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Political and Civic Engagement of Agriculture Producers who Operate in Selected Idaho and Texas Counties Dependent on Irrigation

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Introduction

Public policy is something that affects all citizens that are governed by the civilization that they live within. We in the United States of America have elected to establish and maintain a system of government called a Democratic Republic. This system relies on the adherence to a set of premises as a basis of policy development and implementation. The first of these is that no policy may contradict that of a higher governing authority. In our country the highest governing authority and ideal is prescribed by the Constitution of the United States.

The constitution among other things maintains that the wishes of the majority may not violate the rights of the minority. This is largely the motivation that results in a rather lengthy process that takes place to the end of a policy being implemented. Early phases of the process are commonly initiated as a result of some form of public discontent over an issue. When sufficient attention is drawn to this discontent the investigative phase of policy development will begin.

Before the elected representatives of government can debate and then ultimately vote on the merits of a proposed piece of legislation the policy in question must be written. The author will rely on information from various sources for the purpose of developing and drafting the policy. This process is often referred to as policy analysis. Analysts are those who identify good components from harmful components and strive to submit an effective piece of legislation that will benefit the greatest number at the least possible cost.

There is a group of commonly used and readily identifiable sources that analysts rely on for data that is used to draft the policy that will provide a solution to the problem at hand. These sources include reports on research that are conducted by both governmental as well as private organizations that investigate the cause of the undesirable situation and the extent of negative impact. Further input includes commentary from special interest groups and formal as well as informal surveys of impacted people.

Historically the task of writing policy has resulted in impact on agricultural producers. Jones and Jackson (1990) determined in a study of Wisconsin farmers that these producers were ill equipped with adequate information to fully identify areas of source pollution as well as effective mechanisms to minimize negative environmental impact. These results give rise to the question of whether the agricultural producer is adequately informed, involved and represented during the development stages of policy that is being drafted to address issues such as these. If not, why not?

If a lack of participation does exist, does this void in participation indicate a symptom of greater discontent resulting from a lack of information access or an abundance of independence? One researcher noted that it is very difficult to get a large group to align on a common objective and stay the task to secure that objective (Minarovi & Mueller, 2000). The dissemination of information from policy makers to producers after implementation as well as from producer to policy maker during development can be addressed. Professionals in Agricultural Education and Agricultural Communication could play a pivotal role if the predominant problem is lack of bilateral information and communication flow.

Statement of the Problem

Stakeholder participation in the process of developing public policy may not be maximized in the formulation of all policies. This is illustrated in part by the decline in voting participation from the 1970 high of eighty percent of those who are registered (U.S. Census, 2004). Review of literature has revealed that there is interest in this topic but not a great deal of work that sets about to determine effective ways to increase this stakeholder activity (Cockrel, J., 1997a, 1997b). Work reviewed specifically addresses the topic of discussing the pros and cons of having more involvement while other work examines limited program attempts at achieving the goal of increasing this specific type of participation (Gorman, C., 1999; Goodwin, J., 1993; King and Hustedde, 1993; Schumacher and Lloyd, 1997).

The idea that policy issues are controversial is not a unique premise. Cockrel (1997b) stated that one is not truly dealing with an issue that is of concern to the public if that issue is in fact not controversial. Goodwin (1993) examined contrasting viewpoints for methods of training Texas Extension agents in the presentation of controversial issues. The results of this study revealed a marked increase in the knowledge of those who were in the treatment group. In addition to the positive outcome of enhanced participant knowledge, a significant positive shift in the attitude of treatment participants was identified.

Gorman (1999) indicated that measurable increases in both knowledge of issues and likelihood of future participation in the policy process can be obtained with educational program exposure. The researcher cited an increase of knowledge and participation likelihood of 81% and 61% respectively. These results give credibility to the idea that to facilitate further specialized training of the stakeholders is in the best interest to them as well as the rest of the community. The Gorman work also noted that an increase in the stakeholders' perception of "personal control" was a complimentary outcome of the realized instructional experience.

One identified result of a study pertaining to participatory service learning was a "strong sense of altruism" that was felt by the participants (Hairston, 2004). This study not only provided encouraging results pertaining to the outcome of the project on the whole but, also inferred that the participants truly benefited from the social/planned outcome learning system that was experienced. These findings support the speculation that interactive communication among the program participants is important for stakeholders to gain the maximum benefit as would be supported by the theories of reasoned action and social learning.

