

**STAKEHOLDER EFFECT:
A QUALITATIVE STUDY OF THE INFLUENCE OF FARM LEADERS' IDEAS
ON A SUSTAINABLE AGRICULTURE EDUCATION PROGRAM FOR ADULTS**

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Abstract

This paper considers issues related to farmers' control of program planning for non-formal agricultural adult education¹. Discussion is based on an empirical study of a \$10 million Canadian sustainable agriculture education program that was initiated, created, and controlled by a coalition of farm organizations, supplanting a traditional role of extension. Theories of participatory extension education provide a theoretical framework for consideration of issues in the case. Participation theory guides the formation of partnerships among extension, communities, industry, and government. In the area of sustainable agriculture, however, stakeholders may conflict, presenting challenges to engagement and decision-making processes. Moreover, agricultural education researchers have produced little data to show effects of stakeholder involvement in program planning, putting the extension system at risk of desiring increased levels of engagement without a knowledge base about potential impacts. The study was conducted over a 3-year period using cultural anthropology and participatory action research. Farmers strongly influenced five program elements: (a) staffing, (b) content, (c) instruction, (d) evaluation, and (e) composition of planning group.

Introduction

The Ontario Environmental Farm Plan program (hereafter, Farm Plan) is, in its best and perhaps least understood form, a glossy workbook in a three-ring binder. The workbook included an environmental farm assessment checklist in 23 sections, a blank Action Plan, and lots of technical information. Other types of farm planning programs, such as Farm*A*Syst and the New York City Watershed Agricultural program, featured a similar format (Ervin & Smith, 1996; Watershed Agricultural Council {WAC}, 1996). Three-ring binders are a mainstay of extension education and teacher education, especially short-term, one-shot, or conference-based programs. However, until I looked carefully at the workbook--beyond its technical content and format--I did not understand meanings that the Farm Plan program held for workshop staff, farm organizations, government, and farmers. I needed to discover what educational ethnographer Frederick Erickson (1990) sets as the qualitative

researcher's challenge, "to make the familiar strange," and to make plain "the invisibility of everyday life" (p. 83). The qualitative research process produced an ethnography (Geertz, 1973). In ethnographic narratives, the author is expected to offer a "thick" description of programs, not primarily to entertain, but to alert the reader to the contextualized nature of the issues, and to offer an opportunity for the reader to analyze the data on their own (Geertz, 1973; Lincoln & Denzin, 1994). This article therefore presents stories and interview data as well as analysis and recommendations.

The 'point' of the Farm Plan adult education program, invisible to most outsiders, was the learner-centered nature of the program. Furthermore, several features of Farm Plan were participatory, including the extent to which farm leaders and farm organizations were directly involved in designing and implementing the Farm Plan program. Learner-centered approaches and participation interest adult educators because their application is anticipated to improve the learning experience

individually and collectively. Participatory approaches to program planning are grounded in theories of democratic education advanced by John Dewey (1938) and indicate substantive involvement and shared control (see Deshler, 1995). In an era in which participation is touted as a crucial element of sustainable agriculture education (Röling & Wagemakers, 1998), the high level of high stakeholder involvement in planning and delivering participatory education in Farm Plan warrants scholarly attention. This research assists extension educators to understand nuances present when universities call for greater engagement and collaboration with stakeholders in the design of educational programs (National Association of State Universities and Land-Grant Colleges {NASULGC}, 1999).

