

The Potential Role of Farmer Organizations in Increasing
the Productivity and Income-Earning Capability of
Small-Farmer Agricultural Systems in the Developing Countries:
A Concept Paper [*]

by

Kerry J. Byrnes
Consultant, Farming Systems
Academy for Educational Development

December 16, 1985

[*] This paper was prepared in support of the Communication for Technology Transfer in Agriculture Project, funded by the Offices of Education, Rural Development, and Agriculture, Bureau for Science and Technology, Agency for International Development. Technical services for this project are provided by the Academy for Educational Development under Contract No. DPE-5826-C-00-5054-00. The views expressed in the paper are the author's and do not necessarily reflect those of the Agency for International Development or the Academy for Educational Development.

Table of Contents

Executive Summary.....	i
I. The Need for a Research Initiative on Farmer Organizations.....	1
II. A Typology of Agri-Support Factors.....	10
III. The Concept of Farmer Organization Defined.....	16
IV. Statement of the Problem.....	20
V. Identifying a Theoretical Framework.....	23
The Olson Perspective.....	23
The Mitchell Perspective.....	27
The Runge Perspective.....	30
VI. Some Empirical Evidence.....	34
The Doherty and Jodha Study.....	34
The Bratton Study.....	36
VII. Research Issues.....	44
Defining the "Incentive Structure" Concept.....	45
Social Marketing: A Strategy for Developing LDC Farmer Organizations.....	49
VIII. Agenda for an Applied Research Initiative (Project).....	59
Appendix 1. What is a Cooperative?.....	65
Appendix 2. Definitions of Market and Non-Market Groups.....	66
Appendix 3. Illustrative Activity Data Sheet for AID-Funded Research Project on Farmer Organizations.....	67
Appendix 4. Comments of Reviewers of Draft Concept Paper as Regards the Need for a Research Initiative on LDC Farmer Organizations.....	68
Footnotes	73
References	75
 <u>Figures:</u>	
Figure 1. A Typology of Agri-Support Factors.....	13
Figure 2. The Social System Elements Model (SSEM).....	18
Figure 3. Model of Variables Affecting the Contributions of Local Organizations to Rural Development.....	19
Figure 4. Graphic Summary of Major Variables Addressed in the Core Set of Nine Questions.....	22
Figure 5. Path of Development of Farmer Organizations.....	38
Figure 6a. Access to Production Assets by Type of Farmer Organization.....	41
Figure 6b. Access to Production Services by Type of Farmer Organization.....	42
 <u>Tables:</u>	
Table 1. Potential Tasks of Farmer Organizations.....	15
Table 2. Factors Influencing Farmers to Contribute to a Farmer Organization Which Seeks a Group Good.....	29
Table 3. Access to Agri-Support Factors (Production Assets & Production Services) by Small Farmers in Zimbabwe.....	40

The Potential Role of Farmer Organizations in Increasing
the Productivity and Income-Earning Capability of
Small Farmer Agricultural Systems in the Developing Countries:
A Concept Paper

Executive Summary

There is great potential for the development of small farmer agriculture in the LDCs of Africa, Asia, and Latin America. The key to unleashing this development potential lies in improving the small farmer's access to the production and market resources essential for increased farmer productivity and income-earning capability. Numerous studies have shown that LDC small farmers make maximum productive use of locally-available land and labor resources. However, small farmers typically have little or no control over the supply of many other essential production and market resources (e.g., technology, credit, fertilizers, and market information). Decisions to supply these other essential resources, and to make them available to small farmers, are all too frequently made by state bureaucracies that are insensitive to the small farmer's needs and requirements. The central hypothesis here is that there is a large, untapped potential for farmer organizations of various types to play a significant catalyst role in helping LDC small farmers to improve their access to and use of essential production and market resources.

Available evidence indicates that farmer organizations can provide a mechanism to increase the total level of resources supporting agricultural development and the efficiency with which these resources are allocated at the farm level. Although poor performance has often been observed in LDC farmer organizations (e.g., cooperatives), past experience also suggests that farmer organizations can greatly improve the capability of member farmers to access and manage essential production and market resources. Moreover, when farmer organizations help small farmers to produce agricultural products which can be marketed for fair prices, these organizations make a significant contribution to the growth and evolution of a market-driven agriculture.

Under what conditions farmer organizations can most effectively develop their potential catalyst role and how the development of this potential can be most effectively supported by AID and other donors and assistance agencies remain questions for further research. Toward answering these questions, the present paper reviews what is known about the conditions under which LDC small farmers will engage in collective (group) action to obtain improved access to essential production and market resources. As part of this review, an analytical framework is proposed for conducting research to determine: (1) the structure of incentives required to support development of LDC farmer organizations, and (2) an action strategy which change agents could apply to stimulate development of farmer organizations in an LDC.

AID has recognized the importance of broad-based increases in agricultural productivity and farmer income in the LDCs as a cornerstone for accelerated agricultural development. The AID-sponsored research initiative (project) proposed in this paper will assist the Agency to learn how to most effectively harness the potential catalyst role of LDC farmer organizations and, thereby, unleash the development potential of small farmer agriculture.

I. The Need for a Research Initiative on Farmer Organizations

Today, throughout the developing countries, donors, technical assistance agencies, and host country governments search for solutions to a number of institutional and organizational problems that stand in the way of accelerating the pace of development of small farmer agriculture in these countries. These institutional and organizational problems include but are not limited to development of site- and situation-relevant information (e.g., technology), dissemination of this information to farmers in scattered and remote locations, and delivery of various goods (e.g., fertilizers) and services (e.g., credit) in a timely manner at precise intervals across an agricultural season. Another problem increasingly receiving attention is that of providing farmers with better opportunities to market their surplus production at a fair price and to grow nontraditional crops having greater market demand than is the case for many crops traditionally grown by farmers.

The search for solutions to these institutional and organizational problems has led to a growing recognition of two ideas. These ideas, although not yet universally accepted, have a significant implication for the design of agricultural development strategy. They may be stated as follows:

1. Small farmers, often with a large share of production for subsistence, as distinct from large-scale, primarily commercial farmers, can play a significant role in helping a developing country to meet its requirements for increased production of food and other agricultural commodities.
2. Small farmers will not increase the production and productivity levels of their agricultural systems unless such increases enable them to achieve a significant and relatively assured increase in the income which they derive from the production of food and other agricultural commodities.

For those who accept the validity of these two ideas, the implication is clear for the design of agricultural development strategy: If small farmers are to play a significant role in helping a developing country meet its requirements for increased production of food and other agricultural commodities, that country's strategy for agricultural development must provide for a means that enables its small farmers to increase the productivity and the income-earning capability of their agricultural systems (Johnston and Tomich, 1984).

There are, of course, many elements that one could identify as potential components of a cost-effective strategy for bringing about developmental change in small farmer agriculture in the developing countries. This paper focuses on one of these components, namely, farmer organizations and their potential role in helping a developing country solve the various institutional and organizational problems involved in increasing the productivity and income-earning capability of agricultural systems operated by small farmers. Indeed, it is in view of the magnitude of these problems, the continuing weakness and inefficiency of state agricultural bureaucracies in dealing with them, and the growing fiscal deficits confronting these bureaucracies that LDC governments and others in the donor and technical assistance community have begun to take increased interest in and ask a number of questions about farmer organizations. These questions include but are not limited to the following:

1. Can small farmers, through their participation in a farmer organization,
 - a. Improve their level of access to the various goods and services that are essential for increasing the productivity and income-earning capability of the agricultural systems which they operate?
 - b. Reduce the levels of risk and uncertainty which they must face in making decisions about the management of their agricultural systems?
 - c. Increase the productivity and income-earning levels of the agricultural systems which they operate?
2. Are certain types of farmer organization more effective in helping small farmers to meet their requirements for agricultural goods and services?
3. What are the elements that determine a farmer organization's capability to help small farmers meet their requirements for agricultural goods and services?
4. Which of the elements identified in answering question 3 are controllable and how can these controllable elements be manipulated so as to increase the productivity and income-earning capability of agricultural systems operated by small farmers?
5. What are the elements that lead or cause individual small farmers to engage in collective (group) action to establish new farmer organizations, to support and participate in existing farmer organizations, or to improve the capability of existing farmer organizations to help small farmers meet their requirements for agricultural goods and services?
6. Which of the elements identified in answering question 5 are controllable and how can these controllable elements be manipulated so as to achieve a desired level of small farmer support of and participation in a farmer organization? [1]

As indicated above, national governments, technical assistance agencies, and donors have begun to show increased interest in these kinds of questions about farmer organizations (citations of supporting references are given in Esman and Uphoff, 1984:22-23). Their interest stems from a practical concern which these groups increasingly share over a basic question. Can farmer organizations play a larger and more effective role in the developing countries by helping these countries to identify and implement ways of accelerating the pace of developmental change in small farmer agriculture?

The potential role which farmer organizations can play in the LDCs in helping to create a demand for and supply of agricultural support institutions that effectively reduce constraints to technology utilization in small farmer agriculture has been highlighted by Yujiro Hayami and Vernon Ruttan in their

recent work on the theory of induced institutional innovation (Hayami and Ruttan, 1984:56; Ruttan and Hayami, 1984:211, 217-218). Their research findings demonstrate that technological change in any given agricultural situation will likely depend on implementing a mix of technical and institutional reforms that reallocate resources "so as to remove those resource constraints that are most inelastic and those institutional constraints that are most restrictive of growth and development" (Ruttan, 1978:413). In addressing the question of which types of technical and institutional reforms will be required for technological change in LDC agriculture, Hayami and Ruttan (1984:56) cite Grabowski's (1981) statement that, in addition to developing improved seed, research activities:

...must be directed at...improving cultivation practices and irrigation techniques in order to increase cropping intensity. Credit must be made available to allow farmers with small farms to irrigate their land and thus increase their cropping intensities. . . . Larger farmers' privileged access to machinery must be eliminated. . . . All of these require an increase in power and influence of farmers with small farms, relative to those with large farms, on government decisions concerning agricultural research and credit priorities. This could possibly be accomplished through land reforms or, a less radical solution, the organization for small farmers into groups which could put pressure on government agencies to recognize and respond to the interest of small farmers [emphasis added].

While Hayami and Ruttan (1984:56) firmly assert that such technical and institutional reforms are "clearly desirable", they quickly ask: "But what are the conditions that make them [the clearly desirable reforms] economically and politically viable?" Here Hayami and Ruttan (1984) stop short of providing a definitive answer that would provide guidance on how certain types of institutional change (e.g., development of farmer organizations) could be most effectively stimulated by donor and development assistance agencies.

Evidence that farmer organizations can play a positive role in support of agricultural development has been reported in several studies. For example, Bratton's (1983) study, of agricultural production in the tribal areas of Zimbabwe, found that almost half of nearly 500 randomly-sampled households were members of agricultural organizations sponsored by government, private business, or church organizations. To a significant degree, maize farmers who were members of these organizations consistently outproduced individual (non-member) maize farmers. More importantly, the differences in production levels between member and nonmember farmers were greater in areas where rainfall and soil conditions were less favorable:

Whereas group farmers produce nearly twice as much as individuals in Chipuriro, they produce almost three times as much as in Gutu [the more disadvantaged area]. The implication (which needs further testing) is that farmer organizations make their biggest contribution to production in the more marginal areas (Bratton, 1983:17).

Another example is provided by Oxby (1983:54) who reported higher yields among rainfed group farmers in Kenya compared to non-group farmers assisted by extension workers, even though group farmers had a lower rate of instructors per farmer. To cite but one additional example, the World Bank-sponsored

URADEP project in Ghana encountered difficulties for several years after failing to set up the farmer groups which the project design had included as a means of helping farmers to operate credit, seed, and fertilizer programs from farmer service centers. The project began to get "on track" only after such groups were established (Uphoff and Van Dusen, 1984:42).

The empirical evidence reported by Bratton, Oxby and others, are useful in suggesting and raising questions about the potential role which farmer organizations can play in helping developing countries to bring about developmental change in small farmer agriculture. That answers to such questions are not readily available suggests a need for a framework that would enable us to begin to address in a systematic way how the potential role of farmer organizations can be most effectively identified and developed.

The need for such a systematic framework or methodology was also identified in Cernea's (1981) study of the role of informal peasants' groups in 164 World Bank-financed rural development projects started over a period of four fiscal years (1973-1977) in eighty countries. In this study, each project's appraisal report (i.e., the design at the beginning of the project) was reviewed to determine if the report:

1. considered patterns (existing within the project area) of traditional cooperation based on labor exchange, group management of water, or savings and credit;
2. indicated that group action in the form of community "self-help" would be encouraged by the project; or
3. indicated that farmers' groups related to productive or marketing activities or various other types of "pre-coops" would be established during project implementation.

More than 40 percent of the projects, in thirty-seven countries, contained one of the above-listed elements. Additional data on these projects were collected through review of other project documents (e.g., supervisory reports on project implementation) and interviews with World Bank staff members, primarily operational staff, about their actual experience, views, difficulties, etc., related to the identified projects and other instances in which farmer organizations had been involved.

Among the findings reported by Cernea, the following are significant in terms of the general state-of-the-art (Cernea, 1981:132-133):

1. "The design and preparation of most rural development projects is not guided by a preexisting, explicit, and structured policy and methodology for identifying traditional, or for establishing new forms of, peasants' organizations or for incorporating them into the mechanisms of planned and financially supported development."
2. "...an important proportion of rural development projects suggests the creation (or strengthening) of a variety of quasi-formal groups for small farmers. . . . This is a surprisingly high proportion in light of the absence of a conceptualized orientation towards the involvement of farmers' groups and informal organizations."

3. "The main reason for the presence of such project provisions, in the absence of a formal policy, was the intuitive perception or...conviction of the individual staff involved in the design or appraisal of projects that the development process needs to rely upon and promote the structured self-organization of the small producers for their own interest."
4. "A heavy constraint limiting this trend is the absence of a practical methodology for carrying it ["the structured self-organization of the small producers for their own interest"] out, of a social technology for building farmers' groups, for identifying and effectively supporting (i.e., financially and technically) existing traditional organizations."
5. "Provisions relating to farmers' organizations, even when incorporated in project design and appraisal, generally allow these organizations only a rather secondary function in the overall project effort. In other words, most (but not all) projects reviewed...appeared to have a development mechanism not centered around the self-organization of the producers for attaining their own self-sustained growth, even when the projects took a relatively open-minded stand on the potential of farmers' organizations."

Additional support for Cernea's observations is found in Kottak's (1985) study of ex-post evaluation reports on World Bank-assisted rural development projects in the 1960s-1970s. While the development potential of group action and local social organization was recognized in the design of some of the studied projects, Kottak found that this recognition was rarely harnessed effectively during project implementation.