Purpose of the Study

The purpose of this research is to investigate the extent those who produce agricultural commodities are currently engaged in the process of formulating policy that will affect the methods and outcomes of their production that influences their livelihood as well as quality of life. This study will seek to quantify the benchmark of the scope and intensity of current civic and political engagement among agriculture producers who operate in selected counties of Idaho and Texas. It is thought to be a logical belief that if education and communication professionals can identify this point of current producer action – then future education and communication program design can be structured accordingly. When programs are designed and implemented in a fashion that takes full advantage of previous knowledge and skill of participants, the result is a

much more effective and positive experience. It is believed that this will hold constant regardless of the policy type in question i.e.: water policy, Farm Bills, environmental policy, etc.

Theoretical/Conceptual Framework

There is support in the literature to indicate that participants commonly realize a positive net outcome as a direct result of their participation (Hairston, 2004). Since little research has been conducted in this venue it seems that benefit to the agricultural producer, agriculture industry and population on the whole can be provided by the increase in awareness that would be provided by exploring this topic. If it can be demonstrated that the manifestation of positive outcomes to issues and the resultant impact on the producer and subsequent consumer can be maximized by a more thorough understanding of the Agriculture industry in a proactive fashion, then it would be reasonable to believe there exists a need for Agricultural Education and Agricultural Communication to be active as producer advocates in the policy development process.

There is a great deal of expense that is associated with the development, implementation, and monitoring of a policy. When the impact of the policy is specific to the production of food and fiber this expense is ultimately passed on to the consumer. If the identification of a clear void in the policy process that can be filled by introducing a communication and education partnership between decision makers, analysts, producers and the consumer we would hope that this partnership would result in more efficient and cost effective methods and programs. This increase in efficiency could be seen as lower cost of compliance, greater benefit per producer, and greater overall benefit by way of increased acceptance and implementation at the producer's level.

Dr. Cornelia Flora developed a model that demonstrates this hypothesis as a pyramidal hierarchy. See figure 1. At the base of the pyramid compliance is realized on the positive side as people acting voluntarily because it is the socially responsible thing to do. At this most rudimentary level there are no negative sanctions as it is believed that the lack of positive change in behavior is a result of a lack of knowledge about a problem's existence or a viable solution.

The next level is identified as the range of social pressure. It is here that social learning is demonstrated as being effective in causing behavioral change. On the positive side it is felt that change is motivated by a perceived increase in prestige as well as reasons similar to the lower level. On the side of negative sanctions at the social pressure level behavior is thought to be corrected in an attempt to avoid the loss of the cohort's respect for the individual.

Above the social pressure level is found the level of economic sanctions. On the positive side are the economic incentives that an individual or group would realize for compliance. The negative economic ramifications are actions that result in higher costs to the individual. These would include fines and loss of positive incentives. The top of the pyramid in Dr. Flora's model is the level of force. It is here that zoning or other policy levers are used to achieve compliance.

The idea of enhancing policy design, implementation and compliance by way of bolstering social capital is supported by theories such as reasoned action, planned behavior, social learning and social support. Furthermore the idea of participatory action on the part of those affected is a very good representative example of Dewey's philosophy of Progressivism. Dewey was of the belief that the very act of being involved with others in an activity that dealt in some fashion with a topic of personal importance caused an outcome of an increase in learning and understanding.

Once participants are then able to claim this increased knowledge and confidence it may in turn result in an even greater degree of civic engagement. This possibility would be fully upheld by Dewey's thoughts that education as derived from prior experience will allow the participant to reapply the learned concept to a new set of problems or circumstances. This personal reconstruction of the prior experience will then facilitate reinforcement of the learned material and a more efficient and effective application of it in future need.