Theoretical Framework

Agriculture continues to experience a crisis that includes, among rapid financial and structural changes, an awareness of farming's enormous influence on ecosystem health (National Research Council, 1989). The effects on the environment are complex; nonetheless, negative impacts of common agricultural practices are well documented, especially contamination of surface and ground water (NRC, 1989). In North America, programs that seek to change farmers' agricultural practices in the direction of environmental stewardship have produced lackluster results when compared with the severity of the problem (Lockeretz, 1990; NRC, 1989). Development specialists Chambers (1997) and Röling and Wagemakers (1998) argue that to be effective, scientific-technical institutions must value and elicit authentic participation of farmers and rural people in programs for sustainable agricultural development. Sustainable agriculture programs that are cooperatively defined by farmers and scientists mobilize local knowledge and are anticipated to change farmers' practices more effectively than technology transfer programs of the past (Röling & Wagemakers, 1998). Extension systems in North America are part of the web of

institutions and organizations that seek to influence farmers' environmental, production, and financial planning behaviors. Interaction and local control figure prominently in the system, making the extension system a North American experiment in democratic education (Blackburn, 1994; Gerber, 1992). Although their histories and structures are distinct, American and Canadian extension systems share a populist mission and a legacy of responsiveness to farmers, justifying learning across contexts.

Purposes

This paper is based on a larger study that sought to understand how farm organizations brokered interests of their farmer-members with respect to design of a sustainable agriculture program (Grudens-Schuck, 1998; Grudens-Schuck, in press). This "how" objective of the research required detailed descriptions of behavior and intentions of people at the site over time. A qualitative, single case study approach was therefore applied to obtain the data. The researcher intended to illuminate the practice of engagement of institutions and stakeholders in an applied setting for agricultural and extension education. This paper focuses narrowly on effects of farm leaders' ideas on program design. Other papers focus on coalition-building of farmers, training of grassroots and extension educators in participatory instruction, and facilitators' use of local knowledge in workshops (Grudens-Schuck, 2000, 1999; Grudens-Schuck & Hill, 1997).

Methods

The research focused on a single, large-scale sustainable agriculture program called Ontario Environmental Farm Plan program funded through Canada's Agriculture Green Plan program from 1992 to 1997 at \$10 million (InfoResults, 1993; Ontario Farm Environmental Coalition {OFEC}, 1991/1995) (see Table 1). Apropos of learner control, the program was proposed, designed, and managed by a coalition of farm organizations, called Ontario Farm

Environmental Coalition (hereafter, the Coalition) (OFEC, 1991/1995). Learner involvement in Farm Plan was uncommonly vigorous for an environmental farm planning program at the time (Ervin & Smith, 1996; Higgins, 1998). After an intensive planning phase, the Coalition subsequently involved government ministries in curriculum development, technical support, and teaching. Nonetheless, farm leaders retained control of funding and administration of

Farm Plan. The Farm Plan program expected farmers to analyze environmental risks on their farms, write an action plan, and implement environmental projects with assistance of a \$1,500 (Canadian) grant. At the close of the study in April 1998, over 12,000 farmers had participated in the Farm Plan program, making this program one of the largest environmental farm planning programs in North America (Ervin & Smith, 1996; Higgins, 1998).

Table 1

Essential Facts About Ontario Environmental Farm Plan Program 1992-1998

1. How many farmers attended workshops?	12,000
2. How long were workshops?	2 day-long workshops one week apart (up to 16 hours; often shorter).
3. What materials were used in workshops?	Farm Plan workbook, instructional videos, soil maps, best management practices booklets, fact sheets.
4. Who created workshop materials?	Ministry extension through 23 technical committees with farmer/scientist membership.
5. What was the topic range?	Extensive: field crops to grapes; livestock to greenhouse. Also woods, wells, fuel, and septic.
6. What were instructional methods?	Participatory education, lecture, and hands-on environmental self-assessment.
7. Who was administrative lead for funding?	Ontario Federation of Agriculture (Non-governmental organization).
8. Who officially delivered Farm Plan?	Ontario Soil and Crop Improvement Association (non-governmental organization).
9. Who taught Farm Plan workshops?	Teams of Soil and Crop Program Representatives and Ministry extension educators.
10. Who attended the workshops?	Farmers only; any commodity or scale.
11. Where were workshops held?	County-by-county basis; every county in Ontario.
12. What was amount of financial incentive?	\$1,500 Canadian (less than \$1,100 US).
13. How did farmers obtain financial incentive?	Completed farm assessment and action plan. Received go-ahead from Peer Review Committee after completing project.
14. Who staffed Peer Review Committees?	Local farmers plus Soil and Crop Program representative.
15. Did extension or government see farmers' assessments or plans?	No.
16. What is the Ontario Farm Environmental Coalition?	Four general farm organizations formed steering committee. Approximately 35 other farm organizations (mainly commodity).