Social design flaws, identified in thirty-six (53%) of the sixty-eight sampled projects, caused many projects to fail or to achieve less than could have been achieved. . . . In the thirty-two cases...[47% of the reviewed projects]...in which the...[ex-post evaluation reports]... specifically called attention to deficiencies in sociocultural design, the average ERR [economic rate of return] was...less than half that of the thirty-six projects in which no such problems were identified (Bratton, 1985:39-40).

Three main reasons for this poor track record in project design and implementation were identified: (1) inadequate socioeconomic knowledge in project preparation, (2) lack of social skills in project management units to carry out the project goals, and (3) use (often unconscious) of culturally-biased and therefore often incompatible social designs for innovation. Indeed, the lack of detailed and accurate social and institutional knowledge as an input to project design led to deficient or inappropriate social strategy for project implementation (e.g., ignoring traditional social organization and imposing nontraditional organizational forms). As a result, (1) appropriate groups with development potential were ignored; (2) inappropriate, unworkable, or unnecessary new organizations were formed; and (3) assumptions about individual motivations were made that conflicted with traditional communal values.

Although the findings of the Cernea and Kottak studies are based primarily on the World Bank-sponsored projects reviewed, these findings generally reflect the state-of-the-art of development experience vis-a-vis farmer organizations. Specifically, the development literature reviewed for this paper evidences little, if any, consensus on either policy or methodology for effectively involving farmer or, more generally, local organizations in the agricultural development process. Indeed, as the A.I.D. Policy Paper on Local Organizations in Development states: "The literature examining the results of [A.I.D.] experiences and other donor attempts to deliver assistance to local organizations is...often contradictory" (A.I.D., 1984:1). Such contradiction is illustrated in the A.I.D./PPC Policy Paper on Cooperative Development (A.I.D., 1985) and the AID/PRE/CSBD-sponsored study on "Cooperatives in Development" (D.A.I., 1984) as regards whether cooperatives are "for profit" organizations (like a privately-owned business) or "maximum member benefit at least cost" organizations (see Appendix 1).

It is therefore not surprising that top-down initiatives to establish farmer organizations have more often than not proceeded on little more than an ad hoc basis; as a result, these organizations have all too frequently failed, been short-lived, or performed at a level far below that which had been expected (cf. Galjart and Buijs, 1982:3; Esman and Uphoff, 1984:164-165). Typically, initiatives to create or revive such organizations have been undertaken without sufficient consideration of potentially applicable theory, past research, and/or relevant field experience. In the process, some

...efforts have been very successful, whereas others have been notable failures. Some types of cooperatives have worked well in one country but not at all in another. One form of cooperative may have thrived in a country, while another form did not. There is still no general body of theory, based on empirical examination of experience, that provides adequate guidelines for planning and implementing successful cooperative projects (D.A.I., 1984:2).

Indeed, it is generally the case that research to date on farmer organizations has not resulted in any systematically-organized body of knowledge that would provide donors, developing country governments, change agents, and other interested parties with a model or guidelines (steps) for establishing the necessary and sufficient conditions to support the development of farmer organizations that effectively help small farmers to:

1. Improve their level of access to the various goods and services that are essential for increasing the productivity and income-earning capability of the agricultural systems which they operate;
2. Reduce the levels of risk and uncertainty which they must face in making decisions about the management of their agricultural systems; and
3. Increase the productivity and income-earning levels of the agricultural systems which they operate.

Given this dearth of knowledge about the role of farmer organizations in agricultural development, there is an identified need for research that would provide donors, developing country governments, and technical assistance

agencies with guidelines on the conditions under which farmer organizations can play an effective role in facilitating developmental change in small farmer agricultural systems. The urgency for such guidelines and, by implication, research to develop them is underscored by the recognition of our currently very limited knowledge and understanding of how a general A.I.D. policy--"to provide direct and indirect support to a wide range of public and private local organizations" (A.I.D., 1984:ii)--can be translated into a specific and growing number of effectively functioning farmer organizations.

This point is crucial in light of the 5/9/85 cable sent by the Administrator of the Agency for International Development to all USAID missions. Specifically noting the potential of farmer groups or organizations (e.g., cooperatives) as a mechanism for accelerating technology development and transfer, the Administrator cites the role which farmer organizations have played in the development of U.S. agriculture:

We should note...that...farmers themselves have traditionally been change agents. In the U.S., they acted individually and through commodity groups, cooperatives and other associations to demand information and new solutions to production problems as well as reforms in economic and social policies and institutions that support farming [emphasis added].

Reviewing the potential impact which private sector extension could have on technology transfer, the Administrator recognizes that: "Organization of producers' groups as recipients of...extension efforts may help in enhancing the efficient transfer of new technology" [emphasis added]. At a later point the Administrator adds:

I also believe that a great deal can be accomplished by the public and private sectors working together in complementary ways to identify and address technology development needs and disseminate research findings. A good example of such cooperation is an A.I.D. program in Honduras designed to promote the formation of associations of growers and establish incentives that stimulate their participation in agricultural research and extension. ...cooperatives and PVOs represent other possibilities for public/private sector collaboration [emphasis added].

There is, therefore, increasing recognition of the potential development impact that can be achieved by more effectively utilizing farmer organizations (e.g., water user associations, credit societies, input supply cooperatives, produce marketing cooperatives, etc.) as catalysts for technical and institutional change in LDC agriculture. Unfortunately, although the Administrator's cable points to the catalyst role which farmer organizations can play in strengthening private sector involvement in technology development and transfer, donors and technical assistance agencies like A.I.D. have very inadequate knowledge about how they can most effectively support farmer organizations in playing this role. Thus, what is now needed, beyond simply recognizing the potential catalyst role of farmer organizations in the LDCs, is a commitment to develop the knowledge base that will enable donors and development assistance agencies to know when (under what conditions) and how farmer organizations can most effectively support development and transfer of agricultural technologies that enable LDC small farmers to increase the productivity and income-earning capability of their agricultural systems.

This, basically, is the rationale for the need for A.I.D. to spearhead a research initiative on LDC farmer organizations. Through a properly-focused research initiative, the Agency would learn how its "four basic programmatic components" (A.I.D., n.d.:4) can be used to:

1. Tap and increase the overall development impact of farmer-controlled resources--the strategy means of reliance on the private sector and market forces;
2. Identify and find means of relaxing technical and institutional constraints to technology development and transfer in LDC small farmer agriculture--the strategy means of technology research, development, and transfer;
3. Upgrade the service capability of rural institutions (e.g., credit, production input supply, commodity markets, etc.) to support an accelerated pace of growth and development in LDC small farmer agriculture--the strategy means of institutional development and training; and
4. Improve communication between host country governments and a major rural constituency, namely, small farmers--the strategy means of policy dialogue.

Clearly, the knowledge that could be gained through an applied research initiative on farmer organizations in the LDCs would address a major information gap within the donor and technical assistance community. This knowledge, moreover, would provide A.I.D. with a major cornerstone for implementing the "four basic programmatic components" (listed above) of the Agency's "blueprint" for development. This concept paper is a first step toward shaping that cornerstone and meeting the identified need for research on the potential role which farmer organizations can play in helping the developing countries increase the productivity and income-earning capability of their small farmer agricultural systems.

The paper is organized in eight parts. Following this introduction on the need for research on farmer organizations (Part I), Part II develops "a typology of agri-support factors." This typology identifies a number of agricultural production support factors around which farmers can, through collective (group) action, create and participate in farmer organizations that enable their member farmers to improve their access to those factors having the greatest utility to member farmers. Part III defines "the concept of farmer organization," and provides a preliminary indication of some conceptual frameworks that could be used to identify key structural elements impacting on (1) the capability of farmer organizations to perform certain functions (e.g., to provide member farmers with improved access to production credit) and (2) the individual farmer's incentive to support and participate in these organizations. Part IV translates the paper's general introduction and definition of concepts (i.e., "agri-support factor" and "farmer organization") into a "statement of the problem." More specifically, this section identifies eight problems or questions to be addressed in a program of research on the role of farmer organizations in small farmer agricultural development. Part V focuses in a preliminary way on the problem of identifying a theoretical framework that would provide a systematic basis for conducting research on LDC

farmer organizations. Part VI presents some relevant empirical evidence. Part VII focuses on two key research issues--(1) the need for research to identify the "incentive structures" that will support the development of farmer organizations in the developing countries, and (2) the possibility of utilizing social marketing as a model or strategy for implementing action programs to foster the development of the potential catalyst role of farmer organizations in the LDCs. Finally, Part VIII provides a suggested agenda for a proposed research initiative (project) on farmer organizations in the LDCs.

II. A Typology of Agri-Support Factors

The ability of small farmers to increase their agricultural productivity and farm income depends in part on their skill in making decisions about the management of agricultural systems. There is now no lack of scientific data to substantiate the virtually innate ability of small farmers to manage the various agricultural systems which they and their ancestors have traditionally operated (Harwood, 1979). Over the years, however, the small farmer's decision-making environment has become increasingly complex in terms of the range of public and private sector institutions and organizations that provide and/or regulate goods and services essential for increasing the productivity and income-earning capability of the farmer's agricultural system. The increasing complexity of the farmer's decision-making environment has, in turn, significantly raised the levels of risk and uncertainty which small farmers face as they make decisions about the management of the various factors potentially influential in determining the productivity and income-earning capability of their agricultural systems (cf. McInerney, 1978). These "factors" or, as we shall call them, "agricultural production support factors" (or agri-support factors) are defined in the following typology:

1. Land -- to provide the physical structure (soil) and nutrients essential for crop or animal production.
2. Access to Unit of Production -- to provide the right to use a particular unit of production (e.g., a parcel of land) for crop or animal production and to derive a benefit from such use.
3. Water -- to provide essential moisture for crop or animal production.
4. Technology -- to provide the how-to knowledge for producing a particular crop or animal
5. Production Inputs -- to provide the seeds/seedlings, fertilizers, chemicals (herbicides, insecticides, and fungicides), traction, and implements required for producing a crop or animal according to a particular technology.
6. Capital -- to provide the financial means (in cash or credit) to purchase the production inputs used in producing a crop or animal according to a particular technology.
7. Labor -- to provide for the performance of the various physical tasks and cultural practices involved in producing a particular crop or animal.
8. Markets and Market Information -- to provide outlets for the sale of surplus production, awareness-knowledge (information) on market conditions (e.g., market prices), and performance of processing, storage, and other marketing functions.
9. Infrastructure -- to provide the physical base for the communication of technological and market information; and the transportation of people, production inputs, and produce.

10. Policy -- to provide a favorable environment for investment in agriculture (e.g., currency exchange rates, crop/input price ratios, institutional support for contracts, etc.).

Only some of these ten agri-support factors (e.g., seed as a production input) actually enter physically into a farmer's agricultural system (e.g., a maize-bean cropping system). However, the farmer's management decisions must be made in view of all of the agri-support factors directly or indirectly impacting on the physical process of production. Here direct factors are those (e.g., production inputs such as fertilizers) that physically enter the production process, while indirect factors are those (e.g., market prices) that "condition" the decisions which farmers make about the use of direct inputs. Thus, whether a farmer may choose to take a production credit loan (the agri-support factor of capital) to buy fertilizer (the agri-support factor of production input) depends on the farmer's perceptions of how much surplus production that fertilizer will yield above the farmer's consumption requirement and whether it will be possible to sell this surplus at a profit in some market (the agri-support factor of markets and market information).

When looking at the farm management decisions which a farmer has to make, it is useful to remember that the farmer's demand for any agri-support factor is a derived demand. The concept of derived demand may be explained as follows. Demand for an agricultural commodity (e.g., maize) by consumers is primarily a function of consumer income and the price of the commodity, while demand for an agri-support factor (e.g., fertilizers) used in producing this commodity is primarily a function of the market price of the commodity and the price of the agri-support factors used in producing the commodity, assuming the existence of markets and marketing channels. All things equal, high maize prices motivate maize farmers to produce increased yields and to demand a variety of yield-increasing inputs. Of course, without reasonably well-functioning markets, these prices do not get signalled to producers; and, without reasonably high income levels, high maize prices depress consumer demand for maize. Thus, the derived demand for inputs to produce higher maize yields will vary positively with maize prices and negatively with agri-support factor prices., when each factor is considered separately. When considered together, along with consumers' income levels, the relative weight of the "price effect" and the "income effect" will determine the demand for maize, and thus the derived demand for inputs.

A clear example of the derived demand concept is provided by production inputs (e.g., fertilizers) which the farmer buys and which enter directly into the physical process of production. Here "derived demand" means that the particular quantity of fertilizer used by a farmer is basically determined by the extent to which using that quantity will bring the farmer a favorable return from the sale of the agricultural surplus produced by using that amount of fertilizer. Thus, the quantity of fertilizer a farmer will use varies inversely with the price of this input and directly with the price which consumers (or marketing intermediaries) are willing to pay for the surplus produced by using the quantity of fertilizer in question. If the farmer expects that consumers (or intermediaries) will not want to buy the surplus produced by using a particular quantity of fertilizer, or will not want to pay a sufficiently high price for it, then the return which the farmer will earn by producing (and selling) that surplus may not be sufficient to earn the farmer a fair return (profit) over the costs associated with using the