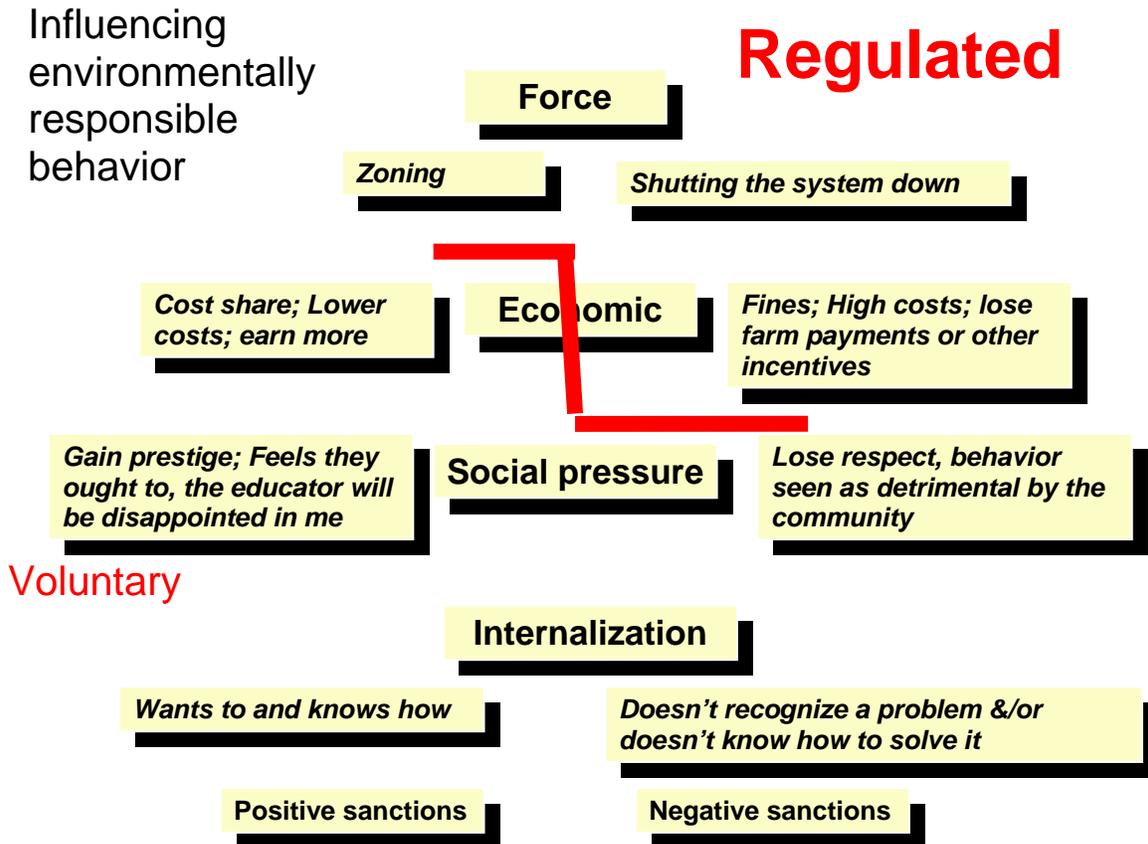


Figure : Cornelia Butler Flora, North Central Regional Center for Rural Development.

Definition of Terms

For this study the following terms and definitions will be used:

Civic Engagement — For the purpose of this study the term civic engagement was defined as the active and voluntary participation in and association with the political process. It was operationalized by a set of Likert scale based questions that measured the construct that was identified as civic engagement. These questions included items that were designed to identify both action based activities as well as the monetary contribution to action based groups.

Political Engagement — Political engagement is defined as the act of being involved in political pursuits. These would include but not be limited to voting, campaigning for candidates, contributing time or financial resources to a candidate or the passage or defeat of a measure.

Limitations

The study possessed the following limitations that may have reduced the degree to which inferences can be made. Although an attempt was made to identify all producers within the thirty-eight counties that were selected from the two states it is not possible to be assured that complete and accurate identification contact information of this type in fact exists. The second limitation is that the target population was limited to producers that reside and or operate their enterprises in counties that are known to heavily use surface or sub-surface irrigation water. As a result generalization must be made cautiously when considering producer groups that operate largely or wholly in areas that are known as 'dry land' for description of cultivation practices.

Significance of the Study

The current research sought to identify effective means in which stakeholder participation could be magnified in an effort to further expand the realization of positive participatory effects that would result in the development and adoption of public policy. Since adequate management of water supplies are of critical importance to the industry of agriculture; have been and reasonably will remain a widely discussed and hotly debated topic, water issues were chosen as the policy area of consideration for this study.

