondents. Part three describes the dimensions of Extension field staff specialization in Minnesota from 2004 to 2007. Part four outlines the advantages of Extension field staff specialization, using the data from the survey. Part five outlines the disadvantages of specialization. The final section provides conclusions and policy implications for Extension services.

Our primary source of information for this paper is a survey, conducted by the authors, of more than 79 percent of the 129 Minnesota regional Extension educators (REEs).

# **History of Minnesota Extension Field Specialization**

For over twenty years, the University of Minnesota Extension has attempted to encourage increased specialization among its field staff – but without much success.

Disappearing M.S. Specialists

In the early 1980s the University of Minnesota required that all tenured Extension specialists with an M.S. degree be parented in an academic department rather than in Extension. This resulted in academic departments receiving a large number of full-time M.S.-level Extension specialists who worked throughout the state. As these individuals retired, the departments replaced them with individuals with Ph.D.s and split Extension/research appointments. As Ph.D.s became the state specialists for Extension, they also became more specialized. This had the benefit of linking their research and Extension work more closely. Some argued that this increased the quality of outreach curriculum.

At the same time, Extension field staff members were becoming relatively more 'generalists' compared to their audiences. For example, Ford and Babb (1989) found that commercial farmers were not using Extension as their primary source of information in any of nine different management areas. These results were confirmed by a number of related research projects (Schnitkey et.al. 1992; Patrick and Ullerich 1996). Consequently, just at the point when full-time M.S.–level state specialists were needed most, they disappeared in Minnesota.

### County Clustering and Specialization

Starting in 1987, Minnesota Extension attempted to achieve the benefits of specialization in issues-based programming by county clustering. The county cluster was a group of three to seven counties, with nine to more than fifty Extensions REEs per cluster. There were twenty clusters statewide. Participation in a cluster was voluntary for the counties. Extension educators were housed in county Extension offices. Counties paid for about 25% of the educators' salary and fringes, and state and federal funds paid the other 75%. Educators were expected to work about 75% of their time within their home county and 25% of their time in the county cluster programs. The primary selling point for counties was that groups of Extension educators could contribute their expertise to problems throughout the cluster of counties.

In the county clustering model Extension educators formed teams in agriculture, home economics, and 4-H (Hutchins 1992). While educators liked the ability to focus more on their area of special interest, some found that "there was no clear indication of a corresponding reduction in county work" in a generalist capacity (Hutchins 1992, p. 2). One educator mentioned that she worked in the cluster "but I don't ever tell anyone in my own county about

that cluster work." Essentially, this "off-the-books" cluster work meant that this educator had to deliver 100% in her home county plus the 25% in the cluster. The authors suggest that this made the cluster efforts volunteer rather than paid work.

The major feature of the county clustering model was that educators selected their own specialization. Community needs were considered, but capacity to deliver and expertise were not. As a result there were educators who were "specialized" in community economic development with no community development or economic development training or experience. They had an interest in this work and could see some demand for it in their county cluster. Most of the people in this specialization were actually 4-H educators and were selected and hired as such. Consequently, most of the field Extension educator specialists in community economic development worked three to four days per week with 4-H and not with their specialty. Under these conditions, would you call the title "community economic development specialist" a realistic label or an oxymoron?

#### 2002 Reorganization and Specialization

Due to an ongoing budget deficits, Extension had to downsize in 2002. During the 2002 reorganization, there was a more explicit attempt to specialize. Field staff members were organized into areas of expertise. There was an expectation that field staff would work over larger regions, serving as many as ten to fifteen counties (compared to three to seven with the county clusters). The areas were larger because eighteen areas of expertise were established rather than just the three in the earlier rendition of specialization. However, the specialized regional educators continued to be housed in county-based Extension offices.

<sup>&</sup>lt;sup>4</sup> Discussion with George Morse, 1995.

With staff still housed in counties, true specialization was doomed to fail from the start. Many county stakeholders liked having access to a broader array of field specialists. Yet some did not want "their" specialists to travel out to other counties. Again, many field staff members found that their county stakeholders expected them to continue as generalists while the system expected them to be more specialized and serve a larger region.

#### Latest Policies

Comparative advantage is a key economic concept that suggests that everyone benefits the most when people specialize in areas in which they are relatively most productive (Frank and Bernanke 2006, Wheelan 2002). While the public expects Extension to deal with many new issues (McDowell 2001), Extension leaders have long called for additional specialization of field staff (Bartholomew and Smith 1990; Harriman and Daugherty. 1992; Gibson and Hillison 1994; Borich, 1988; Rauschkolb, 1988; Thompson and Gwynn 1989, Hoag 2005). Yet none of these articles provided a detailed conceptual or empirical description of specialization of field staff that permits measuring the consequences of moving toward greater specialization.

While Minnesota Extension had attempted to encourage field specialization earlier, it took an epic state budget deficit (\$4.5 billion) in 2003 to achieve the degree of specialization it now has. Ultimately, Extension elected to fund field specialists with state and federal funds while allowing counties to fully fund additional local positions (Morse and O'Brien 2006). This provided the necessity and the opportunity for field staff to become more specialized.<sup>5</sup>

Extension administration adopted the following sets of policies and systems that define specialization for the 129 REEs located in 18 regional centers around Minnesota.

6

-

<sup>&</sup>lt;sup>5</sup> Details on the rationale for going to regional centers can be found in Morse and O'Brien (2006).

- Each educator was designated to work in one of eighteen areas of expertise in which he
  or she had an advanced degree.<sup>6</sup>
- 2. Extension educators were moved to regional centers with new responsibilities to work much larger geographic areas, frequently the entire state.
- 3. Funding for REEs came only from state and federal resources, with no local funding.
- 4. Supervision of regional educators shifted to either tenured faculty or campus specialists in their area of expertise.
- 5. Fifty-seven statewide program teams, consisting of campus faculty and field staff, were asked to develop statewide program business plans.
- 6. A new promotion system was established that encouraged greater scholarship, program leadership, and outreach teaching.<sup>7</sup>

# Survey Methodology and Characteristics of Respondents

To measure the effects of most recent policies the authors of this paper designed an online questionnaire to survey Minnesota's 129 REEs<sup>8</sup>. Only REEs were surveyed because of the focus on specialization. After approval from the University's Institutional Review Board, the survey was administered in May 2007 by the Office of Measurement Services (OMS). A professional service was used in order to protect the anonymity of the respondents. Other precautions to enhance anonymity involved not asking for the area of expertise and stripping the capacity area of individuals respondents from the data file we received from OMS.

<sup>&</sup>lt;sup>6</sup> This aspect of the specialization was started in July 2002 before we knew about the 2003–2004 budget cuts and the need to move to a mixed regional center/county mode.