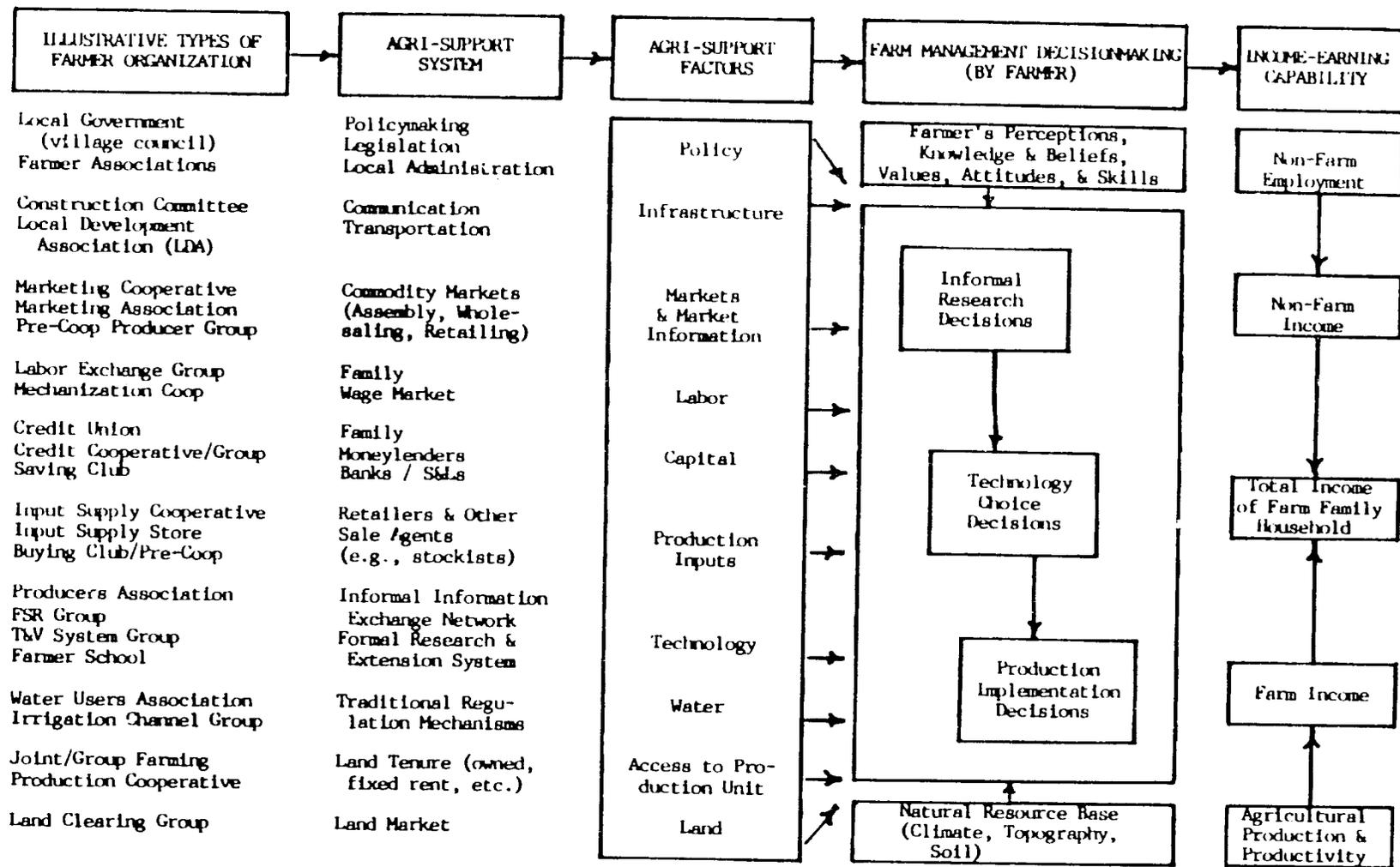
particular quantity of fertilizer in question. Accordingly, the farmer will have little or no incentive to use that particular fertilizer quantity and either will use less fertilizer than that amount or will not use any fertilizer at all. Thus, the level of economic incentive which a farmer requires as a condition for using a particular agri-support factor is a key part of the total structure of incentives (cf. Runge, 1984a; Runge, n.d.) involved in motivating a farmer to increase the productivity and income-earning capability of his (her) agricultural system. [2]

A graphic presentation of this typology of agri-support factors is presented in Figure 1. As the reader may observe, Figure 1 specifies a relationship between the "income-earning capability" of the farm family household, "farm management decisionmaking" (by the farmer), and the typology of agri-support factors. The household's "income-earning capability" is based on the various non-farm (including off-farm) employment and agricultural production activities in which the household's members engage. The latter of these employment activities, agricultural production, is directly influenced by the farmer's "farm management decisionmaking" which may be defined as including three components:

1. Informal research decisions -- those decisions involved in conducting informal experimentation to identify improved agricultural production technologies.
2. Technology choice decisions -- those decisions involved in selecting, among available technologies, a particular technology for production of a particular crop or animal.
3. Production implementation decisions - those decisions involved in putting a traditional agricultural production technology into practice.

Next, as illustrated by Figure 1, the various agri-support factors enter into the farmer's decisionmaking as regards farm management and, thereby, impact on the productivity and income-earning capability of the farmer's agricultural system(s). Clearly, the potential for a farmer's "production implementation decisions" to be effective in achieving a particular production or income objective set by the farmer depends on the farmer having adequate access to and control over the quantity and quality of agri-support factors required to meet the farmer's objective. Indeed, the unavailability, insufficiency, or inappropriateness of any one agri-support factor (e.g., inefficiencies or inadequacies in harvesting, storage, or marketing) can preclude the farmer from being able or having the incentive to achieve desired increments in the productivity and income-earning capability of his (her) agricultural system. Accordingly, how effective small farmers are in accessing and controlling the specific agri-support factors they require will determine to a significant extent how successful they will be in increasing the productivity of and income derived from their agricultural systems.

Figure 1. A Typology of Agri-Support Factors.



Traditionally, farmers have accessed essential agri-support factors such as labor and production inputs (e.g., seed) through a limited number of institutions or organizational forms (e.g., the family). With the passage of time, however, agricultural systems have become increasingly dependent for the provision of agri-support factors on a much larger number and variety of institutions and organizational forms which, taken collectively, comprise what we may refer to as the "agricultural production support system" (or agri-support system). An illustrative listing of the principal institutions and organizational forms which comprise the agri-support system is presented in Figure 1.

Typically, small farmers individually exert only very limited control over the quantity and quality of the agri-support factors they require. Indeed, the lion's share of the control over the supply of many agri-support factors required by farmers normally lies in the agri-support system with its complex of institutions and organizations over which small farmers individually have little or no control or power. As a mechanism for garnering a measure of countervailing power vis-a-vis the agri-support system, farmers have engaged at times in collective (group) action with the objective of obtaining a greater measure of access to and control over one or more of the various agri-support factors. Such collective action has resulted in a number of types of organizational forms or, more specifically, farmer organizations (Figure 1).

Farmer organizations may be classified in different ways (cf. Torgerson, 1977). One classification scheme, suggested by Robert C. Flick (personal communication) of Agricultural Cooperative Development International, identifies four main kinds of farmer organizations, as follows:

1. A business organization that seeks to improve farmer income by providing services needed by the farmer in order to produce (e.g., an input supply cooperative, an irrigation society, etc.);
2. A supply management organization that seeks to enforce production quotas to control the amount of a particular crop reaching the market (e.g., the supply of California Navel Oranges is controlled by a marketing order);
3. A research, promotion, quality (grades and standards), and advertising organization that seeks to improve varieties, develop quality guidelines for the market, and expand the market (e.g., The California Almond Association); and
4. A representational, lobbying organization that seeks to improve farmer income by advancing farmers' interests on the political and governmental front (e.g., The National Council of Farmer Cooperatives, The National Farmers' Union, The American Farm Bureau Federation, Land O'Lakes Political Action Committee, etc.).

Another classification scheme, suggested by Esman and Uphoff (1984:72-82, 295), proposes a typology of eight potential tasks (or functions) which a local organization or, more specifically, a farmer organization could undertake in behalf of its membership. These functions or tasks, as shown in Table 1, can be viewed as four pairs, constituting a continuum from initiating

activity (A) to influencing the external political-administrative environment (D). In between are activities pertaining to resources and services which constitute the inputs and outputs of organization. Of course, any given organization may undertake only a few or one of the identified functions; and there is empirical evidence to suggest that a new farmer organization is more likely to be successful if it limits its activities, at least in the initial stage of getting organized, to one critical function, for example, water management as in the early stages of the water users groups in Sri Lanka's Gal Oya project (John Ericksson, personal communication).

Table 1. Potential Tasks of Farmer Organizations (Adapted from Esman and Uphoff, 1984:72-82. 295).

(A) Intra-Organizational Tasks

1. Planning and Goal-Setting: assessments of community or group needs and of various problems, means, and strategies; formulation of plans to deal with needs and problems.
2. Conflict Management: efforts to resolve conflicts within community or organization, to facilitate production or maintain social harmony.

(B) Resource Tasks

3. Resource Mobilization: gathering community resources for development effort, or gaining resources from outside sources through effort of farmer organization.
4. Resource Management: efficiency and correctness in resource use, including financial, organizational, and natural resource management.

(C) Service Tasks

5. Provision of Services: delivery or distribution of services, either those of the farmer organization or from outside sources with farmer organization involvement.
6. Integration of Services: coordination of services, either farmer organization's or outside sources', so that they most efficiently and effectively meet members' needs.

(D) Extra-Organizational Tasks

7. Control of Bureaucracy: efforts to make government staff work harder, more flexibly, and more cooperatively with and for members to ensure attendance at office, field visits, lack of corruption, etc.
 8. Claim-Making: efforts to get government decisionmakers to deal with farmer problems and needs; may include getting rules altered, budget allocations changed, etc.
-

III. The Concept of Farmer Organization Defined

The research literature on farmer organizations documents the variety of farmer organizations existing in the developing countries (cf. Uphoff and Van Dusen, 1984; Esman and Uphoff, 1984; Oxby, 1983; Johnston and Clark, 1982; Cernea, 1981; Lele, 1981; Nesman, 1981; Obern and Jones, 1981; PCARR, 1981; and Morss, et al., 1967). The initiative for establishing a farmer organization may arise from any of several sources:

1. Individual farmers may take the initiative to organize themselves into some form of an organization in order to gain a measure of countervailing power in relation to traditional (e.g., large farmers or landlords), market, or bureaucratic institutions and organizational forms.
2. A government may require that farmers organize themselves into some organizational form as a condition for gaining access to a particular agri-support factor (e.g., that farmers organize into a "credit society" as a condition for a group loan).
3. An outside agent of one type or another may sponsor or promote organizational efforts to establish some form of farmer organization which the agent believes will effectively facilitate and motivate farmers to gain access to one or more agri-support factors.

While the source of initiative for establishing a farmer organization is a potentially important variable, our interest here is more on the question of whether such organizations can play a role in helping their member farmers to achieve three interrelated objectives:

1. To gain an increased measure of access to and control over essential agri-support factors that are not readily available to individual farmers through existing traditional, market, or bureaucratic organizations.
2. To reduce the levels of uncertainty and risk which small farmers must face in making decisions about the management of their agricultural systems.
3. To increase the productivity and income-earning capability of agricultural production systems operated by the small farmer.

The interrelationships between and among these objectives are readily apparent. While certain activities of a farmer organization may focus on getting (gaining access to) specific agri-support factors (ASFs), others can focus on using specific ASFs, or on helping farmers to make better farmer management decisions given the availability of these ASFs. Getting control over access to ASFs (objective #1) may directly contribute to production and income (objective #3). Reducing levels of risk and uncertainty (objective #2) may come from getting ASFs, like timely availability of production inputs, or from collective action to use ASFs, such as coordinated planting dates to reduce pest/disease losses or joint crop protection measures against animal damage. [3]

With these three objectives in mind, we may now define a farmer organization as any group of farmers enabling its individual members to achieve more effective control over the supply of, access to, and/or proper use of one or more agri-support factors entering directly or indirectly in agricultural systems operated by the individual members of the group. This definition is intended to include various types of formal and informal groups, regardless of the group's sex composition.

This concept of a farmer organization can be further specified in terms of the individual elements (Bertrand, 1967:25) that define the organization's (group's) structure (Loomis, 1959:12-42). In looking at a farmer organization, we are specifically interested in identifying the key elements that impact on the capability of the organization to perform certain functions (e.g., to provide member farmers with improved access to agri-support factors), and the nature and level of the incentives which individual farmers have to support and participate in the organization. While the literature contains a variety of structural models relevant to the problem of defining the key social system elements of a farmer organization, the discussion here will be limited, for illustrative purposes, to a brief indication of two such models.

The first model, known as the "social system elements model" (SSEM) was initially conceptualized by Loomis (1959:12-42) and later adapted by Byrnes (1975). This model, illustrated in Figure 2, specifies nine social system elements which may be identified in any social system. These nine elements are: sentiment (attitude), belief (knowledge), norm, status-role, rank, power, objective (end), facility (technology), and sanction. A definition of each of these elements is given in Byrnes (1975:20-25). An empirical application of the SSEM may be found in Alers-Montalvo's (1960) study of a supervised agricultural credit program in Pucara, a community in the Mantaro Valley of the Central Andean region of Peru. This program had been developed with the support and participation of a group of farmers who created a farmer organization (specifically, a "village agricultural society").

A second model relevant to defining key elements of a farmer organization is provided by the conceptual framework proposed by Esman and Uphoff (1984) in their exploratory analysis of 150 case studies of "local organization" in rural development. This local organization model, diagrammed in Figure 3, identified a number of intra-organizational and extra-organizational "variables" that were hypothesized to affect the contributions of local organizations to rural development. The intra-organizational elements included functional and structural variables such as provision of services and size (e.g., number of members), respectively. On the other hand, the extra-organizational variables included performance (e.g., growth in income), participation (e.g., resource contributions), exogenous (e.g., governmental policies), and environmental (e.g., topography) variables. A complete listing and definition of the specific variables under each of the six variable types -- performance, functional, structural, participation, exogenous, and environmental -- is provided in Esman and Uphoff (1984:295-303).

Figure 2. The Social System Elements Model (SSEM): A Representation of a Social System in Terms of the Nine Social System Elements.