Data collected from this study will add to the body of knowledge in that it will provide a baseline of current stakeholder civic engagement. Furthermore this study will attempt to identify relationships between identifiable demographics and as yet unknown extents and types of civic action. This baseline information will be available for later comparison to determine the net effectiveness of future programming and resource expenditures that are offered in an attempt to optimize the participation of agriculturalists in policy design.

Literature (Besch and Minson, 2000; DeLeon, 1992; and Yercan, 2003) reports that there is in fact a benefit if not a need for enhanced participation of an informed populous in the policy arena. Durning (1999) inferred that attention is demanded when policy analysts are described as "pawns of the powerful." Gorman (1999) found that a measurable increase in both knowledge of issues and likelihood of future participation can be obtained with educational program exposure.

There are indications that agreement on a goal is not always the primary obstacle to efficient and beneficial policy development and implementation. Minarovi and Mueller (2000) identified that subjects in their study largely agreed on the need for sustainable agriculture but not one respondent matched another on what constituted the concept. It is conceivable that the policy developmental process could be enhanced in just such a situation if there was a source of data that investigated relevant questions such as what is culturally and historically the "norm" and what if anything had been tried before in the particular demographic (DeLeon, 1992).

One of the commonly hypothesized reasons that a greater level of participation is not sought out or offered is that there is a wide range of potential solutions that stakeholders hold as plausible based upon their individual experiences and points of view. Cockrel (1997) published a series of guides for the University of Kentucky Cooperative Extension. These documents addressed the facts, myths, and values of public policy. In his writing Cockrel (1997b) identified that personal opinions regarding policy are formulated upon all three of these components. It was further identified in this work that it is imperative that the stakeholder be able to enhance personal skills at separating these in order to become more effective at developing an informed opinion with which to deal with policy issues that are controversial in nature.

In an opinion article authored for the *Journal of Extension*, Schumacher et al. (1997) addressed the process of education of issues that are deemed to be controversial. In an effort to

ease the tension that stakeholders often experience in association with the process of policy related issues the idea of “free space” has been explored (King & Hustedde, 1993). The focal point of the King and Hustedde article was that the use of neutral environments such as churches, schools, a mercantile or other non-threatening venue inclusive of private homes would be more conducive to the stakeholders’ policy educational experience.

There is collective support in the literature of the idea that to establish an efficient and effective methodology to facilitate an enhancement of policy knowledge on the part of stakeholders will result in positive gains. The idea of including social research to provide input data for policy development is supported by statements made by DeLeon (1992).

DeLeon’s (1992) observations included that policy developed from a participatory democracy would better serve the governed as it would more accurately reflect the values and needs of those regulated than would policy generated by a select few, even if those analysts were elected. Still, it is recognized that having even a large percentage of the population involved in the actual acceptance or rejection of any given policy would be impractical.

One observed alternative that would have multiple benefits would be to “empower” the people by including more citizen participation in the policy planning stage. This is not a foreign idea even to the most traditional of policy analyst contingents as reported by Durning (1999). The idea of “empowering” the people is not new and in some cases has been taken to the extreme. One example of this occurred in Turkey in the early 1990’s.

The issue was that of control over irrigation water resources that had been solely maintained by the state. The findings of Yercan (2003) indicate that the turn-over of the irrigation system to privatization in the form of farmer’s cooperatives, Water User Associations (WUAs), farmer’s unions, and in some cases municipalities has overall been successful. The state benefited from the relief of liability associated with maintenance, future projects, and delivery costs while the growers have more control over areas irrigated and improved service.

Agricultural social science has been involved in the process of developing public policy for a considerable period of time. This involvement however has been largely limited to the inclusion of expertise from those trained in Agricultural Economics. This component of policy analysis and development is well illustrated by the contributions of the Food and Agricultural Policy Research Institute (FAPRI) group. This is a congressional sanctioned and funded body established in 1984. FAPRI is a joint program consisting of research centers at Iowa State University and University of Missouri at Columbia. The Iowa contingent is maintained at the Center for Agricultural and Rural Development (CARD) while the Missouri component is housed at the Center for National Food and Agricultural Policy (CNFAP). FAPRI is largely dedicated to the analysis of the annual farm bill on a macro-level by way of developing multi-year projections pertaining to the U.S. Agriculture sector as well as the international aspect of several commodity markets.