<sup>&</sup>lt;sup>7</sup> Additional detail on the changes and economic policies are found in Klein and Morse, 2007, Morse and O'Brien 2006, Morse 2007, Morse and Klein, 2007.

<sup>&</sup>lt;sup>8</sup> We received excellent suggestions from Mary Marczak, Scott Chazdon and Dick Senese. All remaining errors, however, are the sole responsibility of the authors.

<sup>&</sup>lt;sup>9</sup> Future studies might examine the impacts of specialization on local positions and the relationships between the local positions and the specialized REEs. While very important, that was beyond the resources for this study.

One of the questions did ask for the capacity area so we could track the response rate and provide capacity area leaders with data on their individual capacity areas. A Dillman approach was used to promote a high response rate, with several different e-mail messages to respondents. *Response Rates* 

The overall response rate was 79% with 102 of the 129 REEs responding. Detailed results on 'response' are summarized below in Table 1. The response was very representative with the percent of REEs in each capacity area (Table 1, column 3) was on par with the percentage of REEs in each capacity area that responded to the survey (Table 1, column 4).

Table 1: Response Rate by Capacity Area, Minnesota Extension, 2007

Capacity Area	Number REEs	Percent of	Percent of	Response
		total REEs	Respondents in	Rate by
			Survey	Capacity
			-	Area
Agriculture, Food and	38	30%	29%	79%
Environment				
Community Vitality	19	15%	14%	74%
Family Development	26	20%	22%	85%
Natural Resources and	19	13%	12%	71%
Environment				
Youth Development	29	22%	23%	83%
Total / Average	129	100%	100%	79%

Note: Data are from the University of Minnesota Extension Human Resources Directory (May 2007) and survey question 5. n = 102

#### Time in Service

As shown in Table 2, more than half (57%) of the REEs have been with Extension for eleven years or more. Time in current capacity area (column 2) is less because some REEs were previously county Extension directors.

Table 2: REE's Years with Extension and in their Current Capacity Area, Minnesota Extension. 2007.

Years of Experience	With Minnesota Extension	With Current Capacity Area
0–2	14%	15%
3–5	8%	25%
6–10	21%	20%
11+	57%	41%
Total	100%	100%

Source: Questions 1 and 2 of Morse and Ahmed Survey of REEs, May 2007

At this point we do not know how the experience distribution of respondents matches the actual experience within the organization, but leaders within the organization tell us it appears to be representative.

#### **Features of Extension Field Specialization**

This section will explore seven features that define the nature of the effort of specialization in Minnesota Extension: area of expertise, advanced degrees related to area of expertise, size of geographic area covered, source of funding, supervision by subject matter specialists, statewide program teams, and promotion criteria.

# Area of Expertise

Each educator was assigned to one of 16 areas of expertise as shown in Table 3. These areas of expertise are broader than most academic disciplines but provide some common focus related to the academic disciplines. REEs are no longer hired as agricultural REEs but as livestock REEs within the AFE capacity area. REEs doing community economics are no longer also doing leadership training—and fitting it all into one or two days a week when they are not busy with 4-H. These REEs now do community economics full time, sometimes collaborating with those in other areas of expertise.

Table 3: REEs by Area of Expertise, Univ. of MN Extension, 2007

Capacity Area and Area of Expertise	# of REEs	Capacity Area and Area of Expertise	# of REEs	Capacity Area and Area of Expertise	# of REEs	Capacity Area and Area of Expertise	# of REEs	Capacity Area and Area of Expertise	# of REEs
Agriculture, Food & Environment	<u>38</u>	Natural Resources & Environment	<u>19</u>	Family Development *	<u>26</u>	Youth Development *	<u>29</u>	Community Vitality *	<u>19</u>
Ag Business Management	7	Water Resources	8	Family Relations	6	4-H	24	Community Economics	9
Crops	10	Natural Resources	6	Family Resource Management	8	Community Youth Development	5	Leadership & Civic Engagement	10
Food Safety	7	Environment al Sciences Education	4	Health and Nutrition	11				
Livestock	9	Housing Technology	1						
Horticulture	5								

Note: The five capacity areas are in underlined. Source is University of Minnesota Extension Human Resources Directory, May 2007.

## Advanced Degrees Related to Area of Expertise

An advanced degree related to the area of expertise is an important aspect of specialization because it ensures that the field staff has the basic knowledge and jargon necessary to interact well with the campus faculty. In 2006, 90% of REE respondents had either a master's (79%) or Ph.D. (11%) degree related to their area of expertise. In 2001 Minnesota Extension required a master's degree as eligibility requirement for an REE position but often the degree was in adult education or other topics unrelated to the area of expertise. However, now there is high alignment between the degree and area of expertise. Of survey respondents, 59% rated their academic degree as related a "great extent" to their field expertise, and another 36% rated it

 $<sup>^{\</sup>rm 10}$  Ahmed and Morse REE Survey, Question 37.

related a "moderate extent." Among those hired since 2004, 83% rated their academic degree as related a "great extent" with the other 17% rating it a "moderate extent." As expected, the recent hires had degrees more closely related to their area of expertise.<sup>12</sup>

Size of Geographic Area Covered

The larger the geographic area a field staff Extension educator covers, the more specialized the educator can be. Within a single county a high degree of specialization often results in excess supply. On the other hand, serving a large geographic area on the same educational program builds the human capital and reputation of the educator. In each of the new locations, the audience will ask new questions or present new challenges that help the educator grow professionally.

As expected, in 2006 there were many more (~40% more) REEs with statewide territories than in 2001 and far fewer (~31% fewer) with localized or clustered territories (one to four counties).

Of the REEs that in 2001 covered one to four counties, 65% were covering more than seven counties or doing statewide programming in 2006. Additionally, 67% of the REEs that started after 2001 were now covering a territory of more than seven counties or had statewide

<sup>&</sup>lt;sup>11</sup> Morse and Ahmed REE Survey, Question 38

<sup>&</sup>lt;sup>12</sup> The approach we used relies on the respondents' assessment rather than on more objective criteria; this might be more accurate than the authors attempting to evaluate this without agreed upon fields related to the area of expertise. These results were still a surprise since we thought 100% would be in the "great extent" category for the recent hires.

responsibilities.<sup>13</sup> We expected the results to not contain any appointments of fewer than five counties; the reason we do see them is that 4-H REEs specifically get appointments with two to four counties. The shifts in the territory covered by REEs are shown in Figure 1.

Geographic Territory that REEs were responsible for **Conducting Programming in** (Comparison Between the Years 2001 and 2006) Univ. of MN Extension REEs, 2007 60% Percentage of REEs 50% 40% **2001** 30% **2006** 20% 10% 0% 7 or more 1 to 2 3 to 4 5 to 6 Statewide **Number of Counties** 

Figure 1

Note: Source is survey questions 9 and 10. For 2001 N = 80 and for 2006 N = 102.