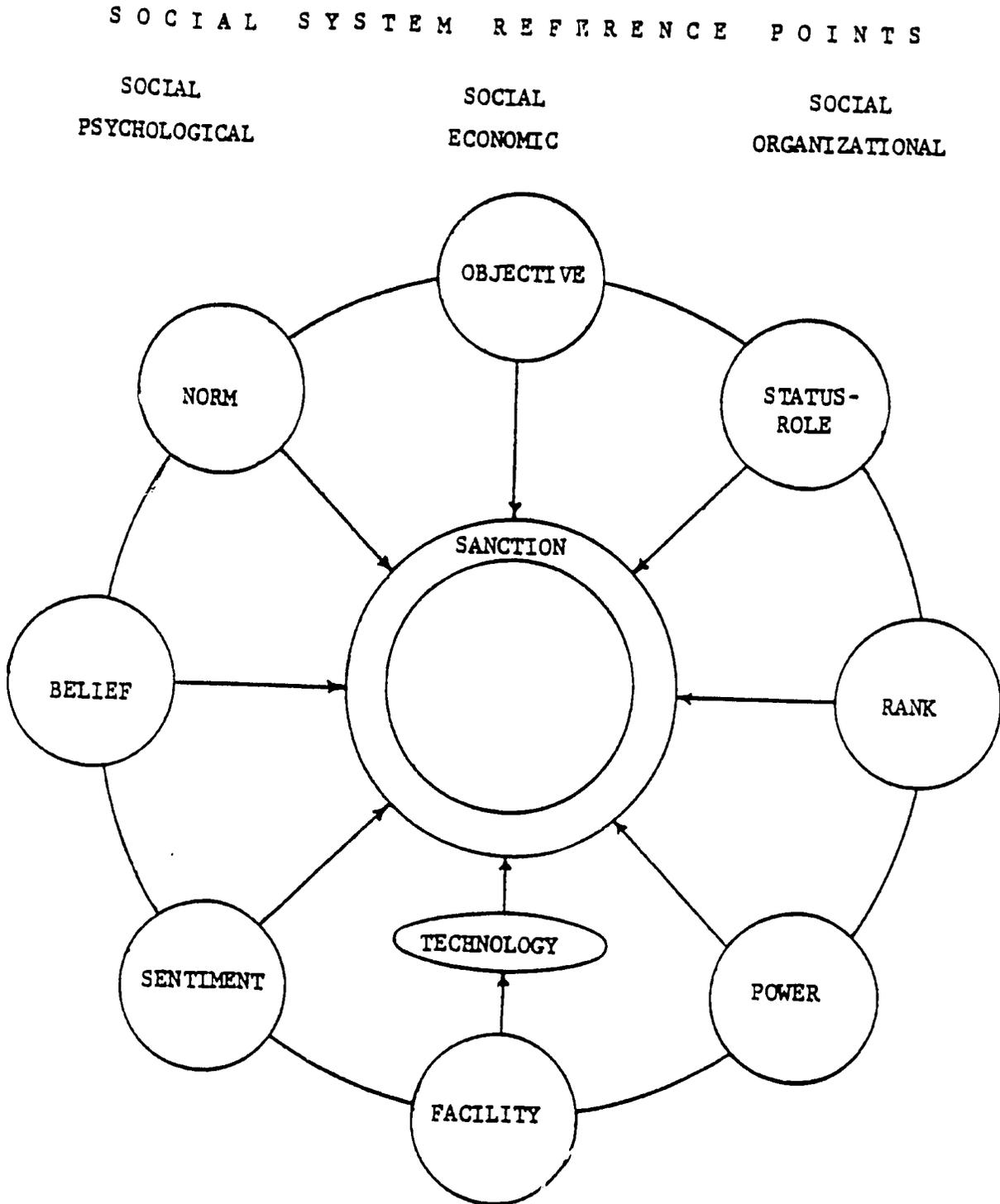
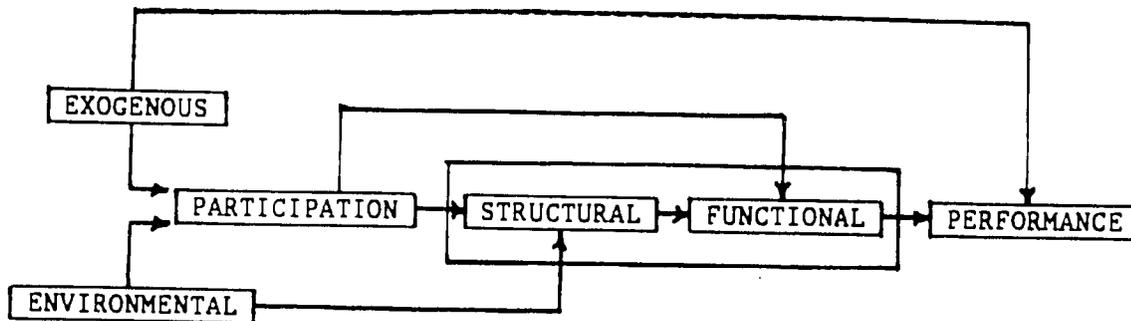


Figure 3. Model of Variables Affecting the Contributions of Local Organizations to Rural Development (Adapted from Esman and Uphoff, 1984:69).



Both the SSEM and the "local organization" models identify numerous variables that potentially may be identified as causally related to specific dependent variables (e.g., farm income or farmer adoption of a recommended input package). However, neither model provides an explicit, theoretically-based specification of the causal relationship between such dependent variables and the causally-relevant independent variables which, if appropriately manipulated through policy and other interventions, would result in desired changes in the specified dependent variable(s). Thus, if research on a given set of independent variables is to be useful in assisting in the design and implementation of policies and programs to support the development of the potential catalyst role of farmer organizations, then such research must be developed within the context of a theoretical framework that provides an *ex ante* basis for predicting how and explaining why a particular independent variable or set of independent variables is related to a specified dependent variable.

Before turning to specification of such a theoretical framework, it is first necessary to define the problem at hand more concretely. Accordingly, the following section defines, at a general level, the set of independent and dependent variables relevant to this paper's focus on the potential role of farmer organizations in increasing the productivity and income-earning capability of small farmer agricultural systems in the developing countries.

IV. Statement of the Problem

Given the preceding introduction and definition of concepts, we may now begin to focus on the general problem which is of theoretical, research, and practical interest here. This problem may be stated as follows: What are the organizational structures and processes through which individual small farmers are able to realize, or could be able to realize, a more effective measure of control over the supply of, access to, and/or proper use of the various agri-support factors essential for increasing the productivity and income-earning capability of their agricultural systems? This problem can, in turn, be broken down and restated in terms of a number of more specific problems or questions which, in effect, are really component parts of the general problem. Nine such component problems or questions are now identified.

Questions 1 through 4 relate to the problem of identifying the specific characteristics that determine the structure of incentives that would motivate and facilitate individual farmers to engage in collective (group) action to support and participate in a farmer organization.

1. Which characteristics of specific agricultural commodities and agricultural production systems determine the structure of incentives for and the likelihood of collective action by farmers to support and participate in a farmer organization?
2. Which characteristics of specific types of agri-support factors determine the structure of incentives for and the likelihood of collective action by farmers to support and participate in a farmer organization?
3. Which characteristics of a farmer organization determine the structure of incentives for and the likelihood of collective action by farmers to participate in a farmer organization?
4. Which characteristics of the farmer's social system determine the structure of incentives for and the likelihood of collective action by farmers to participate in a farmer organization?

While questions 1 through 4 focus on the characteristics (or determinants) of the structure of incentives for and the likelihood of collective action by farmers to support and participate in a farmer organization, questions 5 through 7 focus on the extent to which a farmer organization adequately performs the function of providing farmers improved access to essential agri-support factors and the problem of identifying the conditions under which farmers will take action to improve a farmer organization's performance capability.

5. Case A--Given the absence of any type of farmer organization to provide farmers improved access to a particular agri-support factor:
 - a. What are the characteristics that would account for the absence of any such farmer organization?
 - b. Under what conditions will farmers engage in collective action to establish such a farmer organization?

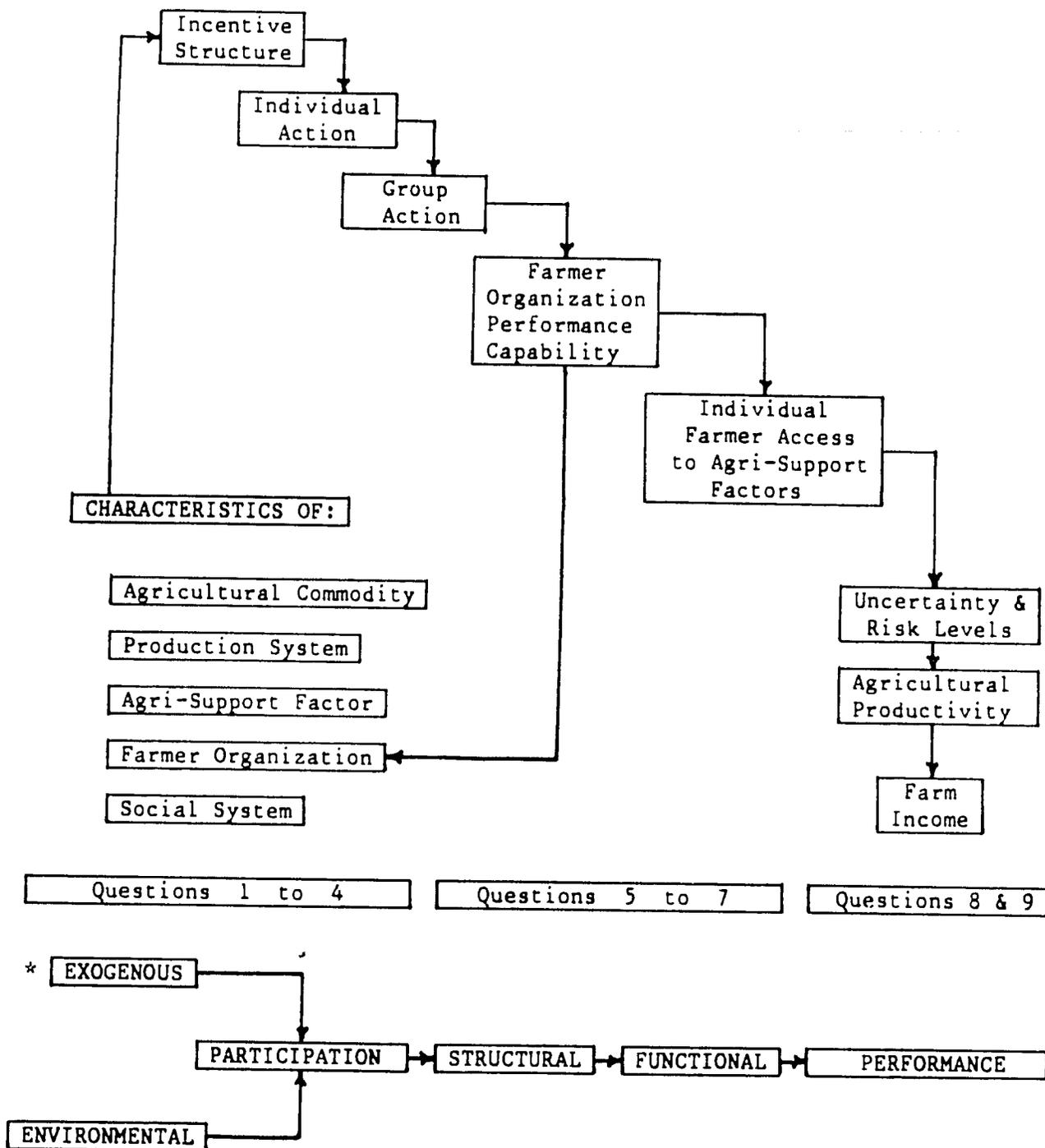
6. Case B--Given the presence of a farmer organization that is inadequately performing the function of providing farmers improved access to one or more agri-support factors:
 - a. What are the characteristics that would account for this inadequate level of performance?
 - b. Under what conditions will farmers engage in collective action to resolve the problems which exist?
7. Case C--Given the presence a farmer organization that is adequately performing the function of providing farmers improved access to one or more agri-support factors:
 - a. What are the charactersitics that would account for this adequate level of performance?
 - b. Under what conditions will farmers engage in collective action to upgrade the organization's capability to provide farmers improved access to one or more additional agri-support factors?

Questions 8 and 9 focus on the extent to which a farmer's membership in a farmer organization has a positive impact on the productivity and income-earning capability of the farmer's agricultural system.

8. Under what conditions does being a member of and participating in a farmer organization reduce the level of uncertainty and risk which a farmer must face in making farm management decisions?
9. Under what conditions does being a member of and participating in a farmer organization have a positive impact on the productivity and income-earning capability of the farmer's agricultural system?

Figure 4 presents a graphic summary of the major variables or factors addressed in this core set of nine questions. It is recognized that this diagram as well as the set of questions or problems it represents can be further refined and specified in the course of identifying a theoretical framework applicable to the problem at hand, and formulating, on the basis of such a framework, hypotheses which can be empirically tested. It is to the problem of identifying such a theoretical framework that this paper now turn.

Figure 4. Graphic Summary of Major Variables Addressed in the Core Set of Nine Questions.



* = Correspondence of Adapted Version of "Local Organization" Model (Esman and Uphoff, 1984) to Major Variables Addressed in Core Set of 9 Questions.

V. Identifying a Theoretical Framework

A useful starting point for designing a program of research on the potential catalyst role of farmer organizations in small farmer agricultural development is provided by public choice theory (Hardin, 1982; Sproule-Jones, 1982; Erickson-Blomquist and Ostrom, 1984). Several researchers, for example, have used public choice theory to study natural resource problems in the developing countries (Russell and Nicholson, 1981; Popkin, 1981). West's (1983:46) study on collective adoption of natural resource conservation practices and development projects points out that "collective adoption implies not just decision but also collective action." In this section, we will focus on three perspectives on public choice theory, namely, (1) the "logic of collective action" as articulated by Olson (1965), (2) the "revised rational choice theoretical paradigm of collective action" as articulated by Mitchell (1979), and (3) the "assurance problem in collective action" as articulated by Runge (1981, 1983a, 1983b, 1984a, 1984b, n.d.).

The Olson Perspective

The theory or "logic of collective action" (Olson, 1965, 1982) deals with situations where a set of individuals (e.g., farmers) can obtain a potential benefit (e.g., irrigation) only if they get together into some form of organization (e.g., water users group) which has the capability to provide the benefit to its members. Olson distinguishes between two benefit classes-- public goods and private goods. A private good is a good whose consumption can be restricted to those who have paid for it (e.g., a privately-owned well and pump), whereas a public good is one which, if it is provided at all, must be made available to all potential beneficiaries whether they have contributed or not to making the good available (e.g., water along an irrigation canal). Given this distinction, Olson advances the proposition that public goods may not be provided even if everyone concerned might actually be better off making the required contribution and receiving the benefits in question.

This possibility is explained by Olson as follows. In deciding whether to make the required contribution to help defray the costs of making a good available, the rational, self-interested individual will consider the expected utility of his contribution and will compare it with the alternative uses to which it might be put. The expected utility of the contribution is not the benefit the individual will obtain, for if the benefit is a public good it by definition would be available to all potential beneficiaries if it is provided at all. What is at issue is not simply the benefit in question but rather the individual's perception of the difference which his (her) contribution will make to the probability of the benefit actually being provided. The rational individual, Olson proposes, reasons as follows: "Since I get the benefit whether or not I contribute, it is only worth contributing if it makes a significant difference to the chance of the benefit indeed being made available." Thus, the rational individual considers the difference which that individual's contribution will make to the likelihood that the benefit will be provided and then multiplies this by the utility of the benefit in question.

This may be illustrated by the following hypothetical example set in a developing country context. Suppose that it is technically and economically feasible for farmers to form a produce marketing cooperative, and that the cooperative could successfully negotiate a contract with a vegetable processor

that would enable the cooperative to pay each member farmer an increase of \$.10 per bushel in the price of each bushel of cucumbers a member farmer sells to the cooperative. Suppose too that a participation fee (membership dues) of only \$.01 per bushel sold, if paid by all the potential beneficiaries, would be sufficient to finance the cooperative. On the surface it would seem that all the members of the cooperative would thus make a gain of \$.09 per bushel sold. But Olson, to the contrary, would argue that it may be quite rational for no one to contribute and thus for no price increase to be secured.

Olson's argument would be based on the following line of reasoning. As suggested above, the farmer, being a rational, self-interested individual, will consider the difference which his contribution would make to the likelihood of the benefit being provided and then multiply this by the utility of the benefit in question. If the farmer expects that a \$.01 contribution per bushel sold raises the probability (of the farmer getting the \$.10 per bushel price increase) by 0.01, then the expected utility of the contribution is equivalent to $0.01 \times \$0.09$ or \$.0009 (assuming that utility is a linear function of money). Under these conditions, the farmer would clearly be better off not paying \$.01 per bushel sold and instead spending the money thereby saved on something else. All the other potential contributing farmers will reason likewise; none of them will be willing to pay the \$.01 per bushel sold; no cooperative will be formed; and no price increase will be obtained.