Procedures

The author directed the intensive case study of the Farm Plan program from 1995 to 1998 with 1-year resident fieldwork in Guelph, Ontario, in 1996-97. The study used cultural anthropology combined with participatory action research to produce an ethnography. Ethnography is a cultural account that pays close attention to language, behavior, settings, and the connections among them (Geertz, 1973). Ethnography was developed within the discipline of anthropology and is considered an advanced, distinct approach to research in the qualitative tradition (Erickson, 1990; Lincoln & Denzin, 1994). Ethnography emphasizes immersion at the site and long association (e.g., months or years) with people important to the research using informal and formal information-gathering techniques lumped under the general term, "participant observation." Ethnography also requires that at least part of the results be presented in narrative form, including verbatim quotations, so that readers may experience the data more directly than is possible through presentation of statistical results (Erickson, 1990; Geertz, 1973; Lincoln & Denzin, 1994). Ethnographic research methods used in this study featured 36, two-hour interviews; direct observation of 13 Farm Plan workshop sessions with total attendance of 195 farmers; and 53 distinct events involving 256 hours of participant observation of farms, organizational meetings, farm shows, and field days. Methods also included review of current and pilot editions of the Farm Plan workbook and other internal documents. A five member-planning group composed of insiders and the author negotiated selection decisions, gathered data at critical reflection sessions, and collaboratively planned and presented reports consistent with the participatory action research approach to the study (Greenwood & Levin, 1998). Analysis consisted of nested sets of coding schemes subject to member checks (people at the site assisting determination of veracity of claims) and peer debriefing (a technique analogous to internal validity check that

reviews logic and consistency of coding schemes). Qualitative data elicited through the study may be especially useful to educators who desire to understand *how* and *why* local people act in the setting. Such knowledge can be used to design successful extension education programs for particular types of learners or may explain why past efforts were rejected (Cervero & Wilson, 1994; Erickson, 1990).

Setting

Workshops were a substantial part of the Farm Plan process both for what they asked farmers to do (attend two full-day sessions and complete a six-hour, on-farm assignment) and for its innovative facilitation, called participative education. Most counties offered workshops on a continuing basis from November through March, attracting 6-40 farmers per session. In addition to workshops, staff actively encouraged attendees to complete and submit workbooks to a formal peer review process, after which farmers could apply for a \$1,500 (Canadian) grant to subsidize environmental improvement projects on their farms.

Lake Huron. I attended a workshop in the flat, oil-producing region on the shores of Lake Huron. Here, where corn and soybean farmers planted next to working oil rigs, nearly 50 farmers arrived at an evening workshop. A workbook was awaiting each of them. I sat in a back corner where I heard grumbles of young men, just a few years out of high school, who sat in the back row. "Homework." Outdoors, I smelled oil from refineries in Sarnia to the west, where many of these young farmers worked during the day as they slowly established their farming operations. Those who worked at the plants were taught health and safety and environmental protection on the job. Now their farming practices were cause for concern, too.

North Country. In a small rural hamlet to the north, I attended a Farm Plan workshop held in a historic community hall, still in use. I drove on rural roads with eight-foot piles of snow cast aside by the plow. Where the land dipped, acid marshlands supported narrow cedars and red-stemmed dogwood. While women from the community brewed strong

coffee, the Ministry Technical Advisor and a farmer fixed a leak in the ceiling caused by melting snow. People sat at tables arranged in a horseshoe shape. The Farm Plan facilitator distributed the summary of the previous week's flip chart work titled: "Reasons for farmers addressing the environment." As part of the participatory process, facilitators delayed technical education until farmers worked through several participatory exercises intended to gain farmers' "buy-in" (enthusiasm, ownership) of the concept of learning to act environmentally to benefit their farms, families, and themselves -- not just for "society."

