



AgEcon SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

1987

UNIVERSITY OF CALIFORNIA  
DAVIS  
AUG 10 1988  
Agricultural Economics Library

**ACHIEVING SUCCESSFUL EXTENSION-RESEARCH INTERFACE:  
IMPACTS OF ORGANIZATIONAL STRUCTURE**

John E. Ikerd  
University of Georgia

The survival of agricultural economics as a credible profession depends on an effective interface of extension and research. Agricultural economics extension without relevant, research based information is just another continuing education program. Agricultural economics research without an effective outreach program is just another area of specialization within the discipline of Economics.

The validity of these assertions depends to a great extent on the definitional distinction between a profession and a discipline. There is no consensus among agricultural economists concerning this distinction. But, I will use the term discipline to refer to a body of knowledge made up of a unique set of basic principles and concepts (Ikerd). A profession utilizes discipline based principles and concepts in solving problems or exploiting opportunities. Agricultural economists utilize principles and concepts from economics, statistics, mathematics and other disciplines to address problems and opportunities of agriculture and related sectors of the economy. Thus, agricultural economics is a profession rather than a discipline.

Extension must have relevant, research based information if it is to address real world problems and opportunities of producers, agribusinesses and rural communities. Similarly, research results must be disseminated or extended if they are to be of benefit in solving problems or realizing opportunities. This interdependence of research and extension, coupled with interdependences of each with teaching, represents the essence of the land grant philosophy. Extension, research and teaching all are essential elements of the agricultural economics profession.

Agricultural economics extension without relevant research will become nothing more than off-campus teaching. Agricultural Economics research without effective extension will become nothing more than another area of specialization within economics. Agricultural economics cannot survive as a credible profession without an effective interface between research and extension.

The Weakening Extension-Research Linkage

Concerns regarding the extension-research interface in agricultural economics appear to be increasing. Ed Schuh, in his much discussed article in Choices, contends that there is a serious malaise in the land grant university system. He points to a pervasive attitude that applied work is not important and

Agricultural extension

that publishing for peers and consulting for high paying firms or government agencies takes precedence over the traditional social mission of land grant research. Researchers who write more experiment station bulletins and applied research reports and fewer journal articles may be viewed as less scholarly than those who concentrate on writing for their peers in refereed journals. Extension specialists who shun the professional journals also may have their scholarly credentials questioned by their research colleagues.

Extension traditionally has provided a linkage between research based information and problems of society. The underlying assumption of extension work has been that research based information was practical and useful. The trend toward a discipline orientation in the agricultural economics profession raises serious questions regarding the extension-research interface. Who will conduct the applied research which is essential to the profession? Some have concluded that extension specialists must take greater responsibility for conducting their own research to maintain their professional credibility and to support their educational programs (Wood).

What is the role of the extension economists in the 1980s and 1990s? Can we depend on researchers to provide useful and practical information? Or, should we become more involved in conducting applied research for ourselves? How can we gain and maintain credibility as professional agricultural economists without abandoning the land grant mission of extension? The extension-research interface is a critical consideration in all of these questions.

This paper does not provide conclusive answers. However, it does provide an historical perspective on the evolving status of extension agricultural economists within the agricultural economics profession. Current organizational schemes of land grant universities and the perceived impacts of these schemes on the extension-research interface are examined. And finally, some alternative strategies are outlined for achieving a more successful interface between extension and research in agricultural economics.

#### The Evolution of Agricultural Economics Extension

Many of the current conflicts between extension and research in our profession can be traced to differences in the evolution of academic standards for extension and research faculty in agricultural economics. Even a subjective summary of these evolutionary processes may provide insights into prerequisites for achieving a more successful extension-research interface.

Extension specialists have been a part of the Cooperative Extension Service since its beginning. However, specialists increased dramatically in numbers with growing land grant

university budgets during the 1950s and 1960s. Many specialists in agricultural economics hired during this period were former county agents seeking professional advancement. Most had Masters degrees in agricultural economics or obtained Masters degrees as a prerequisite for their employment as specialists. Extension economists with Ph.D. degrees in Agricultural Economics were a distinct minority during the 1950s and early 1960s.