This example illustrates Olson's counterargument to the conventional wisdom which would assert that individuals with common interests will join together to further those interests. It will not be enough, to use a different illustration, for debt-ridden farmers to realize that, in order to break the traditional pattern of farmer dependence on the village moneylender for loans, it is in their common interest to engage in collective (group) action to organize themselves into a "savings and loan society". Such realization will in no way guarantee the occurrence of effective group action, for each farmer will also realize that an individual's own efforts will have no noticeable effect on the success of the organizational effort. Thus, in the absence of special conditions (to which we shall come shortly), rational, self-interested farmers will not act to achieve their common or group interests. More specifically, such farmers will not join cooperatives or any other types of farmer organization.

Since, however, small farmers do sometimes support and participate in a wide variety of farmer organizations of one type or another (see Figure 1), one must conclude--or at least one may hypothesize--that such farmer support of and participation in farmer organizations depends on a set of special conditions being present. As a basis for identifying these special conditions, Olson proposes the concept of the large or latent group. When we think about a large number of small farmers (e.g., the population of small farmers in a village or region), we are thinking about what Olson would call a "latent group." Such a large number of farmers is called a "latent group" because the individual farmers have a potential or latent capacity for action (see Appendix 2 for a more detailed definition of a latent group). It is here that Olson identifies the first of the aforementioned special conditions, as an incentive that distinguishes between those individuals who support collective (group) action in the common interest and those who do not.

The potential or latent capacity for individuals in a latent group to engage in collective (group) action can be realized or "mobilized" only with the aid of "selective incentives." Olson (1965:51) writes that: "Only a separate and 'selective' incentive will stimulate a rational individual in a latent group to act in a group-oriented way."

In such circumstances group action can be obtained only through an incentive that operates, not indiscriminately, like the collective good, upon the group as a whole, but rather selectively towards the individuals in the group. The incentive must be "selective" so that those who do not join the organization working for the group's interest, or in other ways contribute to the attainment of the group's interest, can be treated differently than those who do (Olson, 1965:51).

Olson next examines the type of selective incentive that is required to ensure that individuals in a latent group will support and participate in collective (group) action. Here Olson focuses on the importance of "social incentives" as distinct from "economic incentives." A "social incentive" may be defined as either a negative or positive nonmonetary sanction, in that it can either coerce by punishing those who fail to bear an allocative share of the costs of the group action, or it can be a positive inducement or reward offered to those who act in the group interest. Examples of positive sanctions or "rewards" (of a nonmonetary nature) include social status, prestige, respect, self-esteem, friendship, fellowship, social acceptance, etc. As Olson (1965:60) states, "everyday observation reveals that most people value the fellowship of friends and associates, and value social status, personal prestige, and self-esteem." These various types of nonmonetary sanctions are really what one may call "individual, noncollective goods" which the individual receives from the group (or society) in exchange for appropriate patterns of behavior by the individual.

Because it is the group (society) which determines how much of an "individual, noncollective good" (e.g., social status) to give a person in exchange for that person following specific behavior patterns, and because "individual, noncollective goods" are generally valued (desired) by the individual, the group is in a strategic position to use "social incentives" (positive and negative sanctions) to encourage the individual to do his part toward achieving the group's goal. And because social incentives, whether administered by the group's leaders or members, have the characteristic of distinguishing among individuals, such social incentives are a type of selective incentive that potentially may be used to mobilize a latent group or segments thereof to support and participate in collective (group) action.

A second condition for stimulating individuals to act in a group-oriented way for the achievement of a public good is that the number of individuals needed to provide it be relatively small. Generally, social incentives are effective only in groups of smaller size, specifically, in groups which are sufficiently small that the members have face-to-face contact with one another. Such face-to-face contact, as one observer notes, has been one of the keys to the success of the new irrigation (water users) groups in the Gal Oya water management project in Sri Lanka, where the organizational base is the "turn-out" group consisting of farmers organized around a "turn-out" (lowest level in the irrigation system). [4]

The condition that a group be "relatively small" for effective collective action is based on four considerations. First, "in any large group everyone cannot possibly know everyone else, and the group will ipso facto not be a friendship group; so a person will ordinarily not be affected socially if he fails to make sacrifices on behalf of his group's goals (Olson, 1965:62). By contrast, in a friendship or a small group, it is difficult for an individual not to be affected socially if he fails to make sacrifices on behalf of the group's goals. Second, in a relatively small group, each individual's contribution makes a very much larger impact on the likelihood of the benefit being provided, thus increasing the expected utility of the contribution. Third, in a relatively smaller group, there is greater scope for communication and strategic bargaining. Fourth, the greater the number of individuals that are involved in an effort to organize a group, the greater the organizational costs will be and the less likely that any one individual could be found who would be prepared to act as organizer.

Thus, Olson concludes that the larger the number of individuals required to participate if a public good is to be provided, the less likely they are to do so. Thus, it is not assumed or expected that individuals in a large or latent group will organize for coordinated action merely because, as a group, they have a reason (e.g., an economic incentive) for doing so, or that social incentives will alone provide sufficient motivation for the individuals in a latent group to engage in collective (group) action to obtain a collective goal. Indeed, as Olson (1965:65) observes, "most...large economic organizations...have had to develop special institutions to solve the membership problem posed by the large scale of their objectives."

Olson's theoretical framework is based on the assumptions of rationality and self-interest; that the rational, self-interested individual considers the expected utility of his contribution to the provision of a public good and compares it with alternative uses. It is therefore not unreasonable to conclude, as in the case of the Alphan farmer, that the farmer, as a rational, self-interested individual, will not contribute \$.01 per bushel sold to a cooperative that would secure a \$.10 per bushel price increase, if he perceives that there is only a slim (e.g., a one in a hundred) chance that the \$.01 will make all the difference between the cooperative being a success or it being a failure. The farmer is better off keeping his money and spending it on something else; and the cooperative accordingly will not be formed.

This example, however, is based on some rather arbitrary assumptions about the contribution's required size (\$.01), the probability (0.01) that it will make a difference, and the size (\$.09) of the ultimate benefit. If these assumptions are not made or, more generally, if one cannot specify on an a priori basis the type and level of "selective incentive" that will be necessary to stimulate a farmer to act in a group-oriented way, then one cannot readily predict whether the cooperative or, more generally, a farmer organization will be formed. It becomes clear, therefore, that our ability to predict whether a farmer will contribute to a group-oriented effort or, more specifically, will engage in collective action to support a farmer organization depends, to a very great extent, on our ability to identify some type and level of "selective incentive" sufficient to motivate potential member farmers to provide the level of support or contribution essential if the organization is to be effective in affording its members access to a desired common benefit (public good).

The Mitchell Perspective

A potentially useful approach to developing such a predictive ability is provided by what Mitchell (1979) has described as a "revised rational choice theoretical paradigm of collective action." Briefly, this paradigm, consistent with Olson's theory of collective action, defines a "collective good" as a good that is available to everybody in a group whether or not any particular person in the group has contributed to the attainment of the good. Here, however, the paradigm makes a useful distinction between (1) "collective goods" which Mitchell defines as including "public goods" and "group goods" and (2) "selective goods" (or, as Mitchell calls them, "private goods"). A "public good" is a collective good that is available to everyone in a society, while a "group good" is a collective good that is available only to individual members of a particular group within a society. On the other hand, a "selective good," which may also be called a noncollective, individual, or private good, is any good that can be conveyed by the group on a selective basis directly to an individual group member. Note that Mitchell's definition of a "selective" or "private good" is broader than Olson's definition, in that the latter's definition implies that a good is a private good by virtue of the condition that one may acquire the privilege of consuming it simply by paying for it.

Next Mitchell's paradigm recognizes that effective organization of and collective action by a group can be jeopardized to the extent that potential group members, who are assumed to be rational, utility-maximizing persons, perceive that one or more of the following problems is present: (1) the "free rider" problem, (2) the "inconsequentiality" problem, and (3) the "organizing" problem. The free rider problem refers to the situation where a group member does not perceive any individual utility in supporting the collective action that is necessary if the group is to be able to make a group good available to its members; nevertheless, the group member is willing to personally enjoy or otherwise take advantage of the group good as long as it is available to all members of the group. In effect, such a group member is taking a "free ride," enjoying the group good but not contributing in any way to the group-oriented effort that is essential in making the good available to all group members. Obviously, if every potential or current group member is only willing to be a free rider and is unwilling to contribute in any way to the support of the group-oriented effort essential for making the good available to the group's members, then there will not likely be a sufficient level of contribution to support forming or sustaining the group; as a result, there will be no collective action to make the group good available to any person.

In the case of the inconsequentiality problem, potential or current members of a group or organization perceive that their individual contributions to support collective action by the organization to attain a group good will represent such a small portion of the organization's resources that these contributions will be inconsequential in affecting the outcome of the group's effort to make the good available. Consequently, such individuals will not come forth with the individual contribution necessary to support effective collective action by the group to attain the good in question.

In the third potential problem area, namely, the organizing problem, potential or current members of an organization perceive that the costs of organizing collective action to attain a group good are sufficiently high so as to preclude the possibility of the group (organization) being able to cover the full costs involved in making the good available. Accordingly, the level of individual support or contribution required to cover these costs will not be forthcoming and the collective action required to attain the good in question will not be undertaken.

Because any and/or all of these three problems can constitute a significant impediment to the nature and level of collective action required if a collective good is to be made available to a group's members, a group's collective action effort, if it is to be successful, must provide current and potential group members with sufficient "incentive" to overcome or preclude the potential dampening effect which these three problems can have on an individual's motivation to contribute to the group's collective action effort.

Toward developing an ability to identify what would constitute a sufficient incentive for collective action, Mitchell outlines a typology of factors which he hypothesizes as potentially influential in determining the level of incentive or motivation an individual will have to engage in collective action. These factors, as outlined in Table 2, include the costs of contribution, the benefits of contribution, and the costs of not contributing. In the case of farmer organizations in the LDCs, we are specifically interested in the potential role which such organizations can play in increasing the level of incentive for current or potential member farmers to support the collective action required if such organizations are to be able to provide their members with improved access to agri-support factors.

To the extent that collective action by a farmer organization is effective in obtaining improved access to agri-support factors for the organization's member farmers, such "improved access" constitutes, in terms of Mitchell's paradigm, a group good (as distinct from a "public good"). On the other hand, where the lack of collective action by farmers effectively precludes them from having improved access to the agri-support factors essential for relaxing constraints to increased productivity and income-earning capability, such farmers will likely continue to incur what may be termed as a "group bad" or the "costs of not contributing" to support collective action. Norman Uphoff (personal communication) suggests one "cost" (or "group bad") that individual farmers could weigh and which may tilt them toward supporting one or more farmer organizations. If farmers (as a latent group) are seen as unorganized and, therefore, as "weak," farmers will get taken advantage of more often in the political arena--clearly a "group bad". So a "rational" farmer could support one or more farmer organizations without reckoning specific benefits from any individual organization, just to "show the flag" and to let potential political adversaries know that they shouldn't try to mistreat or exploit farmers.

Table 2. Factors Influencing Farmers to Contribute to a Farmer Organization Which Seeks a Group Good (Adapted from Mitchell, 1979:100).

- I. Costs of Contribution
 - A. Money
 - B. Time
 - C. Loss of social status and reputation
 - II. Benefits of Contribution
 - A. Possible increase in a group good
 - 1. Utility of the group good for the farmer
 - 2. Amount of the group good the farmer expects to receive personally
 - 3. Perceived effectiveness of collective action to achieve the group good
 - B. Receipt of selective goods
 - 1. Goods and services
 - 2. Sociability
 - 3. Social status
 - 4. Self-esteem
 - III. Costs of Not Contributing
 - A. Possible continuance of or increase in a group bad
 - 1. Disutility of the group bad for the farmer
 - 2. Amount of the group bad the farmer has received or expects to receive personally
 - 3. Perceived effectiveness of farmer contributions in preventing the bad
 - B. Receipt of selective bads
 - 1. Loss of goods and services
 - 2. Reduced social status
 - 3. Guilt
-

The Runge Perspective

Olson's "logic of collective action" implies that farmers will not support a group-oriented effort (e.g., a farmer organization) without some form of "selective incentive." Since there are numerous instances where farmer organizations exist without any apparent provision of a selective incentive, one must ask what other factor(s) may account for the existence of such organizations. Runge's (1984b) answer to this question is that the organizational problem is not really one of providing selective incentives but rather one of providing potential contributors with "assurance" that each and every individual will contribute his (her) fair share toward ensuring that the organization in question will be able to provide the desired group good.

Thus, returning to the cucumber marketing example, the individual Alphan farmer should know that his (her) real choice is not between (a) supporting a marketing cooperative and getting the benefit of organization and (b) not supporting the cooperative but yet getting a benefit which others foolishly make possible for him. Rather the farmer's real choice is between (a) and (c) not supporting the organization and not getting the benefit, with the likelihood of (a) subject to the level of assurance which individual farmers have that all other farmers will provide the necessary support required for the group to be able to provide the desired benefit (Kimber, 1981).

Runge (1983a:1) identifies institutions as the key factor in providing actors with information that helps in reducing uncertainty over and providing assurance as regards the expected actions of others. Specifically, Runge defines institutions as any public system of rules or "rules of the game" that provide assurance respecting the actions of others, thereby "making possible greater cooperation and coordinated action" in a particular choice environment (Runge, n.d.:1-2). Institutions, as a public system of rules, provide for certain penalties and defenses when violations occur. "Operationally, institutions guide the behavior of people with respect to each other, and to their own and others' belongings, possessions, and property" (Runge, n.d.:1). As an example, note the frequent reliance in developing countries on common property arrangements, in which a community's members have certain rights to be included in access to resources. Institutions sharing this inclusivity property reduce uncertainty and risk in environments where a low subsistence level from season to season makes life chances precarious and places a premium on institutions such as common property. "Where weather and natural calamity dominate the pattern of life, the assurance that misfortune will not lead to certain death is provided by social institutions which spread risks by means of the right to be included" (Runge, 1983a:9).

Institutions, in Peter Dorner's words, "assure a degree of security with respect to the accepted procedures of human interaction and response" (cited in Runge, n.d.:1). By playing a crucial role in setting expectations, institutions have the impact of "conferring expected value to the stream of future benefits associated with human activity. By defining rights and privileges, responsibilities and obligations, ...institutions fix people's expectations of the future" (Runge, n.d.:1). In short, institutions serve to reduce uncertainty and increase the potential for cooperation and coordinated action. Depending on the circumstances, institutions may act as obstacles to change or "may facilitate change by altering people's views of the likely consequences of certain actions" (Runge, n.d.:2).