East Central. In east central Ontario, I attended a workshop where farmers complained and challenged the facilitator. Some claimed that the farmers who really needed Farm Plan weren't there. A farmer whose father had emigrated from the Netherlands boasted of grassed waterways and new eaves troughs intended to prevent dairy manure from entering the creek. All this without Farm Plan, he added. The facilitator shook his head when afterward I inquired about that verbose participant. Having known this man's farming family many years, the facilitator guessed that just a minor expansion in cow numbers and barn size would challenge the ease with which that farmer presently satisfied environmental goals. This same facilitator wanted all farmers to understand environmental concepts in Farm Plan thoroughly. To this end, he did not just accept completed workbooks, but detained each participant in the kitchen area of the workshop site for 20 minutes, reviewing the ratings farmers had assigned to environmental risk areas of their farms.

Again Lake Huron. During a visit with a farmer who had participated in a Farm Plan workshop, I spent most of my time in the farmer's truck. We first took a bumpy ride through a mature sugarbush, and through a creek that was fenced at odd angles with barbed wire, planks, and electric fencing. The farmer pointed to a rock next to a tile drain outlet in this same creek and said:

See all that green algae and sh-- on the rock? The neighbor upstream has a huge pig barn. He's not too environmentally conscious. This spring, he spread manure--he had two big irrigation guns spreading at the same time--right after a rain when the ground was saturated. The tile running out of his farm was just running black with pig manure. He's kind of got a bad reputation for that. The water quality was incredible after that. You could smell pig manure in the creek.

We spent the next few hours visiting neighbors and the town hall as the farmer introduced me to the hog manure conflict in the local community. These farmers and rural residents had just passed a bylaw in their municipality that restricted large-scale hog operations. Why? So much manure. So liquid. The odor. Paraphrasing another farmer, it was like sewage from a city. The farmer and a friend conferred with each other about formulas for the area of a cylinder as they compared legal standards for manure storage with an estimate of a capacity for manure of a nearby pit under construction. Something was wrong--the pit was undersized. They would bring this accusation to the meeting. Did I see the real problem? Sitting above a municipal drain, this farmer explained that in the event of a spill, the manure would flood the drainage channel and flow directly to Lake Huron. Looking west, the lake shimmered on the horizon.

The stories above illustrate the nature of the workshops, but also the heft of the conflict present in Ontario during the time of program delivery. Not unlike pressures in farming communities across much of North America, the Farm Plan program faced design and delivery issues imbued with conflict, fear, anger, and a rapidly changing policy environment.

Results

Farm leaders designed Farm Plan to reflect their collective analysis of farmers' experiences with environmental regulation, the sustainable agriculture movement, and

extension education. Specifically, farm leaders based their approach to adult education on local theories about the ways past programs discouraged farmers from acting environmentally. This section discusses farm leaders' beliefs about effective adult education related to program design for Farm Plan. In particular, five features influenced heavily by farm leaders constituted a program that differed in important ways from many extension and government programs.

Staffing Featured Grassroots Educators

A prominent feature of the Farm Plan program was employment of a cadre of grassroots facilitators drawn from the ranks of local farm families; most had not considered themselves educators previously. Grassroots educators were employed by Ontario Soil and Crop Improvement Association (hereafter, Soil and Crop), a farm organization with a history of successful third party delivery of government programs (Dyzuk, 1991). Farm leaders claimed that grassroots education and recruitment would be able to involve farmers in "threatening" issues, such as environmental improvement, more effectively than extension. This claim figured prominently in committee discussions and in Farm Plan publicity. Farm leaders also designed the program to be confidential. Confidentiality prevented government agency staff from reviewing farmers' assessments of environmental hazards and risks on their farms documented via the Farm Plan process. Confidentiality was an uncommon feature of environmental farm planning programs at the time (Ervin & Smith, 1996). Confidentiality was aggressively sought by farm leaders in response to farmers' fears of vulnerability to government prosecution (OFEC, 1991/1995). This policy distinguished Farm Plan from U.S. farm planning programs in which extension and government agency staff provided leadership for individual on-farm environmental assessments, for example in the New York City Watershed program (WAC, 1996). In Farm Plan, grassroots facilitators were the only personnel who

could link a farmer's name with his or her farm plan.