# Source of Funding

The source of funding is closely related to the degree of specialization possible. When 25% of the funding comes from counties and the educators are housed in those counties, there are pressures for the educators to answer almost any type of question. Some members of the public think that simply because staff members are affiliated with the University they can easily tap into

<sup>1</sup> 

<sup>&</sup>lt;sup>13</sup> We filtered out REEs who were hired after 2001 because we do not have data for REEs who have left Extension since 2001. To include these data in this comparison of newer REEs would risk skewing the data toward regionalization because new hires get regional appointments rather than county ones, as in the previous system.

detailed information. While there is some truth in this, the increasing complexity and volume of information means that educators cannot guarantee the credibility of information in any area of expertise. For example, in 2001 livestock specialists were sometimes expected to provide information on horticulture or other agricultural topics unrelated to their area of expertise.

In 2006, REE funding came entirely from state and federal sources and not from counties. Some counties did retain Extension educators<sup>14</sup> and paid all of their expenses; however, these educators are not classified as REEs. When all of the funding is from state and/or federal sources, it is much easier for the educators to specialize. However, contrary to popular myths, 62 percent of all field positions were in county offices (Morse 2006).

#### Supervision by Subject Matter Specialists

One of the key functions of a supervisor is to coach field staff members on their plans of work and the manner of doing their work. Supervisors who have expertise in the same area as the field staff and have worked with the target audiences of the field staff are better able to coach the field educators than are other supervisors. Consequently, field Extension educators supervised by a subject matter specialist are much more likely to specialize and focus their work around the area of expertise than are those supervised by district directors who cover all field staff in all areas of expertise within a given region. In 2004, supervision of all program staff and REEs shifted to campus specialists.

#### Statewide Program Teams

Focus on a limited set of programs is essential for specialization. Few educators can become experts in every issue and topic, even within their area of expertise. Each of the issues has different audiences that require attention and understanding. Most of the issues require working

<sup>&</sup>lt;sup>14</sup> Food Stamp nutrition education assistants were funded by a federal grant and some match from the counties.

with other areas of expertise or disciplines, which also takes time. The development of effective curricula and materials requires background research on the audience's needs and learning styles, existing curriculum, pilot efforts, and continuous evaluation and improvement. Without focus there is neither the time nor resources to invest in educational programs to make them highly successful in terms of enhancing knowledge and changing behavior. Particularly to achieve this focus and to allow specialization across REEs within the same area of expertise, Extension administration asked for the development of 'program business plans' for each major program. One of the major goals of the program business plans was to help REEs and campus faculty interested in the same issues to jointly plan statewide educational programs. While nearly all program teams had some REEs and some faculty, the size ranged widely depending on the issue.

#### Promotion Criteria and Scholarship

Promotion criteria for Extension field staff reflect the degree of specialization required. Systems that require that educators demonstrate significance or distinction in program leadership, Extension teaching, and/or scholarship will require that the educators be much more focused. As is the case for tenured campus faculty, Extension field staff with a scholarship requirement will need to develop and communicate the same topic in multiple settings, progressing from presentations to area-of-expertise colleagues to boarder groups in their program areas to national meetings to journal articles. Often the Extension educators will need to work on the same topic over two, three, or four years in order to move it through this progression. In 2006 Minnesota Extension implemented a new promotion system for field staff that was much more rigorous than in 2001. The promotion criteria were only possible due to the specialization.

# **Advantages of Extension Field Staff Specialization**

Specialization of field staff is done because of the perceived advantages in enhanced productivity in support of Extension's mission. According to economic theory, increased specialization should allow a downsized Extension to deliver more program impact per FTE. 15

Yet what are these advantages? While ultimately the benefits of any policy change must be measured in terms of program impacts, to demand this immediately is impractical and likely to result in no serious examination of the merits or demerits of the change. Looking at the proximate changes is not only more practical but also a way to correct potential problems created by greater specialization.

The following proximate changes are expected to result from specialization and ultimately produce greater programmatic impacts:

- 1. recruitment of highly qualified applicants
- 2. greater incentives to invest in their human capital
- 3. closer working relationships with campus faculty
- 4. more statewide teamwork on program development and delivery
- 5. greater involvement of REEs in applied research
- 6. greater scholarship efforts by REEs
- 7. greater credibility of field staff members with target audiences
- 8. higher quality of educational programs.

<sup>&</sup>lt;sup>15</sup> In 2004, due to the state fiscal crisis, Extension lost 60% of its county-based regional educators. However, the total loss in educational field staff was 10% due to gains in local program coordinators and local positions and the addition of regional positions. Morse and O'Brien (2006) estimate 30% of the 2003 field employment would have been lost rather than only 10% without the change in funding arrangements with counties.

This paper describes how each of these has changed from 2001 (clearly before the reorganization) and 2006 (after the reorganization had settled in).

Recruitment of Highly Qualified Applicants

A position in which one is allowed to specialize in one's area of expertise is likely to draw a higher quality of candidate than one in which the person must be a jack of all trades. As reported earlier in this paper, nearly 59% of the individuals recruited since 2004 see their degrees highly related to their area of expertise. Originally, we thought that we could simply examine the percentage of hires that have master's or Ph.D. degrees to compare qualifications. However, this proxy ignores how tightly the degrees fit with the needs of the job. Unfortunately we have not yet found a means to test the common perception among capacity area leaders that we are recruiting more highly qualified applicants

Greater Incentives to Invest in Human Capital

If the Extension field educator has a clear focus and specialization, there is much more incentive to invest in their own human capital. Without this focus, there is no way to know whether a given focus will enhance the work. Unless the individual uses the new knowledge and/or skills relatively soon, they start to depreciate. Unless there is a cohort learning and applying new knowledge and skills, they are more likely to not be used. For these reason, focus and specialization also provides incentives for state specialists or others to offer training to Extension educators.

Table 4 summarizes data from our survey on professional development training offered to REEs. Note that fewer REEs are participating in 'for-credit' courses in 2006 than in 2001. This is probably because Extension no longer provides study leaves. These leaves were provided earlier

to help REEs finish their master's degrees, but now all new REEs are required to have a master's degree. More REEs are securing training at national association meetings in 2006 than were in 2001. This is consistent with the findings that REEs are attending more national conferences and giving more presentations. The remaining forms of training did not change significantly between 2001 and 2006.

Table 4. Professional Development Completed by Minnesota REEs, 2001 vs. 2006

Type of Professional	% REEs in 2001	% of REEs in 2006
Development		
For-credit course	28%	16%
Noncredit course	31%	37%
Online course	25%	26%
Short duration workshop	79%	84%
Training provided by	90%	89%
Extension		
Training provided by	33%	36%
Extension in other states		
Training provided by other	31%	44%
University of Minnesota		
units		
Training at national	44%	64%
association meetings		
Other	23%	29%
Sample Size (n)	80	102

Note: Source is survey question 39.