In Olson's perspective, free rider behavior is inevitable in the absence of selective incentives, regardless of what others are expected to do. Indeed, expectations about or uncertainty over others' behavior are irrelevant and nonproblematic. Moreover, even if all agree not to take a free ride, there is no incentive to keep the agreement; it will eventually be broken and free rider behavior will resume. The Runge perspective brings the Olson perspective into question by asking: Does it seem reasonable that farmers would decide whether or not to join a cooperative regardless of what they expect other farmers to do? It seems more reasonable to argue that farmers considering a decision whether to join a cooperative will base their decision at least in part on what each farmer expects of other farmers. Of course, the problem faced by each farmer is that of uncertainty (or lack of information) about other farmers' actions.

The idea that an individualistic behavior pattern (i.e., free rider behavior) as distinct from other behavioral alternatives (e.g., individual support of collective action) is always and necessarily the dominant behavior pattern may also be questioned. Consider an environment characterized by mutual interdependence, in which expectations of others' behavior are relevant. For example, if each Alphan farmer expects other farmers to graze as many sheep as possible on a small pasture, each may decide to graze as many sheep as possible, completely disregarding the potential harm that overgrazing could bring to the community and individual farmers. But an individual farmer's decision to graze as many sheep as possible is not one that has been made on a purely individualistic basis with complete disregard to expectations of other actors' behavior. If each farmer were assured by some institution (rule or custom) that the other farmers would not attempt to take a free ride by overgrazing beyond a set individual limit, each farmer is likely to restrict grazing of sheep to the assigned limit.

This example highlights just how important expectations and the problem of uncertainty are to the farmer. It also helps to point out that selective incentives (e.g., "enforcement from above") are potentially not the sole or primary factor that can influence individual behavior. Indeed, selective incentives may be far less important than agreement developed within a village or community through a process of mutual accommodation. In such a setting, a farmer organization may arise from the "bottom up" (e.g., spontaneous, "grass roots" initiatives) as a result of local rules and customs.

The possibility of individual farmers' expectations of others' actions being made with greater confidence is enhanced if some existing rule of behavior permits farmers' actions to be predicted with accuracy (Ullman-Margalit, 1977). Runge (1983a:5) refers to a wide variety of institutions, in different biophysical and cultural environments, that provide assurance and reduce uncertainty over others' actions. All too frequently, however, existing institutions remain unrecognized as development practitioners seek to implement what they see as rational solutions to what they have identified as the problems. Thus, it is more likely that an existing institution will be identified on a post hoc basis as a constraint to adoption of a development initiative (e.g., technology transfer) than on an ex ante basis that would permit the initiative to be designed in such a way that the institution serves to support rather than impede the initiative in question.

In contrast to Olson's perspective, Runge's description of the "assurance problem" (AP) provides an alternative approach to identifying the determinants of collective action. Unlike the Olson perspective, the AP does not assume either free rider behavior as a predominant behavioral pattern or an inevitable dependency on or primacy of selective incentives as a necessary condition for collective action. Nor does the AP lead to the conclusion that farmer organizations can only be fostered through top-down imposition and enforcement of new and essentially alien institutions.

As described by the AP, whether or not farmers will support a farmer organization or attempt to free ride the benefits (group goods) made available by such an organization depends on expectations. If I expect other farmers along a turn-out canal to draw more than their fair share of water, I will probably be inclined to overdraw also. But if I expect other member farmers of the local water users association to draw only their allotted shares of water, I may also have an incentive to draw no more than my allotted share. Thus, where a farmer has assurance that other farmers will draw no more water than each farmer's fair share, the possibility of free rider behavior (drawing more water from the irrigation canal than one's allotted share) will not be a dominant strategy for any farmer.

In the face of uncertainty, expectations formed (and informed) by appropriate institutions (rules) can make a difference. Where there is rampant free riding on a group good (e.g., nonrepayment of production loans drawn on a credit line exclusively for small farmer credit groups), this behavior may stem from expectations that are either uncoordinated by existing "rules of the game" or coordinated by prevailing norms which lead individuals to expect nonrepayment by others, leading each to take out a loan before the credit line closes (or similarly to draw more water before the canal runs dry). While enforcement from above or special conditions (i.e., selective incentives) may be sufficient to prevent or minimize free riding, it is not necessarily the most efficient or equitable approach.

Alternatively, the AP suggest that what is necessary is to develop a basis for mutual accomodation and consent based on a set of rules. The basis for this may lie in existing rules or potentially in rules which can be negotiated by the group.

The lesson of the assurance game is to let individuals...innovate self-binding rules which best serve their needs before enforcing rules from outside. Rules will be better suited to the needs of the group...and more likely to succeed.... These rules may come in many shapes and forms, not all of which are familiar. The institutional opportunity set of solutions...is much wider than we think...(Runge, 1981:603-604). [5]

Even if old institutions present apparent obstacles for establishing farmer organizations that facilitate improved farmer access to agri-support factors, there still may be elements of these institutions (rules) which, having certain strengths, are worth preserving or adapting, or which can serve as the basis for adding new rules. In terms of Runge's perspective (i.e., the AP), there are potentially various institutional forms, depending on the history, traditions, and biophysical resources of the group involved, that can successfully coordinate expectations. The problem for applied and adaptive research is finding the appropriate institutions for a particular situation.

The "free rider," "inconsequentiality," and "organizing" problems can readily be seen as problems of uncertainty and expectations. Solving these problems entails, in part, providing farmers with information on relative productivity and income-earning capability under current institutional relationships (e.g., without improved access to agri-support factors) as compared with alternative institutional arrangements (e.g., with improved access to agri-support factors made possible through collective action on the part of farmers supporting an appropriate farmer organization). This information can provide farmers with a less uncertain (more informed) basis for making allocational decisions about which types of organizations to support. Technical information must be complemented by knowledge of the existing structure of local institutions and their comparative capacity to regulate the behavior of farmer organizations and their member farmers. Relevant here for farmer decisionmaking is information about the attitudes which farmers have about farmer organizations, joining and being a member of such organizations, abiding by the rules of these organizations, farmer confidence in existing or proposed mechanisms for redressing wrongdoing, etc.

To attempt to a pure "top-down" approach, in effect, seeking to impose farmer organizations on villagers, is to run the risk that potentially valuable information contained in local institutions (rules) will be ignored. Of course, "the best sources of this information are the people themselves, with whom consultation can provide an understanding of the institutions most compatible with technically efficient resource management" (Runge, 1983a:8). This implies a dual role for those (donors, governments, and technical assistance agencies) who seek to promote greater utilization of farmer organizations as a form of collective action through which farmers can gain improved access to essential agri-support factors. First, practitioners of farmer organization development, must approach the issues of farmer productivity and income-earning capability with sufficient technical expertise to be able to assure the affected--the farmers--that the information in question (e.g., income-increasing potential of a particular type of farmer organization) is sound. Second, they must approach allocational and distributional issues with sufficient attention to local definitions of fairness so that they are able to gain a locality-based constituency. "Where technical and allocation questions are interdependent," as Runge (1983a:9) stresses, "both technical and institutional information is crucial."

The second implication follows from the first. Not only consultation with local people but also guidance from existing local institutions is essential for the successful identification of institutional as well as technical innovations. Such utilization of and reliance upon locally available knowledge is increasingly being exploited by anthropologists studying "indigenous knowledge systems" (Chambers, 1983; Warren, 1984) and by farming systems research practitioners (Whyte and Boynton, 1983). Involvement of farmers and local leaders, buttressed by the assurance conveyed by the incorporation of traditional rules into the design of organizations providing farmers with improved access to agri-support factors, can increase the likelihood that such organizations will be effective and self-sustaining without having to rely indefinitely on selective incentives or the imposition of top-down enforcement.

VI. Some Empirical Evidence

The previous section's review of the Olson, Mitchell, and Runge perspectives may have left the reader with the question of whether it is "selective incentives" or "institutions" that is more important for supporting the development of farmer organizations in the LDCs. The reader may also be asking whether the development of farmer organizations in the LDCs is ultimately dependent on the initiative of farmers themselves or whether there is a role which outside organizations (e.g., donors, technical assistance agencies, and developing country governments) can play in initiating and assisting in action to support the development such organizations. The way out of this potential quandary is to:

...recognize the problem as one of assurance, which can be provided by a combination of bottom-up organization and top-down assistance.... The problem is to find the right combination . . . and rethink the conditions necessary for a combination of bottom-up and top-down activities to generate farmer organizations (C. Ford Runge, personal communication).

In the following, two studies (Doherty and Jodha, 1979; Bratton, 1985) are reviewed as a basis for addressing (in Part VII) the problem of identifying an analytical framework that could be used to evaluate or assess in a given LDC "the conditions necessary for a combination of bottom-up and top-down activities to generate farmer organizations."

The Doherty and Jodha Study

Doherty and Jodha (1979), in a study of adoption of new technology by farmers in India, used Olson's "logic of collective action" as a theoretical base for identifying conditions for group action by farmers. Defining "group action" as "measures adopted or taken by a group to provide its members with common benefits," Doherty and Jodha (1979:2) hypothesized seven conditions as essential for group action by farmers. A careful reading of their analysis, however, indicates at least ten distinct conditions which may be hypothesized as essential for collective (group) action by farmers, as follows:

1. Group sanction: that utilization of collective action to seek a common benefit or good through a group-oriented approach is sanctioned within the society in which a group is to function; [6]
2. Group identity: that the actual or potential members of a group (or organization) see or identify themselves as being members or potential members of the group by virtue of having one or more characteristics in common;
3. Group size: that the group's size (i.e., number of members) is appropriate relative to the specific benefit or good provided by the group to its members (e.g., in a marketing cooperative, the individual member's share of market power increases as more farmers become members);
4. Group structure: that the group has an adequate organizational structure in terms of leadership as well as managerial, administrative, and financial procedures;
5. Group good: that it is impossible to exclude any group member from consuming a group-provided benefit or good, if one member consumes it;

6. Organizational good: that the good will not be available to the group's members unless they (the potential beneficiaries) organize themselves to provide it;
7. Functional identity: that a group good functions in the same way for all of a group's members (e.g., in an irrigation scheme, everyone must receive the same amount of water per unit area, regardless of farm size); [7]
8. Divisible good: that it is possible to divide a group good so that individual members of the group may utilize it;
9. Individual profit: that individual or collective use of a group good by group members enables each individual to earn a minimum acceptable net return after costs and risks are taken into account; and
10. Compensatory profit: that the level of return enjoyed by a group member's use of a group good is sufficiently high to cover not only the required level of individual profit but also the transaction costs and loss of individual discretion involved in joining, cooperating with, and supporting the group.

Doherty and Jodha (1979:222) analyzed data on a number of different types of farmer organizations in India, including marketing cooperatives (for improved access to markets and market information), credit cooperatives (for improved access to capital), and other types of farmer groups engaged in such activities as land shaping and construction and maintenance of surface runoff reservoirs or tanks (for improved access to land and water). These researchers found that "group good" and "functional identity" were the most important conditions in determining whether there was scope for collective action in any given case. Whether the benefit sought was an "organizational good" was important in determining whether "the farmers' active participation or simple acquiescence to an administered plan" was necessary. Further, while noting the importance of profits ["individual profit"], Doherty and Jodha (1979:222) point out that, to generate group action, the profits had to be divisible among individuals ["divisible good"], and that these individuals had to be compensated by some further increments ["compensatory profit"] for the loss of discretion experienced in adhering to the group's rules. As regards "group size," the researchers concluded that small groups of five to fifteen farmers can be effective as task groups but that "only larger groups in the neighbourhood of 100 farmers can maintain the momentum and enforce the rules necessary to keep up group action on their own over the long term" (Doherty and Jodha, 1979:222). Finally, referring to "group sanction," Doherty and Jodha emphasize the importance of there existing an "ultimate guarantor" such as the government (or a similarly impersonal institution) that backs collective action in concept and in practice.

The Doherty and Jodha (1979) study should be recognized as an exploratory attempt to apply theoretical ideas derived from Olson's "logic of collective action." While they proposed that their hypothesized list of conditions provides a "useful framework for the evaluation of the likelihood of successful cooperation by farmers" seeking a common benefit or good, the reader should take note of certain weaknesses in their framework. For example, it is not clear from their study how certain conditions (e.g., group size) should be interpreted or specified in terms of function or weight. To illustrate, Olson's "logic of collective action" would suggest that as the size of a group increases, social incentives become less effective as motivators for collective action and collective action itself becomes less

likely. Yet Doherty and Jodha distinguish between "task groups" (5-15 members) and "larger groups" (around 100 farmers) and propose that "only larger groups...can...enforce the rules necessary to keep up group action...over the long term." The reader may also note that the Doherty and Jodha (1979) framework focused more on basic or generic conditions for group action and less on how specific characteristics of an agri-support factor shape or modify the conditions or structure of incentives for individual farmers to engage in group action to improve their access to an agri-support factor. This latter concern was addressed in Bratton's (1985) study which is now reviewed.

The Bratton Study

Bratton's (1985) study of the role of farmer groups (organizations) in food production in Zimbabwe starts from the premise that the type of group (collective) action in which farmers engage is in large measure determined by the nature of the resource (or agri-support factor) around which collective action takes place (Ostrom and Ostrom, 1979). "This seems eminently sensible since the relative scarcity and the cost of the resources are likely to effect the scale of the organization required to mobilize it and the amount of commitment that collective actors will have to make" (Bratton, personal communication). Accordingly, Bratton focused on the questions of whether and to what extent the nature of a scarce resource (agri-support factor) is influential in determining the type and likelihood of collective action by farmers to obtain improved access to and control over that resource (factor).

Another concern addressed by Bratton is that of how farmer groups enable farmers to increase their control over an uncertain and risky environment. The risks associated with dryland agriculture can be reduced to the extent that farmers have improved access to the resources required for production. But one must be clear as regards the source of environmental uncertainty and risk, whether physical (like rainfall) or institutional (like unreliable input supply agencies), and the mechanisms whereby farmer organizations enhance the farmer's control over an uncertain and risky environment. Such mechanisms could include obtaining new ideas and practices, supplementing a meager household resource base, or creating effective demand for services (Bratton, personal communication). With these considerations in mind, Bratton looks at the specific mechanisms by which Zimbabwe farmer groups improved farmer access to agri-support factors, reduced uncertainty and risk, and increased agricultural productivity and farmer income.

First, Bratton classifies agricultural production support factors (or production resources as he calls them) into two categories: (1) production assets which are basic material goods that are vested in the farm family through ownership or use rights); and (2) production services which are supplied by public and/or private agencies but are not owned by the household though it may purchase and consume them. In terms of this paper's typology of agri-support factors, production assets would include land (and access to unit of production), labor (and draft power), and certain production inputs (e.g., saved seed). On the other hand, production services would include water, technology (technical information), certain production inputs (e.g., fertilizers), capital (credit), markets and market information, infrastructure, and policy.