During the late 1960s and early 1970s, emphasis was placed on upgrading the academic credentials of extension specialists. Many universities provided paid study leave and encouraged specialists to complete Ph.D. degree programs. Strong preference was given to those with Ph.D. degrees in filling new or vacant specialists positions. Many specialists in agricultural economics took advantage of opportunities to obtain their Ph.D.s and agricultural economics departments were successful in recruiting new Ph.D.s to work in extension. But, extension economists without Ph.D. degrees were not at all uncommon, even during the 1970s.

During the 1980s, however, extension economists without Ph.D.s have become a distinct minority. Many who were hired as specialists in the 1950s and 1960s have reached retirement age. Others without Ph.D.s have foreseen difficulties in professional acceptance or advancement and have moved on to other occupations. Vacant extension positions have been filled with new Ph.D.s who have identical academic backgrounds and are professional equals to those hired for research and teaching positions.

The evolution of agricultural economics research is similar to that of extension. However, the progression to full staffing with research faculty holding Ph.D.s was one to perhaps two decades ahead of extension. Research economists without Ph.D.s were a distinct minority in most departments by the 1950s. There have been few if any non-Ph.D. research faculty employed in agricultural economics in the last 25 to 30 years.

Basic differences in attitudes of extension and research faculty can be traced directly to differences in the professional evolution of the two areas of work. Even the younger extension workers, with full academic credentials, have been tutored by older extension faculty who have seen themselves as extension workers in agricultural economics rather than agricultural economists working in extension.

Most of us in the profession today consider ourselves to be agricultural economists working in extension. But, we still have a strong sense of mission. We are agricultural economists with a specific task to perform. We inform and we educate with a purpose. We help people solve their problems and realize their opportunities. This sense of mission is much more deeply rooted in our extension experiences than in our academic backgrounds.

We have been educated in Agricultural Economics but tutored in the land grant philosophy by those who were more extensionists than economists.

Many researchers view extension economists as something less than full members of the profession. Even those who appreciate the essential role of extension in the profession may see extension work as somehow less academic than research or resident instruction. Many older researchers grew up professionally with extension colleagues who were academic "retreads" or did not have a Ph.D. Many of the older specialists did not belong to the AAEA, saw little value in most journal articles and econometric models and said so to anyone willing to listen.

Many younger researchers were the more discipline oriented graduate students trained and tutored in modeling and quantitative methods. They were lead to believe that their training was superior to that of their colleagues who choose more applied or profession oriented training. Those graduates with a sense of mission and an applied orientation were more likely to be offered and to accepted extension positions.

Many researchers hold totally out-of-date perceptions of extension economists. I have found this to be a major problem in professional acceptance of extension economists by many of those in leadership positions in agricultural economics departments and in our national and regional associations. Opportunities are growing for extension economists in administrative positions and in professional leadership roles. But, many biases remain that are based on what extension used to be and not what it is today. These biases can be erased. But, it will take time and continuous exposure of researchers to the reality of extension work through extension and research economists working together.

The more difficult problems of extension-research interface relate to differences that are real rather than illusionary. Extension economists and research economists in general may have quite different opinions concerning the agricultural economics profession, of what it is and what it ought to be. These differences will not be resolved until we agree on and begin to work toward a common mission. Or, we can agree to disagree and to go our separate ways.

#### Alternative Organizational Structures

Different administrative or organizational schemes have been used by different land grant universities at different times in coordinating the extension-research-teaching triad. These organizational schemes reflect a variety of philosophies among university administrators. Presumably, the objective of any organizational scheme is to facilitate the overall effectiveness of the organization. Many differenced among institutions undoubtable reflect historical differences related to custom and

tradition. However, persistent differences in organizational schemes imply the absence of consensus among administrators on a single best organizational structure for a land grant university.

Experiment stations and Cooperative Extension Services became part of the land grant university system as a result of the Hatch Act of 1887 and Smith-Lever Act of 1914 respectively. Research and extension were added as separate administrative units because funding for these activities came from new and different sources. Over time, however, teaching, research and extension functions have become consolidated under comprehensive boards which govern overall activities of land grant universities.

Research and extension functions have been integrated into overall university administrative structures even though they are still separate line items in many state budgets. However, these integrated administrative structures differ widely from university to university, even within the land grant system.

Johnson outlines three basic administrative structures which reflect different philosophies for integration of extension, research and teaching functions. All three organization charts begin with a university president or chief administrator with a similar title.