Closer Working Relationships with Campus Faculty

Campus faculty members are motivated to work with extension educators when they feel that their investment of time has payoffs in either: 1) social impacts or 2) their individual careers. At the same time they also consider the costs of working with the extension educators. In 2001 it was common to hear faculty say something like: "It is really easier to do this outreach program myself than to train the extension educators to do it because they have so little training and experience in my program." Yet, as the field staff members become more specialized, the costs of working outreach programs decreases and the benefits increase.

On the benefit side, more specialized field staff can: 1) teach more complicated outreach topics in a credible way, 2) help develop new outreach curriculum, 3) provide credible feedback during formative evaluation stages of a program, 4) provide connections between target audiences and campus faculty, 5) promote new programs as a result of deeper understanding of the audiences and the curriculum, 6) provide new insights that lead to important research projects, 7) work with faculty on new research projects, 8) co-author applied research and 9) provide new opportunities for service learning projects, practical examples of theory, or even guest lecturers.

On the cost side, it is much easier for campus faculty to discuss a new policy issue or social issue with an extension educator who is already familiar with the existing research and theories. While few tenured faculty are completely up-to-date on every sub-field of their discipline, if they have the basic theory and tools, they can discuss many issues with other colleagues and can update themselves quickly.

A step that Minnesota Extension took in increasing the scholarship capacity of REEs was to make it a criterion for promotion in the sense that REEs partner with faculty to conduct research and write journal articles. A result associated with this policy is that 50% of REEs reported greater opportunities to work with campus specialists since 2004 compared to 19 percent reporting fewer opportunities (Table 5).

Table 5: Opportunity to Work with State Specialists, REEs, 2007

Extent of Opportunity	Percentage of all REEs
	Responding
Much Fewer	1%
Fewer	18%
Same	31%
More	29%
Much More	21%
Sample Size (N)	83

Note: Source is survey question 34.

The picture of greater field and campus collaboration was further confirmed when we asked REEs how often they had prepared regional or national presentations jointly with a campus member or state specialist. The results were that in 2001, only 20% of the REEs worked with a campus specialist to develop a regional or national presentation compared to over twice that percentage in 2006 (44%) (See figure 2 below). In 2006 over a quarter of the REEs developed one joint presentation compared to only 11% in 2001. Eighteen percent of the REEs in 2006 worked on two or more presentation with campus faculty in 2006 compared to only 8% in 2001.

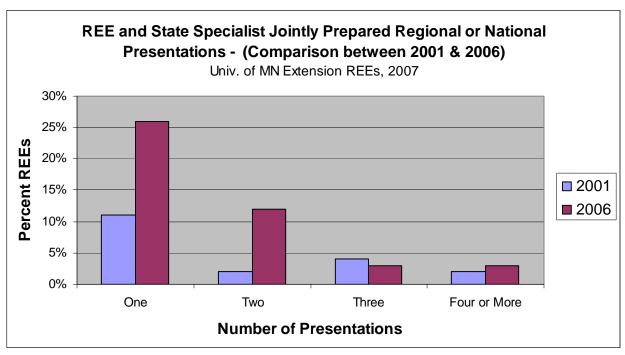


Figure 2

Note: Source is survey questions 15 and 16. The zero category is not shown: In 2001, 80% of REEs did no presentations, and in 2006, 56% did none.

Program development and delivery is a larger part of the REE's job than is applied research, scholarship, and presenting papers at regional or national meetings. Thus, we sought to understand whether there was greater cooperation on this aspect. The percentage that responded that they worked very frequently with state specialist on program development and delivery

nearly doubled (12% in 2001 to 26% in 2006) (Figure 3 below). Conversely, the percentage that reported they "seldom" worked with state specialists was cut in half (32% in 2001 to 16% in 2006). There probably are differences between capacity areas simply because some capacity areas (e.g., Agriculture (AFE)) have many state specialists while others (e.g., 4-H) have very few.

**REE and State Specialist Cooperation on Program Development** or Delivery (Comparison between 2001 & 2006) Univ. of MN Extension REEs, 2007 35% 30% Percent REEs 25% 20% 15% **2001** 10% **2006** 5% 0% Never Seldom Occasionally Frequently Verv frequently **Frequency of Cooperative Work** 

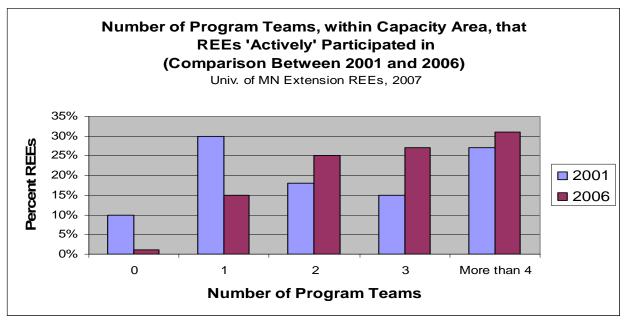
Figure 3

Note: Source is survey questions 27 and 2.

#### More Statewide Teamwork on Programming

Results from our survey show that there was an upward shift both in "active participation" and "extent of involvement" in program teams (figures 4 and 5). As shown Figure 4, the percentage of REEs participating in two or more teams jumped from 60% in 2001 to 84% in 2006.

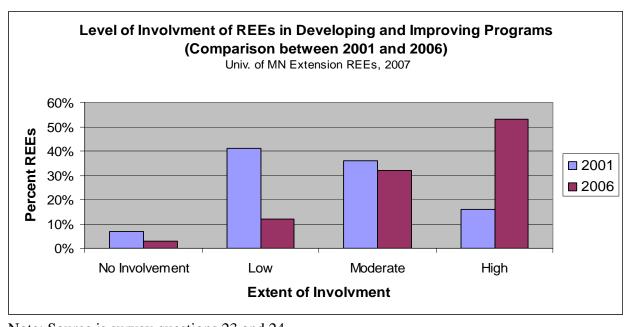
Figure 4



Note: Source is survey questions 21 and 22.

Even more dramatic is the growth in the level of involvement of REEs in the development and improvement of statewide programs (Figure 5). While only 15 percent of REEs had been highly involved in 2001, more than half considered themselves "highly involved" in 2006.

Figure 5



Note: Source is survey questions 23 and 24

### Greater Involvement of REEs in Applied Research

Greater specialization has led to an increase in the percentage of time REEs spend on applied research. Figure 6 shows an upward shift of REEs spending a greater amount of their time doing applied research. Note that 26% of REEs in 2001 did not do any applied research, compared to only 11% in 2006, and that only 22% of REEs in 2001 spent 11% to 30% of their time doing applied research, while in 2006, 44% of REEs spent the same amount of time doing applied research.