Second, Bratton distinguishes between (a) the level of production in small farmer agricultural systems (or the level at which the farmer mobilizes and allocates production assets); and (b) the level of exchange, (or the level at which the farmer enters transactions, usually using money, to access production services outside the household or village.

Third, Bratton derives a typology of farmer groups that distinguishes between (1) farmer groups designed to "pool" production assets from household resources at the level of production, and (2) farmer groups designed to "bulk" demand for production services from the state or market at the level of exchange. Here Bratton suggests that one may also distinguish at the level of exchange between those farmer groups delivering public or group goods and those dealing only in private goods; and that one may also identify those groups designed to operate both at the production and exchange levels to pool production assets and bulk demand for production services, respectively.

Fourth, Bratton identifies four types of farmer groups, as follows:

1. An information group is a farmer group designed to bring farmers together for information or educational purposes.
2. A labor group is a farmer group designed to pool the labor assets of individual households.
3. A market group is a farmer group designed to bulk purchases and sales of production services (e.g., agricultural credit, production inputs, and agricultural produce marketing).
4. A multipurpose group is a farmer group designed to engage in both pooling for production and bulking for exchange.

Fifth, Bratton proposes that these four types of farmer groups may be arrayed developmentally, where some groups engage in more "complex tasks," while other groups are more dependent on "member cooperation." Here task complexity refers to the number of tasks undertaken, the number of actors involved, and the extent to which procedures are bureaucratized. On the other hand, member cooperation refers to the frequency of contact among members, the amount of time each member contributes, and the value of personal assets contributed for group use. Bratton then proposes a model, based on the interaction of these two variables, of how farmer organizations grow and change (see Figure 5). According to this model,

...market groups are more complex than labor groups. They have more members, keep more formal records and must coordinate their activities with outside agencies. Labor groups, however, are more cooperative than market groups. Although they are smaller, member contact is more regular and intensive and involves the commitment of assets. Multi-purpose groups only come about when labor groups add supply and marketing to their repertoire of functions. They are the most complex and cooperative organizations of all (Bratton, 1985:5).

Figure 5. Path of Development of Farmer Organizations (Bratton, 1985)

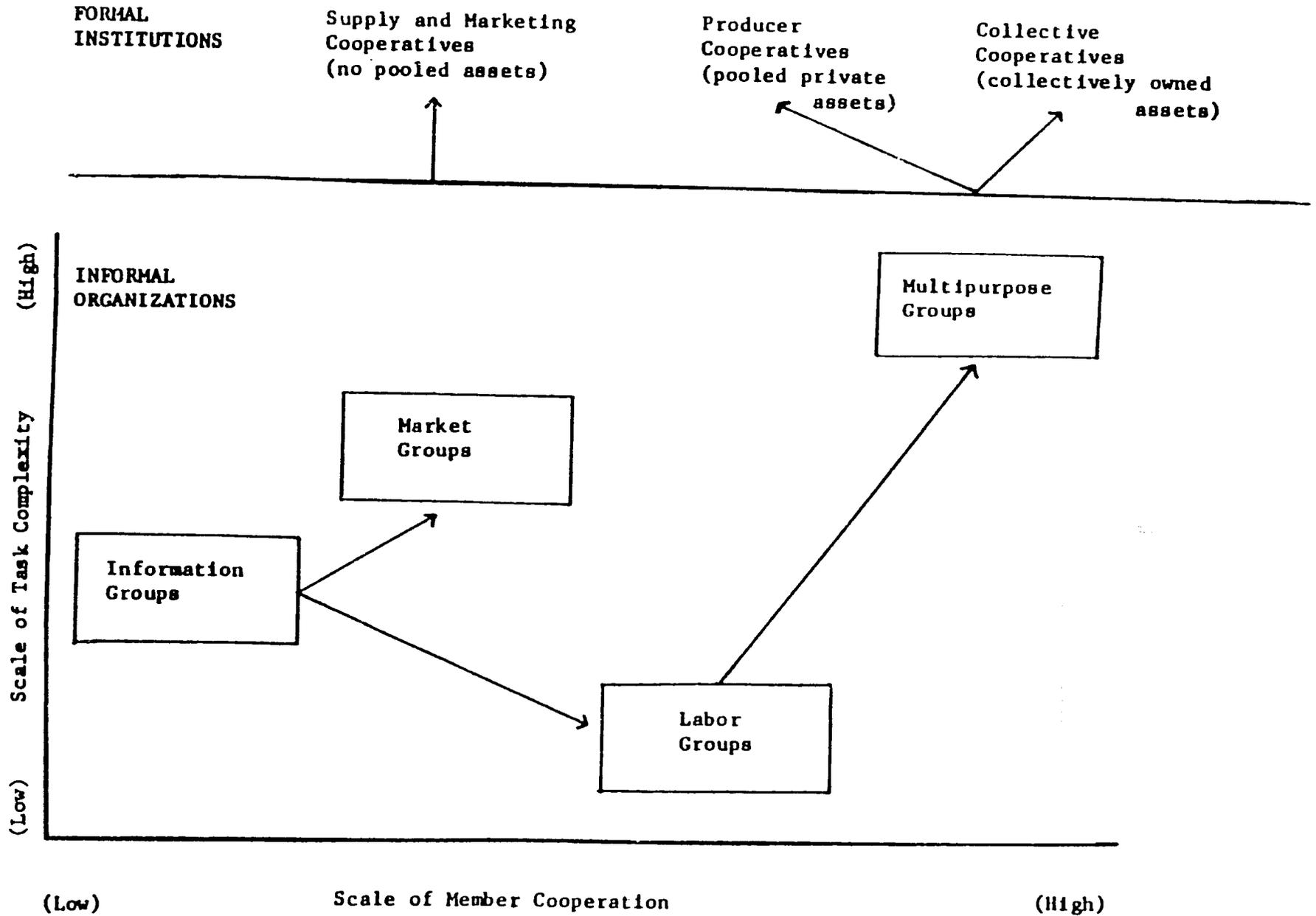


Table 3 summarizes key findings from Bratton's survey of 464 randomly selected households in four rural districts of Zimbabwe. Of the sampled households, 204 (44%) belonged to one or more of the four identified types of farmer organizations. As shown in Table 3, group membership played a significantly greater role in facilitating farmer access to "production services" than to "production assets." In turn, the improved access to "production assets" afforded by group membership had a significant impact on the productivity and income-earning capability of farmers who were group members. In the 1981/82 season, group farmers had maize yields that were 64% to 137% higher per acre and production levels (in tons) that were 89% to 172% higher than did individual farmers; as regards sales, group farmers sold two to seven times more maize and at a higher average price than did individual farmers.

Finally, as the reader may observe in Figures 6a and 6b, there is evidence that, as groups develop along the path which Bratton hypothesizes (Figure 5), farmer organization will play an increasingly smaller role in helping members to "pool" production assets and an increasingly greater role in helping members to "bulk" demand for production services. Interpreting these findings, Bratton (1985:12-13) writes:

...farmer organization has a rather limited effect on the mobilization of agricultural assets at the level of production. In some cases, as with land, group organization is unable to overcome the pressing resource constraints faced by the household. In other cases, as with draft power, group organization performs primarily to complement...social obligations for reciprocal exchange. Group members enjoy a general advantage only in their capacity to mobilize extra labor from work parties. . . . as groups develop, pooling of production assets declines.... This is true partly by definition; market groups, for example, were formed for collaboration only at the level of exchange. But...multipurpose groups show lower levels of labor and draft pooling than the simpler type of organization form which they evolved, that is, the labor group.

The final conclusion, reached by Bratton (1985:21), is that small farmers will more readily organize at the exchange level than at the production level and that the "nature of the resource" (or agri-support factor) around which farmers will most readily organize is more likely to be a "central service" (or production service such as credit) than a "household asset" (or production asset such as land). This finding is consistent with the D.A.I. (1984:xiv, 56-57) study on "cooperatives in development" which found that:

To be successful, a cooperative must be organized around a key resource that an institution can effectively and efficiently mobilize, provide, or market. Agricultural cooperatives appear to be most successful when they are organized around a key stage in the production cycle that responds well to scale or technology -- which an institution can provide. . . . This is typically in agro-industry, storage, marketing, and key crops.

Thus, Bratton's analysis is useful in indicating how differences in the characteristics of an agri-support factor can influence not only a farmer's incentive to join a farmer organization (or engage in collective action to obtain improved access to and control over a particular type of agri-support factor) but also the type of farmer group that is organized.

Table 3. Access to Agri-Support Factors (Production Assets & Production Services) by Small Farmers in Zimbabwe (Adapted from Bratton, 1985).

	All Farmers	Individual Farmers	Group Farmers
	(- - - - -)	(- % - - - - -)	(- - - - -)
<u>Production Assets</u>			
Land	12	11	13
Labor	38	21	46*
Draft oxen and implements	44	48	40
<u>Production Services</u>			
Technology:			
Advice from extension workers	55	31	86*
Advice from missions and fertilizer companies	--	16	54
Credit			
Loan from credit scheme	18	7	32*
Recovery rate	--	54	71-92
Production inputs (fertilizer)			
Obtained directly from manufacturer	61	48	77*
Ordered early for cash rebate and early delivery	--	38	77
Paid cheaper bulk road haulage rates (**)	--	44	58
Paid cheaper bulk road haulage rates (**)	--	44	59
Markets and Market Information			
Sold crop through an official marketing agency	39	25	57*
Infrastructure (transportation)			
Complaints about transport	--	77	61
Complementary package (technology, fertilizer, and market)			
	--	14	57

* p = .001

** "...in Wedza in 1984 group farmers ultimately paid an average of 13% less for a bag of compound maize fertilizer than their individual counterparts. In multipurpose groups in Zwimba the savings were as high as 33%" (Bratton, 1985:16).

Figure 6a. Access to Production Assets by Type of Farmer Organization (Bratton, 1985).

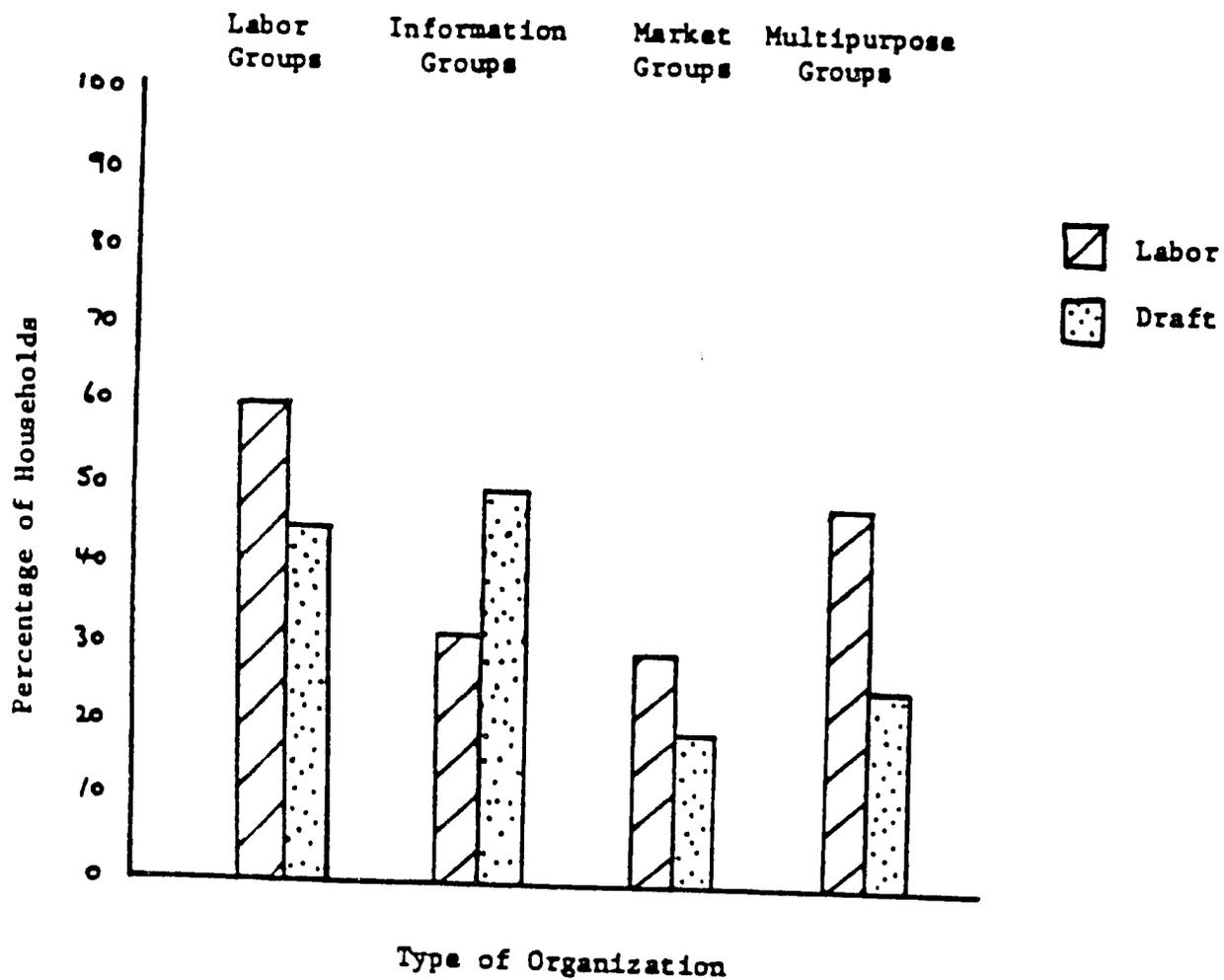
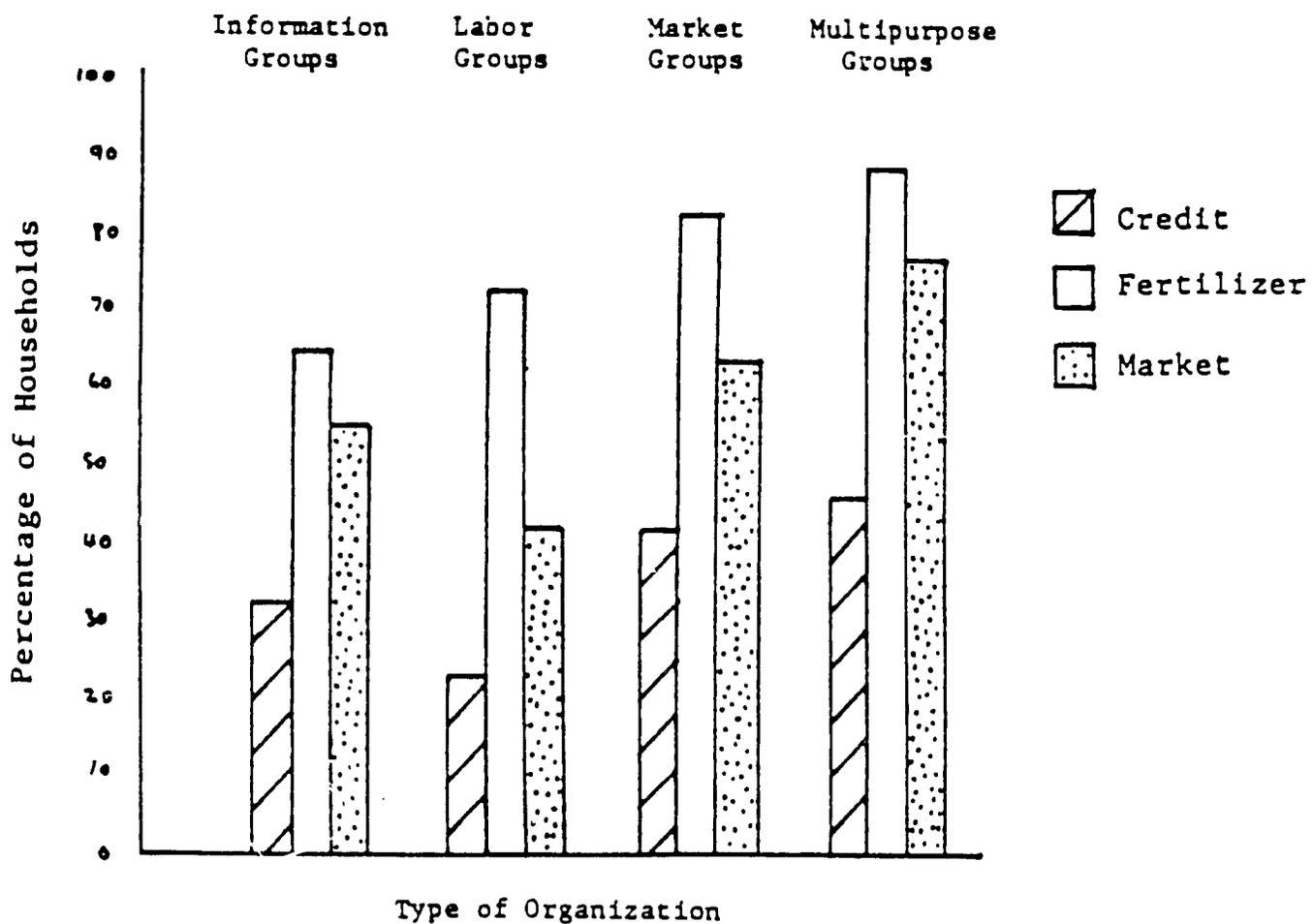