In some institutions, the three functions are separated immediately below the level of president with vice presidents for extension, research and resident instruction. With this structure, the three functions are integrated administratively only at the level of president. Directors of research, extension and resident instruction follow their respective vice presidents in the chain of responsibility and in turn are followed by separate department heads for extension, research and teaching programs.

In other institutions, deans rather than vice presidents are just below presidents in the organizational charts. Deans may be followed by separate directors for research, extension and resident instruction programs. In such cases, integration of the three basic functions occurs at the level of dean rather than president. Research, extension and teaching are more likely to be integrated into academic departments under a single department head with this structure. But, such departments often have separate program leaders for extension, research and teaching who are accountable to their respective directors as well as their department heads.

With the third administrative structure, deans serve also as directors of extension, research and resident instruction. The functions are separated administratively through associate deans or directors for each of the functional areas. Research, extension and teaching functions typically are integrated at the

departmental level in such cases with a department head who coordinates all three functional responsibilities. The associate directors attempt to coordinate research, extension and resident instructional programs among departments.

#### Who Has the Budget?

A key question in any administrative structure is: "Who has the budget?" The perception is that whoever has the budget has the real power. Those of us who have a budget to administer know that it is easy to overstate the power of the budget. But at the same time, we must admit that even limited power to reflect our evaluation of personnel and programs in salaries and support funds enhances our ability to influence program philosophy and direction.

A division of power between academic departments and functional units is an inherent characteristic of any land grant university system. Academic departments are basic organizational units of any university. The need for strong academic departments to support research and extension programs is generally recognized by extension, research and teaching faculty. Extension economists, for example, tend to identify with and support a strong agricultural economics department even if they are housed off-campus and have neither tenure nor academic rank. However, coherent programs in extension, research and teaching also are an inherent part of any land grant university. And, these functional programs, in many cases, must transcend departmental boundaries (Woeste).

Extension and research programs may suffer if too much power is vested in the academic departments. Academic departments may suffer if too much power is vested in separate research and extension programs. The system would seem to function best with an approximately equal balance of power. A near equal balance encourages coordination of functional and academic programs because neither functional program is strong enough to dominant the other or to stand alone.

A key factor in the balance of power seems to be control of the budget. Any structure with separate departments, and thus separate budgets, for extension, research and teaching would seem to tip the balance of power in favor of functional rather than academic programs. This would be more typical of the vice president, director, department head organizational scheme. Separate department heads receive their total budgets through their respective functional directors.

An organizational scheme in which department heads answer directly to deans would seem to tip the balance of power in favor of an academic rather than functional orientation of programs. The department head negotiates with one person, the dean, for a budget which includes extension, research and teaching

components. Department heads may have considerable discretion in use of funds within the department without violating technical budgetary guidelines.

The balance of power is less clear under organizational structures with deans and separate directors of extension, research and teaching. Departmental budgets may be integrated at the departmental level but each director has a definite interest in, and power over, budgets for teaching, research and extension. The department head is likely to have less discretion in use of funds than if a single budget comes from a single person. The power of the department head may be diminished even further by assistant heads or program coordinators for teaching, research and extension. The balance of power under such an organizational scheme may depend more on personalities of deans, directors and department heads than on the university organizational chart.

Organizational structures change over time. A basic trend in recent decades seems to be toward integration of extension, research and teaching programs at lower levels within administrative structures. At the university level, such changes may be reflected in fewer vice presidents, or vice presidents with less actual influence on programs and budgets, for teaching, research and extension. At the departmental level, the trend is reflected in fewer universities with departments for extension separated from those for research and resident instruction. This trend also may mean less autonomy for extension program leaders within Agricultural Economics departments if not more department heads who manage all three program areas directly.

#### Organizational Schemes and the Extension-Research Interface

The total variety of organizational schemes includes several variations of each of the three basic structures with assistant and associate deans and directors here and there, department chairmen rather than department heads, various degrees of budgetary, personnel and program authority at various levels, and even a division chairman system at my own university of Georgia.

Agricultural economics department heads were surveyed in early 1987 to obtain their assessment of the impact of their organizational scheme on working relationships among extension and research faculty in their departments. The survey form is included as an appendix to this paper. Department heads and chairmen were asked to classify their departmental structure as either a.) completely separate departments for extension and research programs, b.) an integrated department with a separate coordinator for extension programs or c.) a completely integrated department under one department head.