There is evidence to suggest that community participation with the aid of adult education does work in the process of developing policy. One noted case reported by Gillis and English (2001), examined how university Extension assistance benefited the understanding of rural Nova Scotia residents in regards to health care issues and policy development. This was a follow-up evaluation of a program where Extension personnel worked as a communication liaison between women’s organizations and the public health department in 1999. Further support that the participatory process has worked successfully with the aid of Extension assistance is found in the case of Defiance County, Ohio. In 1994, a collaborative effort between Ohio State University Extension, county commissioners, and two citizens groups was formed. The goal was to identify

potential duplication of efforts among public agencies and at the same time root out the community concerns that were most pertinent (Nieto, R. D., et. al., 1997).

In addition, the results of such research indicate that greater levels of participation on the part of stakeholders will result in positive outcomes when that increased participation is enthusiastic as a result of knowledge that is grounded in true understanding of not only the problem at hand but also the ramifications both positive and negative that can be expected from the implementation of any given solution that is enacted.

In addition to Extension agents working in a capacity to facilitate information transfer from one or more segments of the community to policy analysts there is at least limited indication that a new trend may be emerging. This possible trend is that of the Extension being asked to act in a research capacity to evaluate critical public policy (Bailey, 2002). A case of example is that of members of one university Extension being asked to conduct an analysis of the fiscal impact of proposed state legislation. It may be reasonable to consider that the outcome recommendations of such analytical requests may result in inputs to the formulation of future policy.

The request came from a statewide producer's organization. Although this does demonstrate involvement on the part of Agricultural Education and Communications professionals in the arena of public policy analysis; it certainly can not yet be deemed part of the norm as is indicated by available literature.

Finally, it is reasonable to consider that when a heightened sense of knowledge of the issues, value of personal contribution, and understanding of the process is all in the possession of the stakeholder; he or she will be much more inclined to use those tools to engage the policy process to the betterment of all involved.

Validity and Reliability

Even though the foundational instrument had been published with reported validity and reliability the final survey instrument developed for the current work was reviewed and evaluated by a panel of experts for face and content validity. The panel was made up of Agriculture Education and Communications faculty as well as graduate students from Texas Tech University along with Cooperative Extension educators from counties in Texas, Idaho and New Mexico. Beta testing was conducted with the assistance of New Mexico Extension and similar agriculture producers, ($n = 30$).

The beta test data were analyzed using Statistical Package for the Social Sciences version 12.0 (SPSS). The resultant Cronbach's Alpha scores for reliability were .70 for predominately political responses (items 1 through 9), .76 for civic and social responses (items 10 through 18), and .68 for responses on anticipated future personal action (items 19 and 20). No changes were made to the instrument after the pilot test.

Results

Of the 210 returned surveys, 65% ($n = 136$) were from Texas and 34% ($n = 71$) were from Idaho. Three surveys (1%) contained no usable data, thus were excluded from the analyses. The average age of respondents was 52 years ($SD = 13.41$), and the average number of years of education was 14.5 ($SD = 3.05$). Years of production experience ranged from 0 years to 65 years ($M = 25.40$, $SD = 14.14$). The average number of acres watered was slightly more than 811 ($SD = 2286$), and on average farms were almost 67 miles from a major city ($SD = 41$). The majority (81%) of respondents identified themselves as politically conservative. Most respondents (i.e., > 50%) were members of the Farm Bureau or a commodity group and raised market livestock.

Fifty-four percent of respondents did not have children at home; however, about 50% of farms (with children) responding noted that their children were likely to take over the farm in the future. The majority of respondents (81%) supported Extension political education.

In comparing the producer respondents from Idaho with those from Texas by state and a cumulative basis for the items that were identified to develop the civic engagement factor similar findings were observed as in the political index comparison.

All correlations are in the conceptually expected direction, and most are low to moderate in size (i.e., most less than .60) with the strongest correlation between age and years of production experience (states combined) at $r = .712$. For Idaho a significant correlation between the political index and the civic index, number of years of education, number of acres irrigated, membership of a commodity group, the raising of market livestock, support of political education programs being offered by their Extension educators, and planning for their children to take over future operation.