Some bitterness existed among extension educators regarding farm leaders' decision to plan and publicize the program as "farmer-driven and farmer-led." An extension educator remarked, when asked in an interview if he encouraged farmers to attend Farm Plan workshops:

At the beginning, we got told fairly bluntly, "Don't do that. We don't want the perception that it's an OMAFRA {Ministry} program. . . . Since it's the environment, they {Farm Plan} don't want to be perceived as a government program. They want to be perceived as a *farmer-run* program.

Grassroots and extension approaches were distinct even to staff members who were enthusiastic about partnership dimensions of the program. A grassroots educator put it this way.

I think it's beautiful in the way it's set up being a partnership. . . . It's got the best of both worlds working together.

This educator expressed greater approval than the extension educator, but note the firmness of the assumption that extension and farm organization approaches to education differ.

Instruction Featured Participation

Soil and Crop facilitators used participatory educational techniques in Farm Plan workshops. During participatory exercises, farmers developed their own reasons for taking charge of environmental problems, engaged each other in development of solutions, and challenged each other's assessments of hazards. Extension staff did not, on the whole, disparage participatory education, and some had been trained in participative techniques. Extension staff members were, however, more likely to talk about participatory methods as "ice breakers" or as techniques for making instruction more

fun, toward outcomes of increased compliance or retention of content matter. Soil and Crop staff, on the other hand, articulated a more comprehensive account of participatory education that included instrumental outcomes (e.g., content knowledge), but valued equally the process by which farmers overcame dependency and resistance with respect to environmental stewardship (attitudinal change, action orientation). Overall, grassroots educators' accounts of participatory education were more consistent with tenets of democratic education for adults than were extension staff members' accounts (Deshler, 1995; Chambers, 1997). One Soil and Crop facilitator exclaimed:

It's not *my* workshop. It's *these people's* workshop. It's my job to facilitate it. And that's why I do shut up. They do the talking.

Later, the author asked the same facilitator about resistance of some educators to using silence and tolerating discomfort of participants during participatory exercises, such as when the facilitator or peers confront each other on ideas. The following conversation resulted.

Researcher: But you didn't . . . cut it short to save their uncomfortableness. You risked letting them be uncomfortable.

Facilitator: So why don't they want to make them {farmers} uncomfortable? (Laughs). It makes *them* {other educators} uncomfortable. It makes *them* uncomfortable to make the *other ones* {farmers} uncomfortable That's probably part of what's wrong with our society. Everybody thinks they should be comfortable all the time. H---, when you *do* something is when you become uncomfortable.

Content Emphasized Experiential Learning

The Farm Plan workbook is comprised of 23 chapters of environmental assessment

checklists and an Action Plan based on the University of Wisconsin's Farm**A**Syst environmental farm assessment (Mulla, Everett, & DiGiacomo, 1998). Farm Plan's emphasis on active learning and control by farmers distinguishes the workbook from other environmental farm planning programs led by government and extension (Ervin & Smith, 1996). As noted earlier, Farm Plan expected farmers rather than scientific experts to complete the 23-chapter assessment and Action Plan (OFEC, 1994). The data suggest that the decision to require farmers, not experts, to complete the workbook was rooted in farm leaders' belief that all farmers in Ontario were capable of learning and combining scientific knowledge with local, practical knowledge. Farm leaders also believed that farmers would learn best by becoming involved in and responsible for environmental activity.