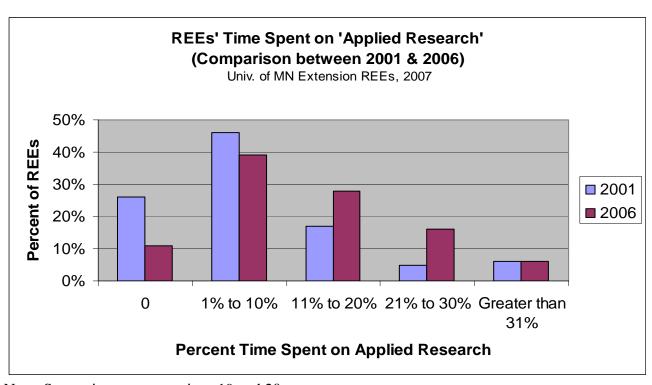


Figure 6

Note: Source is survey questions 19 and 20.

#### Greater Scholarship Efforts by REEs

Minnesota Extension uses a definition of scholarship derived from Boyer's (1990) definition.

Extension's defines scholarship as "creative intellectual work that contributes significantly to knowledge in the field and has impact, is communicated and valued, and is reviewed by peers."

One of the means of learning and sharing new knowledge is through professional conferences. REEs attended more conferences in 2006 than in 2001. As shown in Figure 7, attending no or only one conference was the norm in 2001, while in 2006 the norm shifted with REEs attending one to three conferences. Again, having a specialty and then trying to further improve it, display it, and make contacts are reasons to attend conferences.

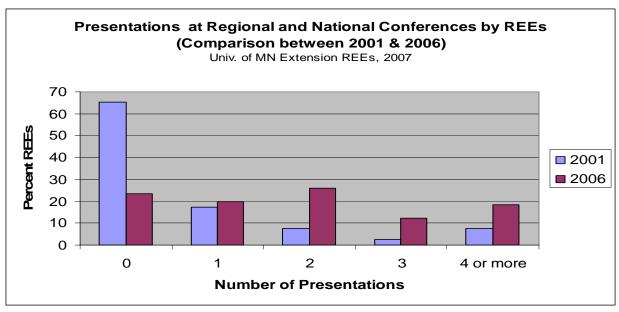
**Conference Attendance of REEs** (Comparison between 2001 & 2006) Univ. of MN Extension REEs, 2007 40 35 30 25 **2001** 20 **2006** 15 10 5 0 0 1 2 4 or more **Number of Conferences Attended** 

Figure 7

Note: Source is survey questions 11 and 12.

Increased conference attendance was also accompanied by an increased number of presentations made by REEs at conferences. Note that 50% of REEs who attended at least one conference in 2001 did not make a presentation, while the percentage in 2006 was only 31%. This shows that REEs not only attended more conference and made more presentations in 2006; they also were more active in the conferences they attended. As shown in Figure 8, the number of REEs doing two or more presentations increased nearly 40% since 2001.

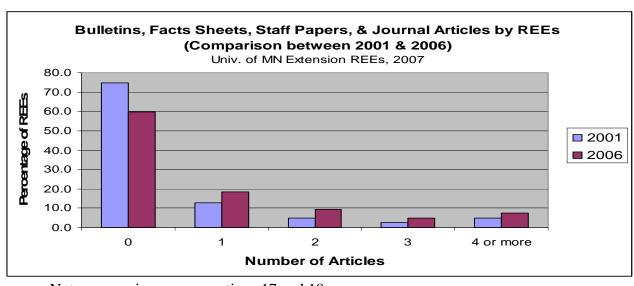
Figure 8



Note: Source is survey questions 13 and 14.

More REEs are writing more bulletins, facts sheets, staff papers, and journal articles in 2006 than were in 2001. The only exception is in magazine and newspaper articles.

Figure 9



Note: source is survey questions 17 and 18.

This may prod some to ask whether concentrating on scholarly work takes away from community engagement – if we consider newspaper and magazine articles as such. The fact is that, in 2006, counties no longer consider REEs as local employees and hence are not giving them the space in local publications they used to. However, it may be that our question captures the quantity of articles but not the quality and the impact of these articles. Fewer articles which are focused on target audiences might actually result in more engagement (Peters, et. al 2005). Similarly, since REEs are serving multiple counties they no longer cover local events as much as they used to. Additionally REEs are targeting more of their efforts at producing more specialized and scholarly articles fit for bulletins, fact sheets and journals.

Greater Credibility of Field Staff with Target Audiences

With the advent of the information age and the increased educational levels of many of Extension's audiences, it is difficult to stay abreast of new research and educational approaches in many fields. The result is that Extension REEs find it more and more difficult to gain and retain credibility.

Table 6 displays several dimensions of credibility that REEs were questioned about. The question asked was: "Since 2004, to what extent has increased specialization resulted in increasing opportunities in the following areas?" The areas are listed in Table 6. Respondents could indicate: "much fewer," "fewer," "same," "more," and "much more."

The most direct reflection is the response about "earning respect from my audience." Of the REE respondents, 54% felt they had a chance to earn more (35%) or much more (19%) respect from their audiences. In contrast only 10% felt they had fewer opportunities (8%) or much fewer opportunities (2%).

Table 6. REE's Perceptions that Specialization Resulted in Fewer or More Opportunities, Minnesota Extension, 2006

Areas in Which Specialization	Much	Fewer	Same	More	Many
Increased Opportunities	Fewer				More
To focus on my area of expertise	1%	6%	19%	31%	43%
To provide statewide program	3%	2%	18%	48%	31%
leadership					
To focus on our program's target	0%	5%	25%	51%	21%
audiences					
To develop and deliver high quality	3%	3%	32%	36%	28%
programs					
To do scholarship on my programs	3%	6%	23%	49%	21%
To work as part of a team	1%	7%	29%	43%	20%
To learn about our target audiences	1%	7%	30%	48%	14%
To earn respect from my audiences	2%	8%	37%	36%	19%
To work with state specialists	2%	16%	30%	34%	20%
To integrate audience feedback	0%	10%	43%	43%	6%
To adjust to new needs	5%	14%	29%	49%	10%
To do Extension teaching	9%	10%	43%	21%	19%
To develop a close relationship with	20%	19%	22%	29%	12%
audiences					
To work with other areas of	28%	29%	24%	18%	2%
expertise					
Sample Size $(N) = 102$ for all					

Note: Source is survey question 34.

We argued earlier that greater focus and the opportunity to provide statewide leadership (shown in the first three rows of Table 6) would lead to higher quality programs. Our survey results show that 62% of the REEs felt their programs were of higher quality. <sup>16</sup> Both the greater scholarship and higher quality are likely to build respect and credibility. Likewise, the experience of providing leadership statewide will also build the respect and credibility of REEs. Other factors that increase credibility were also improved, such as opportunities to work with state specialist (53% reported improvements), opportunities to integrate audience feedback (48% reported improvements), and opportunities to adjust to new needs (58% reported improvements).