Respondents were asked to rate the working relationship among extension and research faculty in their programs using a five point scale: highly productive, good, acceptable, deficient or



counter productive. Factors other than structure affect working relationships. Therefore, respondents were asked also to assess the contribution of their organization structure to the effectiveness of the extension-research interface using a five point scale: highly positive, positive, neutral, negative on highly negative. Respondents were asked to conclude the survey by giving any suggestions they might have for developing more productive working relationships between research and extension programs in agricultural economics.

An identical survey form was mailed to a sample of extension economists. It was hypothesized that assessments of department heads and extension faculty in their departments might differ in some respects. Extension Service, USDA lists for farm management and marketing contacts at each university were used for this latter survey. No attempt was made to match economists' responses with those of their department heads but comparisons were made between responses of department heads and extension economists in general.

Structure and Productivity. A total of 109 survey forms were completed and returned, 40 from department heads and 69 from extension economists. The AAEA directory was used to obtain a list of department heads, which excludes at least some heads of separate extension departments. At least a few of the responses from extension specialists came from program leaders in extension. Thirty-nine of the total responses came from universities with separate departments for extension and research (18 from extension specialists and 9 from department heads). The only department with a division structure was combined with the group for completely separate departments. Thirty-four responses came from economists in integrated departments with separate program leaders for extension and research (22 from specialists and 12 from heads). And, 48 responses came from totally integrated departments (29 specialists and 19 heads).

Values were assigned to extension-research productivity ratings as follows: Highly Productive = 5, Good = 4, Acceptable = 3, Deficient = 2, and Counter-Productive = 1. Zero-one dummy values were assigned to a variable representing department head versus extension economist and for each of the three different departmental structures. The dummy variables for position and structure were regressed on the 1 to 5 productivity scale.

$$1.) \text{ PROD} = 3.89 - 0.20 \text{ EE} - 0.5 \text{ CSD} + 0.14 \text{ CID} \quad \text{Rsq} = .078$$

$$\quad \quad \quad (1.02) \quad (1.97) \quad (0.64) \quad \quad \quad \text{SE} = .99$$

Where: PROD = Productivity Rating  
 EE = Extension Economist  
 CSD = Completely Separate Department  
 CID = Completely Integrated Department  
 (t values in parentheses)

The analytical model with parameter estimates are shown in equation 1. The constant value represents the average productivity rating for department heads of integrated departments with separate program leaders for extension, which I will refer to simply as integrated departments to distinguish them from completely integrated departments. The coefficient of 3.89 indicates an average ranking just below the "Good" level for these departments. Completely separate departments averaged a full one-half ranking lower, between "Acceptable" and "Good." Completely integrated departments averaged slightly higher than integrated departments, just over the "Good" ranking. Extension economists ranked their working relationships slightly lower on the average than did department heads but only by two-tenths of a rank. Rankings would still average from acceptable to good for all structures, even for extension economists.

The average ranking for all respondents was 3.70 and the standard deviation was 1.00. This average ranking was toward the good side of the acceptable-good range. On the average, there would appear to be no serious problem with extension-research working relationships. However, the standard deviation of 1.00 indicates a wide range of opinions among individuals, and possibly wide differences among departments, with respect to the extension-research interface.

The low R-square value, 0.078, indicates that departmental structure explains a very small proportion of the total variation in extension-research productivity among departments. The standard error of the estimate of 0.99 indicated a great deal of variability in extension-research working relationships that cannot be explained by differences in organizational schemes.

Separate models were estimated for department heads and extension economists to detect any differences in their assessments of working relationships among organizational schemes. Parameter estimates for the extension economist model are shown in equation 2 and department head parameter estimates are shown in equation 3.

$$2.) \text{ PROD} = 3.77 - 0.33 \text{ CSD} - 0.15 \text{ CID} \quad \text{Rs}q = .014$$

(ee)                    (0.99)                    (0.51)

$$3.) \text{ PROD} = 3.75 - 0.86 \text{ CSD} + 0.62 \text{ CID} \quad \text{Rs}q = .36$$

(dh)                    (2.44)                    (2.10)

The average rankings of extension economists and department heads of integrated departments are nearly identical, 3.77 and 3.75. However, several differences in preceptions of department heads and extension economists are striking. Extension economists in completely separate departments rank their departments over one-half rank higher than department heads of

completely separate departments, -.33 compared with -.86. The difference is even greater for completely integrated departments which are ranked more than three-fourths of a rank higher by department heads than by extension economists, +.62 compared with -.15.