The study also revealed that design of the workbook expressed organizational interests of farm leaders by preventing individual farmers from calculating a summary statistic related to their farm's overall sustainability through Farm Plan. The workbook was designed so that the farmer cannot, for example, score an 80% (e.g., "good" or "green") rating with respect to environmental stewardship. At the time, avoidance of conflict among commodity organizations was imperative to farm leaders in regard to environmental issues captured by the question, *Who's greener?* (i.e., Who is more environmental?) Fine-tuning the assessment to produce a summary statistic was anticipated to worsen inter organizational conflicts rather than build solidarity. A farm leader explained.

Through this organization you can bring together commodity groups for a common cause who would ordinarily be at each other's throats because they are competing with each other in the marketplace. If we come out of this thing {Farm Plan} having just accomplished that we will have accomplished something. . . . We are going to need that

solidarity . . . particularly with the government.

Farm leaders instead allocated financial resources to hiring grassroots staff, to writing a workbook that addressed all commodities, and to supporting a province-wide program. This approach directly contrasted with most government programs which targeted particular crops or livestock, focused on lands with slopes that surpass a particular threshold, or channeled resources to farms in hydrologically sensitive watersheds (Ervin & Smith, 1996).

Peer Review and Aggregate Data

Among conventional forms of evaluation (Helmut Loewen & Associates, 1995; InfoResults, 1993), the Farm Plan program created two additional assessment processes that directly served farm leaders' interests: peer review and aggregate data. Farmers who participated in workshops were encouraged to submit completed action plans for anonymous review of "appropriateness" to committees called "Peer Review." Submission was voluntary, but necessary to receive an incentive grant. Soil and Crop hired over 200 local farmers to staff Peer Review Committees. The farmer-reviews-farmer policy was philosophically consistent with both the confidentiality policy and with the grassroots staffing decision. The peer review system also pressed the issue of ownership of the program by the farming community on a county-by-county basis, spinning off professional development programs on environmental assessment for farmers on Peer Review Committees so that committees would make responsible, consistent decisions across counties.

In another form of assessment, farm leaders required Soil and Crop facilitators to collect anonymous data from Action Plans, called "aggregate data." Included in these data were farmers' responses to a section called "Barriers to Action," a checklist that allowed farmers to document reasons why they declined to fix a particular environmental problem (OFEC, 1994). The Barriers to Action list also encouraged honesty in the self-assessment process by

providing an opportunity to declare personal and professional reasons for not taking immediate action on existing environmental hazards and risks on the farm. Farm leaders used the data to support positions on determination of extension priorities and on allocations of research funds.

Mainstream Planning

It is notable that farm leaders of mainstream farm organizations planned privately, and then advanced their ideas through a professional policy booklet that startled ministry officials when it was released (OFEC, 1991/1995). Extension staff subsequently entered into a period of cooperation with farm leaders to develop the workbook and technical guides. Analysis showed, however, that environmental and organic farming organizations (groups with a mission beyond hunting and game conservation) remained marginal in the Coalition--uncommon for a sustainable agriculture program. According to a member of one of the uninvolved organizations, mainstream farm leaders "pulled their wagons in a circle" when they composed their learner-directed program planning team.

Conclusions

This paper presents findings about farmers' influence on adult education program design. Overall, Farm Plan is a demonstration of mainstream farm leaders successfully advancing sustainable agriculture while working with extension in ways that reconfigured power relationships. Participation of prospective learners in early stages of program planning is advocated for adult education programs that address complex scientific issues with unmistakable social and economic components, as apparent in environmental education. Nonetheless, meaningful participation of stakeholders is described in the literature as rare and difficult to accomplish. One of the study's basic but noteworthy findings is that farmers successfully influenced program design, affirming theoretical claims that substantive involvement of key

stakeholders is feasible. The findings also support claims present in several extension handbooks that suggest that "collaboratives" and farmer-initiated ideas may come to fruition even when stakeholders' program assumptions differ from professional adult educators' (Taylor-Powell, Rossing, & Geran, 1998; Wells, 1988). Disagreement is *not* a death knell for engagement.