\_

<sup>&</sup>lt;sup>16</sup> We recognize that this could be a self-serving response, but great care was taken to remove any opportunity to identify REEs or their area of expertise and capacity area. Consequently, there is little motivation for REEs to inflate this. Further, 37% reported the same (31%) or fewer (6%) opportunities.

REEs are split in their opinions on whether they have fewer or more opportunities to develop close relationships with audiences. This is discussed further under disadvantages of specialization.

#### Higher Quality of Educational Programs

Ultimately, both the private and public value of Extension stems from people learning about new options and adopting new behaviors. Yet with the growing competition for an individual's time, educational programs must be highly effective to attract participation. This is more likely when there is a high level of specialization and focus that allows continuous improvement that stems from experience and using feedback from audiences. When educators work on many different topics and shift between these very rapidly, they do not have time to invest in quality programs.

Table 6 shows that REEs perceived they had more opportunities to develop and deliver high quality programs. In fact, 62% reported either more opportunities (35%) or much more opportunities (27%) for high-quality programs. In contrast only 6% reported fewer (3%) or much fewer (3%) opportunities.

Two other aspects shown in Table 6 lead to the conclusion that program quality might be improved: (1) Learning about the needs of the target audience increases the relevance of the programs, and (2) integrating audience feedback into the programs and adjusting to new needs lead to stronger, higher quality educational programs. These aspects are based on the idea that expansions in integrative scholarship lead to better research-based educational programs. As shown in Table 6, REEs saw greater opportunity in all of these as a result of specialization and focus.

Another means of checking on the quality of programs is to examine whether the program teams are doing evaluations of their events and programs. As shown in Figure 10,

evaluation is being done more widely in 2006 than in 2001. For example, 48% of the REEs reported they did evaluations on over half of their 2006 programs compared to only 30% of the REEs reporting this level of evaluation in 2001. In contrast, 49% of REEs reported their programs did 25% or less in 2001 while only 36% reported this for 2006. These results are very positive, especially given the fact that the team of three new evaluation positions was only created in early 2006.

**Educational Programs of REEs with Written Evaluation** (Comparison between 2001 & 2006) Univ. of MN Extension REEs, 2007 35% 30% Percentage of REEs 25% 20% **2001** 15% **2006** 10% 5% 0% None 1% to 25% 26% to 50% 51% to 75% 76% or more **Programs with Evaluation** 

Figure 10

Note: Source is survey questions 28 and 29

#### **Disadvantages of Extension Field Staff Specialization**

While we have listed an impressive set of advantages to specialization, every policy innovation also has disadvantages. These were explored in our survey in several ways.

First, question 34, which was reported in Table 6, offered an avenue for REEs to report 'fewer' or 'much fewer' opportunities on each of the 14 items. The number reporting more

opportunities exceeded those reporting fewer on all but the opportunity to work with other areas of expertise. However, another item—the opportunity to develop a close relationship with audiences—was almost tied.

The second approach to exploring disadvantages was to ask the open-ended question: "Please describe what you think are the three most important disadvantages of REE specialization." Of respondents, 83% reported at least one disadvantage. However, only 35% gave three different disadvantages. One of the 25% of REEs who listed only two disadvantages wrote, "must be a good thing as I can only come up with 2 disadvantages." Another 23% only reported one disadvantage. Table 7 reports on the coded responses to the open-ended question on disadvantages.

The first column in Table 7 shows the percentages of responses for the 86 REEs who listed any disadvantage. The second column of Table 7 shows the percentage by the total number of REEs responding to the survey. The third column shows the percent of all 198 responses provided to question 36.

Table 7. Disadvantages of REE Specialization, Minnesota, May 2007

Disadvantage	Percent of REEs	Percent of All	Percent of All
-	Listing any	REEs Responding	Responses
	Disadvantage	to Survey	
Lack of Cross-capacity work	51%	43%	22%
Inability to establish close	35%	29%	15%
relationships with audiences			
Travel much higher	31%	26%	14%
Loss of flexibility and control	15%	13%	6%
Disconnected within capacity	8%	7%	4%
area			
Promotion system	7%	6%	3%
Other items	40%	33%	18%
Sample Size (N)	86	102	198 items

Note: Source is survey question 36.

1.5

<sup>&</sup>lt;sup>17</sup> There also was a parallel open-ended question but is has not yet been coded and is not discussed in this paper. We focused on the open-ended disadvantages because the other questions seem to paint such a positive picture that we wanted to explore potential disadvantages in more depth.

Lack of Cross-Capacity Work

Both question 34 (Table 6) and the open-ended question (Table 7) list "lack of cross-capacity work" as the most frequently mentioned disadvantage in the new system. As shown in Table 6, 58% of the REEs felt they had fewer opportunities "to work with other areas of expertise" as compared to 20% that felt they had more.

Over half of those responding to this question mentioned they felt there were barriers to cross-capacity work. The authors are uncertain what has led to this perception. Some possibilities are as follows. First, the emphasis on program business plans encouraged teams to focus on building a team across all REEs in their area of expertise and a team that included campus faculty. Since this had never happened before, it took much of 2004 and 2006 to achieve. Second, the adjustments to working regionally as well as the greater distances have absorbed much of the time of REEs. Third, the attention of capacity area leaders and area programs leaders on making the new regional systems and new county systems work might have detracted from creating cross-capacity work. Fourth, the history of very short planning horizons of most Extension educators makes it more difficult to collaboration across teams. A can get team B to work on team A's established program rather than team A and B establishing a new program; this type of collaboration is often difficult. Fifth, this concern might simply be a reaction against the discipline of working as a state-wide team<sup>18</sup>. We point out that there have been no attempts by central Extension administration to discourage cross-capacity collaboration. To the contrary, cross-capacity work has always been encouraged when feasible. This is an area that clearly needs additional investigation.

.

<sup>&</sup>lt;sup>18</sup> Before 2001 REEs operated very independently and could easily partner with others outside their area of expertise on short-term projects without consulting with their program teams.

#### Relationships with Audiences

As shown in Table 7, those responding to the open-ended question about disadvantages of REE specialization (question 36) reported that it was more difficult to establish close relationships with leaders in a community. However, on the closed-ended question 34, responses (Table 6) were evenly split on whether there were fewer or more "opportunities to develop closer relationships with audiences." To be more exact, 40% reported more opportunities compared to 39% reporting fewer. But note that the intensity of feeling was stronger on the "fewer" side of this discussion, with 20% saying "much fewer" compared to 12% responding "much more" opportunities.