The R-square value for the extension economist equation indicates that departmental structure explains almost none of the variation in their evaluation of working relationships with research counterparts. On the other hand, departmental structure explains nearly one-third of the variability in department heads' ranking of extension-research relationships in their departments.

Structural Contribution to Interface Effectiveness. Values were assigned to rankings of the contribution of organizational structure on effectiveness of the extension-research interface as follows: Highly Positive = 5, Positive = 4, Neutral = 3, Negative = 2 and Highly Negative = 1. Zero-one dummy values were assigned to other values as indicated previously. The three different models with parameter estimates are shown in equations 4, 5 and 6. Equation 4 is based on data for department heads and extension economists, equation 5 reflects extension economist responses only and equation 6 reflects responses of department heads only.

- 4.)  $CONT = 3.99 - 0.26 EE - 1.19 CSD + 0.21 CID$        $Rsq = .28$   
       (all)                    (1.38)            (4.79)            (0.22)             $SE = .96$
- 5.)  $CONT = 3.82 - 1.09 CSD - 0.06 CID$                      $Rsq = .17$   
       (ee)                    (4.03)            (0.20)
- 6.)  $CONT = 3.83 - 1.39 CSD + 0.64 CID$                      $Rsq = .52$   
       (dh)                    (4.03)            (2.22)

Where: CONT = Contribution of Structure to Interface  
               (All other variables as in previous models)

Analysis of the contribution of structure of effectiveness of the extension-research interface seems to confirm several tentative conclusions from the previous analysis. Higher R-square and t values indicate that factors other than structure affect working relationships within departments. However, R-square value are still relative low, 0.28, and the standard error for regression was .96. These values indicate considerable difference of opinion among economist regarding the nature of contributions of various organizational schemes on the extension-research interface.

Extension economists and department heads seem to agree quite closely on their average rankings regarding the effect of an integrated departmental structure on extension-research relationships. They seem to agree also that totally separate

departments make a successful interface more difficult to achieve, although extension economists are somewhat less pessimistic on this point. However, department heads were clearly more optimistic than extension economists regarding the positive contribution of totally integrated departments to a more effective extension-research interface. Department heads give an average rating of 4.47 to completely integrated departments, about half-way between positive and highly positive rankings. Extension economist rate completely integrated departments at 3.74, somewhat less than a positive ranking.

Suggestions for More Productive Relationships. Nearly all of those responding to the survey made suggestions for improving the extension-research interface. The two most frequent suggestions for improvement were more joint appointments, mentioned by 30 respondents, and more extension input in research planning and vice versa, mentioned by 31 respondents. These proposals were common for both extension economists and department heads but had greater than proportional support among extension economists.

Changes in administrative structure or leadership were mentioned by 16 respondents but ranked nearly as high as joint appointments and coordinated research in popularity among department heads. Department heads seem to have more confidence in solving problems through administrative means. Eight economists, only 1 department head, indicated that administrative changes wouldn't make much difference. Nine respondents indicated that more integrated departmental structures may detract from a department's ability to fulfill its extension responsibilities.

Several respondents volunteered that the effectiveness of the extension-research interface depends on one-on-one working relationships between individual faculty. I doubt that any of the respondents would have disagreed with this particular point. However, the focus of this analysis was on how departmental structure, or other factors, might encourage such one-on-one relationships to develop and grow.

Fourteen respondents indicated that communications was the key to better working relationships. Eleven suggested interspersed offices for research and extension faculty, 5 mentioned membership of extension faculty on graduate committees and 5 suggested integrated faculty teams or task forces. All of these suggestions, 51 in total, presumably would promote better communication and understanding among extension and research faculty.

Fourteen respondents indicated that extension economists should change their attitudes or activities to encourage better relationships with their research counterparts. Nine respondents suggested that extension economists should do more applied

research or should be more scholarly and professional in their extension activities. Several of these respondents indicated that researchers could benefit also from doing more extension work.

A return to the land grant mission was mentioned specifically by 12 respondents as a way to improve the extension-research interface. Ten respondents indicated that institutional research biases with respect to faculty status, tenure and promotion and a failure to appreciate the mission of extension were impediments to better extension-research relationships. Those who felt that departmental structure could not solve the problem or saw dangers in complete integration also alluded to the distinctly different roles of extension and research in the overall departmental mission. And, those who expressed a need for greater extension input in research planning were reflecting the mission oriented land grant philosophy as well.