Chambers (1997) and other writers suggest that under circumstances of rapid change and increasing distance of professionals from constituents, supporting clients in the driver's seat allows changes to be based on timely social and cultural information that stakeholders uniquely possess. One may view farmer-to-farmer staffing in this light. Direct line social and cultural theory does not, however, account for political bids apparent in farm leaders' strategies for Farm Plan education. Here one benefits from analysis possible within the critical tradition in adult education (Cervero & Wilson, 1994). The confidentiality policy, for example, manifested the farming community's concerns about regulatory, command-and-control dimensions of environmental education, salient despite extension's historic emphasis on democratic education. Aggregate data and the Barriers to Action, on the other hand, demonstrate farm leaders' desire to influence policy by documenting farmers' concerns related to cost and feasibility of environmental improvements on farms. Additionally, by asking farmers to do more than they believed possible with respect to environmental assessment, farm leaders manifested their goal of decreasing farmers' dependency on government and scientific-technical institutions. The amount of work that the program expected farmers to complete for Farm Plan was well outside the organizational culture of extension. More often, extension educators are coached to make tasks easy for farmers (Blackburn, 1994; NRC, 1989).

Recommendations

Three recommendations stand out as crucial to the engagement process: (a) the

importance of social and political dimensions of teaching and learning; (b) the likelihood that learners experience education differently from educators; and (c) the value of the professional educators' informed view of exclusionary tendencies stakeholders may bring to educational planning. First, extension educators may support stakeholder engagement more fully if they anticipate a political dimension in addition to a focus on subject matter in the planning phase. The recommendation emphasizes Cervero and Wilson's (1994) democratic approach to program planning whereby adult educators talk openly about social and political aspirations of interested parties (including those of adult educators) rather than focus exclusively on content matter objectives. Second, this study affirms prior qualitative research that underscores the surprising degree to which learners bring different meaning to ordinary dimensions of educational practice, such as: Who teaches programs (extension or farmers?). How much work is involved (little or "a ton"?). Who assesses quality (scientists or peers?). For topics like sustainable agriculture, identity of facilitators may be more important to learners than for other program areas. Third, in processes of engagement, stakeholders may act according to their own preconceived ideas about which other people and organizations are appropriate to involve. Extension educators, as part of ethical professional practice, must be alert to exclusionary tendencies of groups. The author does not advocate forcing equitable participation in any one project. However, one may still strive for appropriate involvement of identifiable stakeholders over time firmly and strategically.

Areas for Future Research

Researchers might attend to elements of group dynamics of both heterogeneous and more unified groups and the implications of synergy of ideas for creative program planning. The issues raised in this paper also beg for evidence collected over a longer time frame. The sustainability of the educational design itself is a relevant question, given that stakeholders are, by

definition, "clients" or "users" of an educational institution, rather than its directors and full-time staff. Long term scholarly research on the institutionalization of stakeholders' ideas in extension programming would contribute to our understanding of participatory processes in light of political and fiscal constraints.

References

Blackburn, D. J. (Ed.) (1994). *Extension handbook: Processes and practices*. Guelph, ON: University of Guelph.

Cervero, R. M. & Wilson, A. L. (1994). *Planning responsibly for adult education: A guide to negotiating power and interests*. San Francisco, CA: Jossey-Bass.

Chambers, R. (1997). *Whose reality counts? Putting the first last*. London: Intermediate Technology.

Deshler, D. (1995). Participation motivation in adult education. In T. Husan & T. N. Postlethwaite (Eds.), *The international encyclopedia of education* (2nd ed.) (pp. 4325-4328). New York: Pergamon Press.

Dewey, J. (1938). *Logic: The theory of inquiry*. New York: Henry Holt.

Dyszuk, B. (1991). *Two blades of grass where there was one before: The story of the Ontario Soil and Crop Improvement Association*. Guelph, ON: OSCIA.

Erickson, F. (1990). Qualitative methods. In R. L. Linn & F. Erickson (Eds.), *Quantitative methods and qualitative methods* (pp. 75-194). New York: MacMillan.

Ervin, D. E. & Smith, K. R. (1996). *What it takes to "get to yes" for whole farm planning policy* (Policy Studies Report No. 5). Greenbelt, MD: Wallace Institute for Alternative Agriculture.