In some ways these results are surprising since REEs so overwhelmingly indicated that they have more opportunities to learn about their target audiences, to integrate audience feedback, to earn respect from audiences, to focus on their target audiences, and to adjust to new needs. It is possible that the inconsistencies in results are due to the view of some REEs that their "regional" roles are the same as their earlier county roles only over a larger area.

That some REEs see their regional roles in the same way as their roles as generalists in the counties—but covering larger areas—is evident in question 36 on disadvantages of specialization. One REE expected to know all of the leaders and population in the region or state rather than the key influence leaders. Others pointed out that it was more difficult for them to be involved in their own communities. Another spoke of no longer being "recognized as a community leader of PLACE." One wrote that "when covering so many counties it is impossible to make connections with every local agency." Another wrote: "Since I work throughout 11 counties, it is difficult for me to really know the pulse of the region" and consequently "for citizens of the region to know me well as a resource." It would appear that these REEs are still focused on geographic communities rather than communities of interest or target audiences.

When REEs worked primarily in a county or a small set of counties, they could build social capital simply by being good citizens in their own communities and counties. As they work regionally or statewide, they need to be very intentional about building social capital with the influence leaders of their target audiences. Possibly Extension needs to provide training to its REEs on building social capital with target audiences and over larger regions.

#### Commuting Time and Travel

The third most common disadvantage mentioned in the open-ended question (36) was the increased travel and commuting time. This is not at all surprising, since many of the REEs now cover the entire state. In fact, one REE said the title "regional" Extension educator was misleading since so many of them cover the entire state.

Many of the REEs hired before 2004 have much longer commutes than they had in 2001. While 61% of those employed in 2001 lived within 10 miles of their office, only 25% of the 2006 REEs live within 10 miles. In contrast, only 2% of the 2001 REEs commuted over 50 miles while 17% do so in 2006.

Table 8. Commuting Distances, REEs, Minnesota 2001 and 2006

Miles of Commute	Percent REEs in 2001	Percent REEs in 2006	Change in Percent
			REEs
Less than 10 miles	61%	25%	-36%
10 to 30 miles	28%	29%	+1%
31 to 50 miles	8%	28%	+20%
More than 50 miles	2%	17%	+15%
Total	100%	100%	0%
Sample Size (N)	82	102	NA

32

Note: Source is survey questions 3 and 4.

#### Other Disadvantages

In total, 198 disadvantages were mentioned by the 86 REEs responding to this question, or an average of 2.3 per person. Many were cited repeatedly. Outside the top six listed in Table 7, the other items were mentioned by less than 3% of the REEs and are not discussed here.

#### **Conclusions and Policy Implications for Extension Services**

As a result of a major cut in funding to counties and the University, the University of Minnesota Extension had to restructure its field staff in 2004 to avoid heavy losses in field staff. At the same time these financial cuts provided an opportunity, and the necessity, to have some of our field staff members become much more specialized. Extension established 18 regional centers and moved 129 REEs to them. Each REE was selected to specialize in one of 16 areas of expertise. Supervision shifted from supervision by district directors who covered all REEs in an 8 to 12 county region to supervision by state and faculty specialists in a given area of expertise. A new promotion policy emphasized program leadership, teaching, and scholarship and included an up-or-out provision after six years.

A survey of all 129 REEs explored the advantages and disadvantages of the new specialization emphasis. The survey, which had a response rate of 79%, was administered by a third party to ensure it was completely voluntary and anonymous. All capacity areas were well represented in the response. Both open-ended questions on advantages and disadvantages and more objective ones were used. Naturally, the results found that REEs have mixed opinions on all of the questions.

By large margins, REEs found specialization offered them more opportunities rather than fewer. In particular, they felt specialization gave them more opportunities to:

1) focus on their area of expertise

- 2) provide statewide program leadership
- 3) work more with state specialists
- 4) develop and deliver high quality programs
- 5) implement scholarship in their programs
- 6) learn about their target audiences
- 7) focus on their program's target audiences
- 8) earn respect from their audiences
- 9) integrate audience feedback
- 10) work as a part of a team
- 11) adjust quickly to emerging needs
- 12) do Extension teaching.

Three primary disadvantages were identified by the REEs.

- 1) lack of opportunities for cross-capacity work
- 2) lack of opportunities to develop a close relationship with audiences
- 3) increased commuting and travel.

Almost three times as many REEs cited the lack of opportunities to work with other areas of expertise (57% fewer opportunities vs. 20% more opportunities). There are many potential reasons but additional research and policy attention are necessary. The findings are likely to contain complex reflections of the need for more issue based programming and a yearning to return to the days of ad-hoc generalist collaboration.

The lack of opportunities to develop a close relationship with audiences was about evenly matched, with slightly more seeing more opportunities. This topic also needs more research and

policy attention. But we ask, "Are those who see fewer opportunities simply unaware of the social capital research and methods to build relationships over wider regions? Or is there another step that must be taken to address this? Or is it simply less important today?" <sup>19</sup>

There is no question that commuting and travel have increased significantly. This suggests the need for greater emphasis on distance education—something recognized by the REEs. In fact, additional training on distance education was identified as the highest need for staff training by REEs. In recognition of this greater travel and commuting distance, Extension has recently adopted a more flexible stance on telecommuting. <sup>20</sup>

Extension administration has intentionally emphasized program impacts over discussions of structure during the past three years. This was a wise approach during this period since it shifted attention to questions of how to deliver the greatest impacts and how to measure these impacts. Also continued discussion of the structural changes with Minnesota stakeholders during the past three years might have suggested that Extension could go back to the old structure. For reasons outlined elsewhere, this is not feasible.<sup>21</sup> However, with three years of experience in the new system, it is time to start measuring in more detail the impacts of this structural change and sharing this research with other states. The intent of sharing this new knowledge is not to convince other states to do as Minnesota has done or to justify our actions, but simply to learn what has worked and what has not.<sup>22</sup> Areas that need further research include:

- 1) outcome impacts of programs
- 2) benefit-cost of individual programs to document private and public value

<sup>&</sup>lt;sup>19</sup> Undoubtedly, this question will create some hard feelings since it is conventional wisdom that this is very important. George Morse takes full credit (and blame) for suggesting that this be discussed. The research on social capital and engagement should be reviewed prior to jumping to conclusions on these questions.

<sup>&</sup>lt;sup>20</sup> Actually, Extension simply adopted the University's guidelines.

<sup>&</sup>lt;sup>21</sup> Morse and O'Brien, 2006.

<sup>&</sup>lt;sup>22</sup> Recall that Minnesota would not have been able to adopt this degree of specialization without the fiscal crisis in 2003 which forced us to do so (Morse and O'Brien, 2006 and Morse, 2007).

- 3) impacts of the mixed regional local model on local positions
- 4) nature of the public and private value of the local positions
- 5) training needs for REEs related to the new promotion process
- 6) impact of program business plans on program impacts
- 7) successful approaches for REE and campus specialist collaboration.