Texas producers demonstrated some similarities in that notable correlations between the political index and civic index, membership of a commodity group, production of market livestock and support of political education programs being offered by their Extension educators were shared. Additional significant Texas correlations between the political index and age, ownership of land and membership in their Farm Bureau were identified. Examples of these relations are the correlation of age and years of production at .762 for Texas while the civic index by political index for Texas is but .459. While the Idaho age and years of production correlation at .618 is not as robust as that of Texas the trend is maintained by the Idaho civic index by political index correlation being .450.

Of all the key variables examined, Idaho and Texas only differed on one: respondents in Texas were significantly more likely than respondents in Idaho to be a member of the Farm Bureau; $\chi^2 (1, n = 207) = 5.77, p \leq .05$. A power estimate analysis for the t -tests, however, was quite low (less than .40). This suggests that it would be difficult to identify significant differences even if they do exist.

To determine the amount of variance in producers' civic engagement as explained by a linear combination of political engagement, distance from major city, age, years of education, and years of production experience. An inspection of the bivariate correlations between the independent variables in this analysis revealed the strongest bivariate relationship between any two variables was found between political engagement and distance from major city ($r=.33$).

A stepwise entry method was used for this analysis due to the exploratory nature of the study. a statistically significant amount of variance in civic engagement was explained by a linear combination of political engagement and distance from major city ($R^2=.28, F=.39.70, p<.001$). A single unit change in political engagement was associated with a .37 increase in civic engagement, holding distance from major city constant ($b=.37, t=8.03, <.001$). Conversely, a one unit change in distance from major city was associated with a .003 decrease in civic engagement, holding political engagement constant ($b=-.003, t=-4.66, p<.001$).

To determine the amount of variance in producers' political engagement as explained by a linear combination of civic engagement, distance from major city, age, years of education, and years of production experience. The strongest bivariate relationship between any two independent variables was found between civic engagement and years of production experience ($r=.29$). , a statistically significant amount of variance in political engagement was explained by a linear combination of civic engagement, distance from major city, and age ($R^2=.27, F=25.26, p<.001$). A one unit change in civic engagement was associated with a .66 increase in political

engagement, holding distance from major city and age constant ($b=.66$, $t=8.12$, $<.001$). A one unit change in distance from major city was associated with a .003 increase in political engagement, holding civic engagement and age constant ($b=.003$, $t=3.51$, $p=.002$). Conversely, a one unit increase in age was associated with a .007 decrease in political engagement, holding civic engagement and distance from major city constant ($b=-.007$, $t=-.156$, $p=.011$).

The overall plot of residuals resembled observations from a normal distribution, in terms of the normal probability plot, residuals fell approximately on a straight line, and when the residuals were plotted against each significant independent variable in the model, there was an overall impression of a horizontal band of residuals.

Summary

The predominant purpose of the study was to determine a baseline on civic and political activity that could be associated with professional agriculture producers located in specific production areas of Idaho and Texas. The areas were specifically targeted due to the high intensity of dependence on irrigation for production. In addition to the objective of identification of a base of civic and political activity this study sought to identify any correlation and regression relationships that could be determined between the two key constructs and specified demographic independent variables.

A review of classic and current literature indicates several important considerations that gave focus to the study. The review emphasized the theoretical foundation for the investigation in that it supported the importance of participation on the part of those being governed. The literature also clearly indicated that there is currently a void in exploration that is designed to enhance the participation of the self-governance process.

The author sought to identify to what extent this population of professionals was currently involved and to what intensity they were engaged in the civic process. It was believed that by establishing this baseline of knowledge and further analyzing the data to determine any demographical relationships that positive strides could be made in determining what types of producers would be most willing to participate in further civic training and actions.

Once significant relationships between clear and present demographics and the dependant constructs were identifiable it was also clear that the identified producers that meet these demographics would be better prospects for further civic training. This is supported by the fact that these participating producers from both Idaho and Texas were found to have significant correlations between their acceptance of Extension Education participating in civic training and their current extent and intensity of personal civic engagement. Additionally, results of the regression and correlation analysis suggest that at least three sub-groups, those producers who are involved with market livestock, members of their Farm Bureau and/or members of a commodity group may be likely candidates to participate in programs to enhance and further civic/political involvement.