Geertz, C. (1973). Thick description: Toward an interpretative theory of culture.

In C. Geertz (Ed.), *The interpretation of cultures: Selected essays* (pp. 3-30). Basic Books.

Gerber, J. M. (1992). Farmer participation in research: A model for adaptive research and education. *American Journal of Alternative Agriculture*, 7(30), 18-21.

Greenwood, D. J. & Levin, M. (1998). *Introduction to action research*. Thousand Oaks, CA: Sage Publications.

Grudens-Schuck, N. (1998). *When farmers design curriculum: Participatory education for sustainable agriculture in Ontario, Canada*. Unpublished doctoral dissertation, Cornell University, Ithaca, NY.

Grudens-Schuck, N. (2000). Conflict and engagement: An empirical study of a farmer-extension partnership in a sustainable agriculture program. *Journal of Agricultural and Environmental Ethics*, 13 (1), 79-100.

Grudens-Schuck, N. (1999, June). Extension and grassroots educators' approaches to participatory education: Interrelationships among training, worldview, and institutional support. Paper presented at the Adult Education Research Conference, Vancouver, British Columbia.

Grudens-Schuck, N. (in press). *The mainstream environmentalist: Learning through participatory education*. New Westport, CT: Bergin & Garvey.

Grudens-Schuck, N. & Hill, D. (1997, June). *Democratic action and participatory research in an environmental education program for farmers in Canada: Farmers' local knowledge*. Paper presented at the World Congresses 4/8 Convergence, Cartagena, Colombia (S.A.).

Helmut Loewen & Associates. (1995). *Farming: It's good for the environment*. Guelph, Ontario: Author.

Higgins, E. (1998). *Whole farm planning: A survey of North American experiments* (Policy Studies Report No. 9). Greenbelt, MD: Wallace Institute for Alternative Agriculture.

InfoResults. (1993). *An evaluation of the Environmental Farm Plan project*. Brampton, ON: Author.

Lincoln, Y. & Denzin, N. (1994). The fifth moment. In Y. Lincoln & N. Denzin (Eds.), *Handbook of qualitative research* (pp. 575-586). Thousand Oaks, CA: Sage Publications.

Lockeretz, W. (1990). What have we learned about who conserves soil? *Journal of Soil and Water Conservation*, 45(5), 517-523.

Mulla, D., Everett, L. & DiGiacomo, G. (1998). *Whole farm planning: Combining family, profit and environment* (Extension Service No. BU-6985-S). Minneapolis, MN: University of Minnesota.

National Association of State Universities and Land-Grant Colleges (NASULGC). (1999, February). *Returning to our roots: The engaged institution*. Washington, DC: Author.

National Research Council (NRC). (1989). *Alternative agriculture*. Washington, DC: National Academy Press.

Ontario Farm Environmental Coalition (OFEC). (1991/1995). *Our farm environmental agenda* (rev. ed.). Guelph, ON: University of Guelph.

Ontario Farm Environmental Coalition (OFEC) (1994). *Ontario environmental farm plan* (1st ed.). Toronto, ON: Ontario Federation of Agriculture.

Röling, N. G. & Wagemakers, M. A. E. (Eds.). (1998). *Facilitating sustainable agriculture: Participatory learning and adaptive management in times of environmental uncertainty*. Cambridge, MA: Cambridge University Press.

Taylor-Powell, E., Rossing, B. & Geran, J. (1998). *Evaluating collaboratives: Reaching the potential*. Madison, WI: University of Wisconsin-Extension.

Watershed Agricultural Council (WAC). (1996). *Whole farm planning: Voluntary, farmer-led and working!* Walton, NY: Author.

Wells, B. L. (1988). Working with groups and organizations (Module 5). In E. J. Boone (Ed.), *Working with our publics: In-service education for Cooperative Extension*. Raleigh, NC: North Carolina Agricultural Extension Service.

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Footnotes

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