Combining responses related to mission and research planning, a total of 88 respondents suggested, directly or indirectly, that working relationships between extension and research would be enhanced by a return to a mission orientation in agricultural economics programs. A mission orientation requires that research and extension programs be coordinated in order to give society practical and useful information that can be used in addressing problems and opportunities.

A mission oriented agricultural economics program requires mutual understanding and respect between extension and research faculty regarding the essential nature of both functions in fulfilling their joint mission. Joint appointments and better communications can enhance the effectiveness of coordinated research and extension programs. However, neither joint appointments nor better communications will improve the ultimate effectiveness of programs of research and extension that share no common mission.

The extension-research interface in many departments of agricultural economics seems to be working well. Other departments have obvious problems in coordination of research and extension programs. The survey did not reveal why some programs seemed to be working better than others only that organizational structure was not a dominant factor. Respondents did suggest, however, that there is considerable opportunity for improvement in the extension-research interface in the agricultural economics profession.

#### Mission Oriented Strategies for Agricultural Economists

A more successful extension-research interface is essential in developing more effective and productive programs in agricultural economics. The success, and quite possibly survival, of agricultural economics as a credible profession

depends on a return to the land grant philosophy. This was my basic attitude when I agreed to write this paper. That attitude has been reinforced and strengthened by the survey results, the literature review and thought processes represented in the finished product.

Some economists question why we need to feel constrained by philosophies reflected in Acts of Congress passed in 1864, 1890, 1887 and 1914. The answer is: for the same reason we feel constrained by a document written and adopted in 1787. The basic values of the U.S. Constitution are as widely held today as they were when the Constitution was written. Likewise, the values reflected in the two Morrill Acts, the Hatch Act and Smith-Lever Act are as widely held today as they were when these acts were written.

Most of us still hold the value that higher education in practical matters should be available to common men and women of all races. We still believe that society benefits from public investments in agricultural research that improve the efficiency of the food and fiber system and free resources for uses other than providing basic necessities for domestic consumption. We still believe that dissemination of practical and useful information and the giving of instruction in agricultural and related subjects to those not in residence on college campuses is a legitimate use of tax dollars.

The Southern Extension Directors were confronted with the possibility of large budget cuts in the spring of 1986. They met to plan a strategy to restore their budgets. Their first step was to develop a written justification for continued funding. In 1986, challenged to justify their existence, the Southern Extension Director reaffirmed their dedication to the mission of extension as stated in the Smith-Lever Act. I, for one, could not have suggested any stronger statement of mission.

Restoring the Mission Orientation in Our Profession. The preferred strategy for enhancing the extension-research interface would be to return the profession to a mission orientation. Research and extension economists who agree that their basic mission is to help society solve its problems and realize its opportunities are much more likely to agree on the problems to be addressed at any given point in time.

Peter Drucker repeats the old story of three stone cutters in his book, Management. A passer-by asks each of the three what he was doing. The first replied, "I am making a living." The second kept on hammering and said, "I am doing the best job of stone cutting in the country." The third looked up with a visionary gleam in his eyes and said, "I am building a cathedral."

We lack a common perception of what we are doing in agricultural economics. Some of us are trying to do something useful while others are just trying to make a living and others are preoccupied with developing their scholarly credentials. Those just trying to make a living can be found in extension as well as research. And, we may have some extension economists in the last category as well. But, scholarly preoccupation seem much more common among researchers. Our dissatisfaction with our research counterparts does not reflect scholarly disrespect but rather our frustration with the lack of applied research on which to build useful extension programs. We in extension are trying to build a cathedral while our researchers are preoccupied with impressing each other by making fancy cuts in the stone.

Ultimately, the Agricultural Economics profession must return to its mission orientation. Knutson lists full restoration of "the tradition of extending research results and working with experiment station scientists" as a change essential for the survival of extension. Sprott, contents that "Research is first among equals; promotion and tenure require publications refereed journals. Our work is directed to and written for peers within our disciplines; and, our relevance has never been at a lower ebb." He ends his comments with the question: "Is there anyone out there with guts enough to forestall a taxpayer revolt by doing something about it?"