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References

- Bailey, K. W. (2002). The Role of Extension in Controversial Studies: The Case of Interstate Dairy Compacts. *Journal of Extension*, 40(1). Retrieved February 24, 2004, from <http://www.joe.org/joe/2002february/a1.html>
- Besch, J., & Minson, J. (2000). Participatory policy making, ethics and the arts. *The American Behavioral Scientist*, 43(9), 1446-1464. Retrieved March 15, 2004, from ProQuest: <http://proquest.umi.com>
- Cockrel, Jerri. (1997a). Public policymaking in America. *Cooperative Extension Service, University of Kentucky*. Retrieved September 15, 2004, from <http://www.ca.uky.edu/agc/pubs/ip/ip19/ip19.pdf>
- Cockrel, Jerri. (1997b). Public policy: Facts, Myths, and Values. *Cooperative Extension Service, University of Kentucky*. Retrieved September 15, 2004, from <http://www.ca.uky.edu/agc/pubs/ip/ip20/ip20.pdf>
- DeLeon, P. (1992). The Democratization of the Policy Sciences. *Public Administration Review*, 52(2). Retrieved March 26, 2004, from ProQuest: <http://proquest.umi.com>
- Durning, D. (1999). Debating Technologies: A Methodological Contribution to the Design and Evaluation of Participatory Policy Analysis. *Journal of Policy Analysis and Management*, 18(2), 339-344. Retrieved March 15, 2004, from <http://proquest.umi.com>
- Flora, C. (2004). Building Social Capital http://www.ncrcrd.iastate.edu/powerpoint/bsc/Buildingsocialcapital_files/frame.htm
- Gillis, D. E., & English, L. M. (2001). Extension and Health Promotion: An Adult Learning Approach. *Journal of Extension*, 39(3). Retrieved March 12, 2004, from <http://www.joe.org/joe/2001june/a4.html>
- Goodwin, Jeff. (1993). Contrasting Viewpoints about Controversial Issues. *Journal of Extension*, 31(3). Retrieved October 11, 2004, from <http://www.joe.org/joe/1993fall/a7.html>
- Gorman, C. (1999). Impact "Women's Participation in Public Policy" Seminars on Participants' Knowledge Gain, Practice Change, and Attitude Change. *Journal of Extension*, 37(6). Retrieved September 16, 2004, from <http://www.joe.org/joe/1999december/a7.html>
- Hairston, J. E. (2004). Identifying What 4-H'ers Learn from Community Service Learning Projects. *Journal of Extension*, 42(1). Retrieved October 11, 2004, from <http://www.joe.org/joe/2004february/rb4.html>
- Jones, S. A. & Jackson, G. W. (1990). Farmstead Assessments a Strategy to Prevent Groundwater Pollution. *Journal of Soil and Water Conservation*, 45(2), 236-238.
- King, Betty S., & Hustedde, R. J., (1993). Community Free Spaces. *Journal of Extension*, 31(4). Retrieved March 26, 2004, from <http://www.joe.org/joe/1993winter/a1.html>
- Minarovi, Rosanne E. & Mueller, P. J. (2000). North Carolina Cooperative Extension Service Professionals' Attitude Toward Sustainable Agriculture. *Journal of Extension*, 38(1). Retrieved March 5, 2004, from <http://www.joe.org/joe/2000february/a1.html>
- Nieto, R. D., Schaffner, D., & Henderson, J. L. (1997). Examining Community Needs Through A Capacity Assessment. *Journal of Extension*, 35(3). Retrieved March 5, 2004, from <http://www.joe.org/joe/1997june/a1.html>
- Schumacher, Stephan D. & Lloyd, M. (1997). Educating with Controversial Issues. *Journal of Extension*, 35(1). Retrieved August 23, 2004, from <http://www.joe.org/joe/1997february/tt2.html>
- U. S. Census Bureau. (2004). Voting and Registration in the Election of November 2002. Retrieved November 8, 2004, from <http://www.census.gov/prod/2004pubs/p20-552.pdf>

Yercan, M. (2003). Management turning-over and participatory management of irrigation schemes: a case study of the Gediz River Basin in Turkey. *Agricultural Water Management*, 62(3), 205-214.
Retrieved March 5, 2004, from <http://www.sciencedirect.com/web-editions>