This research did not directly measure the impacts of Extension programs. However, Extension administration has funded three new evaluation specialists to implement output evaluations. In many cases these outcome evaluations are essential to the benefit-cost studies. Also essential is the conceptual definition of the private and public value of our programs (Kalambokidis 2004). Each of the Minnesota Extension programs has a private/public value statement (Resource Development Unit 2007). Preliminary work has been started on using contingent valuation and travel cost methods to evaluate the private value (Loomis 2005, Roe, Haab, and Sohngen. 2004. and Morse et al. 2007), but additional work is needed.<sup>23</sup>

More than 60 percent of the field staff members are in county offices; additional research is needed on the mixed regional/county model to examine the impacts of these positions. These positions are concentrated in three areas (4-H, approximately 100 people<sup>24</sup>; nutrition education, approximately 100 people; and agriculture, approximately 40 people, with a few in other areas). Each of these might need different research approaches.

Research and policy discussion is needed on the training needs for REEs as the new promotion policy is implemented. The criteria in the new promotion policy were established to strengthen program impacts. Hence, success for REEs will also result in Extension being able to

-

<sup>&</sup>lt;sup>23</sup> Highly related work on securing political support for the private benefits has been done by McDowell 1985

<sup>&</sup>lt;sup>24</sup> For both 4-H and the nutrition education, there are about 80 FTEs since some are part time.

better deliver on its public promise to make a difference. Additional data from our survey outline the REE's professional development and staff training needs.

Statewide program teams require intentional discussion on program plans and specialization of efforts among the team. Our survey collected data on the REE's attitudes about program business plans and the frequency with which they should be used and updated. This needs further analysis and policy discussion.

Our final suggestion for future research relates to collaboration between REEs and campus faculty. While 54% of REEs reported new opportunities, clearly much could be learned from studying the successes in current collaboration and the barriers to increased collaboration. Since Extension's comparative advantage is having educational programs based on strong research and scholarship, this collaboration is one of the keys to long-term success.

#### References

- Bartholomew, M., and K.L. Smith. 1990. "Stresses of Multicounty Agent Positions." *Journal of Extension* 28(4)<sup>25</sup>
- Borich, P.J. 1988. "Clients Face Uncertainty, Too." Journal of Extension 26(4)
- Boyer, E.L. 1990. *Scholarship Reconsidered: Priorities of the Professorate*. Lawrenceville, Princeton University Press.
- Frank, R.H. and B. Bernanke. 2006. *Principles of Microeconomics*. Maidenhead: McGraw Hill Education.
- Ford, S.A., and E.M. Babb. 1989. "Farmer Sources and Uses of Information." *Agribusiness* 5(5):465–76.
- Gibson, J.D., and J. Hillison. 1994. "Training Needs of Area Specialized Extension Agents." *Journal of Extension* 32(3)
- Harriman, L.C., and R.A. Daugherty. 1992. "Staffing Extension for the 21st Century." *Journal of Extension* 30(4)
- Hoag, D.L. 2005. "Economic Principles for Saving the Cooperative Extension Service." *Journal of Agricultural and Resource Economics* 30(3):397-410.
- Hutchins, G.K. 1992. "Evaluating County Clustering." Journal of Extension 30(1)
- Kalambokidis, L. 2004. "Identifying the Public Value in Extension Programs." *Journal of Extension* 42(2)
- Klein, T., and G. Morse. 2007. "The Role of Business Planning Concepts in Balancing Mission and Financial Sustainability Responsibilities in Extension Programming." *Staff Paper PO7—* 2, Dept. of Applied Econ., University of Minnesota. Available at: <a href="http://agecon.lib.umn.edu/cgi-bin/pdf\_view.pl?paperid=25649&ftype=.pdf">http://agecon.lib.umn.edu/cgi-bin/pdf\_view.pl?paperid=25649&ftype=.pdf</a>
- Loomis, J. 2005. "Economic Values Without Prices: The Importance of Nonmarket Values and Valuation for Informing Public Policy Debates." *Choices* 20 (3):179–82.
- McDowell, G.R. 1985. "The Political Economy of Extension Program Design: Institutional Maintenance Issues in the Organization and Delivery of Extension Programs." *American Journal of Agricultural Economics* 67(4):717–25.
- McDowell, G.R. 2001. Land-grant Universities and Extension into the 21st Century:

<sup>&</sup>lt;sup>25</sup> All Journal of Extension articles are available on-line at www.joe.org.

- Renegotiating or Abandoning a Social Contract. Ames: Iowa State University Press.
- Morse, G.W. 2006. "Minnesota Extension's Regional and County Delivery System: Myths and Reality. *Journal of Extension* 44(4)
- Morse, G., and T. Klein. 2007. "Economic Concepts Guiding Minnesota Extension's New Regional and County Delivery Model." *Journal of Higher Education Outreach and Engagement*, in press.
- Morse, G., and P. O'Brien. 2006. "Minnesota Extension's Mixed Regional/County Model: Greater Impacts Follow Changes in Structure." Staff Paper PO6–7, Dept. of Applied Econ., University of Minnesota.
- Morse, G.W., H. Zheng, N. Anderson, A. Dincesen, M. Duncomb, and C. Dehdashti. 2007. "Benefits of 4-H Adventures Program." Resource Development Unit, University of Minnesota Extension.
- Patrick, G.F., and S. Ullerich. 1996. "Information Sources and Risk Attitudes of Large-Scale Farmers and Farm Managers and Agricultural Bankers." *Agribusiness* 12:461–71.
- Peters, S., N.R. Jordan, M. Adamek, and T.R. Alter. 2005. *Engaging Campus and Community: The Practice of Public Scholarship in the State and Land-grant University System.* Dayton: Kettering Foundation Press.
- Rauschkolb, R.S. 1988. Uncertainty: Condition Normal for the Future. *Journal of Extension* 26(4)
- Resource Development Unit 2007, "Executive Summaries of Program Business Plans, St. Paul. University of Minnesota Extension.
- Roe, B., T.C. Haab, and B. Sohngen. 2004. The Value of Agricultural Economics Extension Programming: An Application of Contingent Valuation. *Review of Agricultural Economics* 26: 373–90.
- Schnitkey, G. M.Batte, E. Jones, J. Botomogno. 1992\_Information Preferences of Ohio Commercial Farmers: Implications for Extension. *American Journal of Agricultural Economics*, Vol. 74, No.2: pp. 486-496
- Thompson, O.E., and D. Gwynn. 1989. Improving Extension: Views of Agricultural Deans. *Journal of Extension* 27(1)
- Wheelan, C. 2002. *Naked Economics: Undressing the Dismal Science*. New York: W.W. Norton & Co.