What can we do about it? First, we can stop blaming ourselves for all our problems. Most of the professional exposure of extension in recent years has been discussion of our problems and of changes we must make to survive. Extension sessions at the AAEA meetings in 1982 and 1986 and at the SAEA meetings in 1987 were, for the most part, critical of extension. Constructive self criticism can be useful. We in extension must make changes in our organizational structure and delivery systems to adjust to the current social environment. But, our mission is still valid. We have not lost our way. It is our research counterparts who have gone astray. We in extension have been lonely voices demanding relevance in research until Choices gave a voice to dissident researchers and administrators.

We must, however, go beyond saying "I told you so." We must work aggressively and actively within our departments, within our universities and within our professional associations to restore the mission orientation to our profession. However, the disciplinarians have a strong grip on our profession. The discipline orientation is particularly strong in the professional associations and is strongest in the AAEA. The American Journal of Agricultural Economics defines the standards of our profession for most researchers. The AAEA is clearly dominated by those with a disciplinary rather than professional orientation. The regional journals have found it difficult to stray too far from publication standards set by the AJAE.

Returning the entire profession to its historic mission will be a long and difficult, if not impossible, task. A tax payer revolt may not wait that long. So, what do we do in the meantime? We have at least two alternative strategies. We in extension can do our own applied research in support of our extension programs. Or, we can help restore professional credibility to those researchers who choose to support the land grant mission through applied research.

Extension economists, for the most part, were trained in the same institutions, taking most of the same graduate courses under the same instructors as our research counterparts. We are capable of doing our own research. Most of us already do some applied research and would prefer to continue. However, we feel that our comparative advantage is in extension. The question is not whether we can or will do research, rather it is how much research we should do and how much we should leave to others.

I worked for a time in earlier years with the "Wilson Six Horse Hitch," a team of six Clydesdales. We used the horses for promotional purposes, but similar teams hauled meat through the hilly streets of cities in the early 1900s. Six horse teams were made up of three pairs of horses, two lead horses in front, two swing horses as the middle team and two big wheel horses next to the wagon. Each pair of horses had different functions to perform. But, the three pairs of horses all had to work together or the wagon didn't go anywhere. Extension, research and teaching is not unlike a six horse hitch. Each of us has a different function to perform, we work in pairs but we also must work as a team, we are all hitched together, and we either work together or we don't go anywhere.

Even two Clydesdale horses could pull a loaded wagon. So if your Clydesdales wouldn't work together, you could unhitch them and have three teams of two. But, there were a lot of hills that two or even four horses couldn't climb with a heavy meat wagon. Apparently beer wagons were even heavier and required eight horses rather than six. The little lead horses couldn't pull a whole lot, the big wheel horses were too slow for light loads and the swing horses were just horses. And, there really isn't anything very special about a two horse hitch.

We can unhitch extension from research and teaching. We can do our own research and teach the undergraduate courses in agricultural economics. This is precisely the trend taking place in more than a few Agricultural Economics departments today. But, extension alone can't do all the things that we can do with extension, research and teaching all working together. There will be work that should be done that won't have the expertise to do. It will take us longer to do other things. And, there will be only a third as many of us to do the same job.



If the only choice becomes either to unhitch or remain entangled in our traces, then we should unhitch. There is no useful role for extension in a purely discipline oriented department. A discipline can communicate with itself, which is its only significant communication need, through refereed journals and meetings of peer groups. We in extension cannot become discipline oriented and continue to function as extension economists. Extension will survive only as a part of a profession, not a discipline, even if we have to do our own research. But if we fail to restore an effective extension-research interface, we will have lost the special part of our profession. Extension will be just another pair of horses with a heavy load.

The choice is not a choice between a totally disciplinary orientation or a total mission orientation directed only toward solving problems or realizing opportunities. A disciplinary base is necessary for good applied research. Medical doctors and engineers do some basic research in biochemistry and physics even though medicine and engineering are clearly professions rather than disciplines. We must continue to do some disciplinary research but the question is one of balance. But as Schuh points out, only a few people really are on the frontiers of knowledge. Society can't afford very many purely discipline oriented agricultural economists.

Restoring professional credibility to applied research would seem the more logical strategy for short run productivity and long run restoration of the profession. The recent mission versus discipline controversy indicated potential support for this strategy among researchers and administrators as well as among extension professionals.

Many researchers apparently feel estranged by the disciplinary trend in the profession. But, they may feel powerless to do much about it. They have to publish in the refereed journals to get promoted, earn tenure and gain status in the profession. The refereed journals are discipline oriented. Any time they spend on applied research is likely to be viewed as a cost to their professional advancement.

Many researchers conduct useful, applied research without significant professional incentives. Some may be sufficiently motivated that they would make a contribution to society regardless of the reward system. In most cases, deans, experiment station directors and even department heads support applied research even if the disciplines do not. However, these researchers quite likely would do even more applied research if they were rewarded professionally for this type of work.

How do we generate professional rewards for applied research? One alternative would be to reorient the professional journals. Presumably, rewards for peer-reviewed applied research could count just as much as peer-reviewed discipline research, other things equal. However, the AJAE and even the regional journals seem firmly in the grips of discipline oriented agricultural economists.

The most promising, definitive first step toward restoring professional credibility to mission oriented research might be a new national journal of applied agricultural economics. This has been suggested by various economists at various times over the past several years. Such a journal conceivable could be edited by the AAEA. However, the AAEA would likely see another journal as competitive with the AJAE.

The leadership of the AAEA likely will point to new journals such as Agribusiness and The Journal of Production Agriculture as being adequate outlets for applied agricultural economics research. These journals may prove to be valuable research outlets in the future. However, they are not journals of agricultural economics and thus can never attain the professional status of an AJAE. An American Journal of Applied Agricultural Economics could become the journal of our profession but probably would need to be a totally new venture outside current professional association structure.

The publication criteria for such a journal would have to be strictly controlled to insure that published articles provide information of use in supporting extension, undergraduate instruction or other problem solving applications. Discipline oriented articles, those making contributions to theory or methodology of primary use to research peers and graduate students, would be directed to the AJAE.

I have contended throughout my career that our best chance for restoring professional credibility for extension work was to work with researchers and teachers within our professional associations. However, the time may be at hand to join researchers and teachers with whom we can share a common mission to do what needs to be done regardless of whether the associations approve or disapprove. We can be much stronger and more productive working together than we possibly can be going our separate ways. But, we should not allow our institutions or associations to prevent us from doing those things that need to be done.

If key to attaining a more successful extension-research interface is to restore the credibility of applied research. A new journal of applied research could be a constructive first step. Joint appointments and integrated departmental structures can facilitate more effective working relationships among

research and extension economists who share a common mission. One-on-one working relationships will develop and grow much more easily among professionals in mission oriented departments.

Extension and research are working together successfully in many Agricultural Economics departments at present. But, the extension-research interface is not effective in many other departments. And, there is growing controversy within the profession regarding the roles of applied research and extension work.

With the exception of tax payers, we in extension may have the most to lose from the failure of the land grant system of teaching, research and extension. Thus, it is up to us to initiate the process of restoring professional credibility to the applied research which is essential to survival of the land grant concept. We in extension can unhitch and go our separate way if we are forced to do so. But, we should first try in every way we can to keep the team together. We might survive alone. But with extension, research and teaching working together; we know we can pull the load we must pull to fulfill our responsibilities to society.

## REFERENCES

- Drucker, Peter, Management: Tasks, Responsibilities, Practices, Harper and Row, New York, NY, 1973.
- Ikerd, John E., "The Changing Professional Role of the Extension Economist: Discussion," American Journal of Agricultural Economics, 64:5, December 1982, pp 886-888.
- Johnson, Marc A., "Research-Extension Interaction," Unpublished Paper Presented at Western Agricultural Economics Council Meeting, Monterey, CA, January 22, 1987.
- Knutson, Ronald, D., "Restructuring Agricultural Economics Extension to Meet Changing Needs," American Journal of Agricultural Economics, 68:5, December 1986, pp 1297-1306.
- Schuh, G. Edward, "Revitalizing Land Grant Universities," Choices, American Agricultural Economics Association, Dunning Communications, Washington D.C., Second Quarter 1986, pp. 6-10.
- Sprot, Michael J., "Restructuring Agricultural Economics Extension to Meet Changing Needs: Discussion," American Journal of Agricultural Economics, 68:5, December 1986, pp 1316-1318.
- Wood, William W. Jr., "Future Directions in Extension Economics Programs: Discussion," American Journal of Agricultural Economics, 64:5, December 1982, pp 884-885.
- Woeste, John T., "Future Directions in Extension Economics Programs," American Journal of Agricultural Economics, 64:5, December 1982, pp 874-878.