Figure 6b. Access to Production Services by Type of Farmer Organization (Bratton, 1985).



Two weaknesses may be identified in Bratton's study. First, in the Bratton as well as the Doherty and Jodha studies, one may raise a question concerning the relationship between organizational membership and productivity. It is plausible that at least part of the impact of organizational membership on productivity derives from an implicit selection bias--more "predisposed" farmers are attracted to join farmer groups and these particular farmers probably already have higher production than their less-inclined-to-act neighbors. If this is the case, one must also raise the question of what would be the marginal impact on production if a change agent were to aggressively promote the expansion of farmer organizations to include most or all farmers (Dennis Foote, personal communication). [8]

A second weakness in the Bratton study is that it falls short of providing a theoretically-specified model of the necessary and sufficient conditions for farmers to engage in collective action to assist group members to obtain improved access to essential agri-support factors. There is, in view of these weaknesses, a clear need for further theoretical and empirical work to delineate the links between the conditions, that is, the combination of "institutions" and "selective incentives," that would support (motivate and facilitate) group action and the question of how the characteristics of an agri-support factor shape the structure of incentives for farmers to engage in collective action and the type of group or organization (e.g., a single purpose cooperative as compared with a multipurpose cooperative) that would best afford group members improved access to that agri-support factor.

VI. Research Issues

This paper has highlighted the potential catalyst role which LDC farmer organizations can play in representing and advancing the economic interests of their members. Specifically, this role entails helping an organization's member farmers gain improved access to agri-support factors (credit, production inputs, markets, etc.) essential to increasing the productivity and income-earning capability of small farmer agricultural systems. Available evidence indicates that the potential catalyst role of farmer organizations is not currently being adequately realized in the LDCs and that very little is known, in a systematic way, about the nature of the incentive structure(s) required in the LDCs to foster the development of farmer organizations that can play this catalyst role effectively. There is, therefore, an identified need for an applied research initiative (project) that would develop an analytical capability to determine:

1. The types of farmer organizations that can play, in a given LDC, a catalyst role in helping their member farmers gain improved access to essential agri-support factors;
2. The types of incentive structures that will foster the development of farmer organizations that can play this catalyst role effectively; and
3. Guidelines for designing interventions (policies, reforms, methods, etc.) that will be effective in creating incentive structures that support the development of farmer organizations.

The target or objective of this proposed research initiative (project) would be an assessment methodology (and predictive models) that would enable a user, in a given LDC, to identify:

1. The current status and development potential for farmer organizations in that LDC;
2. The conditions which must yet be established in that LDC to create incentive structures that will foster the development of existing and potential farmer organizations; and
3. The specific interventions that could be used to establish the identified incentive structures in this LDC.

The three perspectives on public choice theory reviewed earlier in this paper, as well as the empirical evidence presented in the preceding section, provide a useful starting point for designing an initiative (project) to address the need, as identified above, for applied research on the potential role of LDC farmer organizations as catalysts for small farmer agricultural development. Limitations of space and time prevent fully developing here many of the implications which these perspectives and empirical studies have for the design of such an applied research initiative (project). However, the present section does provide a broad outline of how the identified need for research on LDC farmer organizations could be productively addressed within a public choice perspective.

The remainder of Part VI is divided into two sections. The first section focuses on the concept of an "incentive structure" and the need for further empirical work to define more adequately the nature of the "incentive structure" required to motivate individual farmers to engage in collective (group) action to gain for group members improved access to agri-support factors. Applied research to develop the "incentive structure" concept as a diagnostic and analytical tool would provide the key ingredient for developing an assessment methodology that could be used by practitioners in a developing country to identify the current status of and development potential for farmer organizations in that country. The second section focuses on the need for a social action model that would provide, beyond the information which could be generated by application of the aforementioned assessment methodology, an action strategy for implementing those changes required to create a particular type of desired "incentive structure." Here the discussion will focus on the potential applicability of social marketing as a model (strategy) for designing and implementing an action program to develop the potential catalyst role of farmer organizations in a LDC.

Defining the "Incentive Structure" Concept

The key element in the different perspectives on public choice theory, as reviewed earlier in this paper, is the central role which an incentive or, more specifically, an "incentive structure" (see Figure 4) plays in stimulating or motivating individuals to act in a group-oriented way, where a group seeks through collective action to obtain a group good for individual members of the group. Of course, the concept of "incentive" may be interpreted in terms of the Olson perspective (as a "selective incentive"), the Runge perspective (as an "institution" which provides a solution to the "assurance problem"), or as a mix of "selective incentives" and "institutions." A primary research issue, therefore, is the need to specify exactly what kinds of conditions, including both "institutions" and "selective incentives," are required in an "incentive structure" to ensure, where a group seeks to obtain a group good, that each group member will act in a group-oriented way in support of the group's collective action effort to provide the good in question.

In focusing on a particular type of group or organization, namely, farmer organizations, we are concerned with identifying the "incentive structure" required to ensure that such organizations will have a favorable environment in which to develop an effective "performance capability" to represent and advance the economic interests of the organization's member farmers, more specifically, to provide the members with improved access to essential agri-support factors. The type of "incentive structure" involved in supporting collective action to develop a farmer organization may be seen as entailing three distinct levels of incentive, as follows:

Level 1: Those incentives required to motivate individual action by a farmer to adjust his (her) production implementation decisions (see Figures 1 and 4) in a manner that permits the farmer to take advantage of available agri-support factors, and thereby, to increase the productivity and income-earning capability of the farmer's agricultural system.

Level 2: Those incentives required to motivate individual farmers to engage in collective action (see Figures 1 and 4) to establish a farmer group or organization, with the objective of utilizing the group as a means to improve the access of the group's member farmers to a particular type of group good, namely, agri-support factors that would otherwise not be available to these farmers on an individual basis.

Level 3: Those incentives required to ensure that a farmer organization established through collective action can develop and maintain a self-sustaining performance capability (see Figures 1 and 4) to provide its members with improved access to agri-support factors.

The utility of studying the implications that specific agricultural commodity and production system characteristics have for the types of local organizational forms best suited for improving the farmer's access to agri-support factors has been suggested in several studies (e.g., Montgomery, 1983; Uphoff and Van Dusen, 1984). These implications could be clarified by systematically examining (1) the extent to which the characteristics of agricultural commodities, agricultural production systems, agri-support factors, farmer organizations, and social systems combine to determine specific types of incentive structures; and (2) the extent to which a given type of incentive structure motivates individual farmers to engage in collective action, via a farmer organization, to improve their access to specific agri-support factors. A possible hypothesis that could be advanced may be stated as follows:

1. That the degree of Level 1 incentive for individual action (e.g., a change in a farmer's crop fertilization practices) to take advantage of the availability of an agri-support factor (e.g., fertilizer) depends, in part, on two key characteristics of this factor vis-a-vis the specific agricultural production system in which this input is used to produce a specific agricultural commodity; these characteristics are "individual profit" and "divisible good."
2. That the degree of Level 2 incentive for collective action depends, in part, on four key characteristics of a farmer organization (e.g., a credit group) as a group-oriented means to assist individual farmers to obtain improved access to a specific agri-support factor (e.g., credit); these characteristics are "compensatory profit," "functional identity," "organizational good," and "group good."
3. The the degree of Level 3 incentive for performance capability of a farmer organization depends, in part, on four key characteristics of that organization, as a social system; these characteristics are "group structure," "group size," "group identity," and "group sanction."

In this hypothesis, the effective realization of the potential catalyst role of a farmer organization depends on the right mix (level, type, and quantity) of incentives being in place in a given agricultural situation. In this mix, certain variables (characteristics) may be more important in establishing an incentive for certain types of behavior (e.g., production implementation decisions) than for other types of behavior (e.g., collective action or performance capability). Thus, it becomes important to be able to

identify precisely which variables (characteristics) create an "incentive" for which kinds of behavioral outcomes. The ability to identify precisely which incentives are effective in achieving a desired behavioral objective (e.g., individual farmer support of a group-oriented effort to provide group members with improved access to agri-support factors) is essential if we are to be able to identify the "incentive structure" that would most effectively motivate and facilitate collective action by farmers.

How can we begin to identify, for each of the three hypothesized incentive levels, the types of incentives required to motivate the required behavior on the part of individual farmers? Here the problem can be broken down into three distinct yet interrelated components. As in the hypothesis above, we may term the first component as "individual action" (see Figure 4). Here the required research would focus on whether farmers, given the availability of a particular agri-support factor (e.g., a market in which farmers can get a higher price for their produce), have sufficient incentive--in terms of perceived benefits, costs, and risks--to change their existing production implementation decisions in such a way that they will be able to take advantage of the availability of the particular agri-support factor.

Relevant research would entail applying traditional agricultural economic models (e.g., partial budgeting) to estimate the level of "individual profit" farmers would require to justify making the required adjustments in their traditional production implementation decisions. This type of model may be extended to include procedures for identifying existing natural or social constraints that reduce the incentive a farmer has to make the adjustments required to take advantage of the specific agri-support factors under evaluation. Knowledge of the existing conditions (e.g., moisture stress or negative attitudes about buying inputs such as fertilizer on credit) that operate as constraints to a change in the farmer's behavior (individual action) is a first step toward being able to identify an effective strategy for removing or relaxing the constraining impact which such conditions have on the farmer's ability to take individual action to change his (her) production implementation decisions.

As earlier noted, the demand for any agri-support factor is a derived demand; thus, if farmers perceive that making adjustments in their production implementation decisions, to take advantage of a particular agri-support factor's availability, will not likely result in any increase in benefit (or reduction in cost or risk), then such farmers will certainly not have any incentive, when this agri-support factor is not available, to incur the additional costs and risks involved in seeking, through collective action (e.g., farmer organization), to improve their access to this agri-support factor. In this sense, we can say not only that the demand for any agri-support factor is a derived demand but also that this same principle applies in the case of collective action. Specifically, the greater the derived demand for a particular agri-support factor, the greater the derived demand for a group-oriented effort to provide member farmers with improved access to this agri-support factor. Thus, the utility of a farmer organization to actual and potential member farmers lies in the organization's "performance capability" to help its member farmers gain improved access to those agri-support factors for which the derived demand is the greatest.

Thus, a key starting point for a research program on farmer organizations in the LDCs is to do the types of agricultural economic and constraints analyses outlined above; such analyses will provide an LDC government, existing farmer organizations, and current and potential member farmers with a more informed basis as regards which agri-support factors, if more readily available to farmers, would provide the best opportunities for increasing their productivity and income-earning capability. This analysis would provide an indication of what additional characteristics (e.g., institutions), beyond increased "individual profit" or a reduction in cost or risk, impact on the incentive a farmer has to adjust his (her) agricultural system in a way that allows the farmer to take advantage of a particular agri-support factor, if indeed this factor can be made available to farmers through collective action.

The second component, which we may term the "collective action" component (as per Figure 4), entails an analysis of the incentives that are effective in motivating individual farmers in a group to engage in and support collective action to obtain some common benefit or good (e.g., improved access to an agri-support factor). Here the research would focus on building, testing, and validating predictive models that specify the necessary and sufficient conditions (variables) for individual farmers to engage in collective action. The conditions for group action identified in the Doherty and Jodha (1979) study--"compensatory profit," "functional identity," "organizational good," and "group good"--provide an initial hypothesis of variables that potentially may be key determinants of whether a group-oriented effort (e.g., a farmer organization) is likely to be successful. Models incorporating these variables should be systematically evaluated in a variety of empirical contexts. Other variables that potentially may need to be included in these models are specified in Mitchell's "revised rational choice theoretical paradigm" (see Table 2) and the Esman and Uphoff (1984) local organization studies. Mitchell's paradigm provides a systematic framework for evaluating a number of different variables that could impact on a farmer's decision on whether to support collective action. On the other hand, the Esman and Uphoff local organization studies provide a number of cases that could be tapped as secondary data sources for preliminary model building and testing.

In developing any collective action model, attention should be addressed to determining the mix of "incentives" qua institutions which, if present, provide assurance as regards the expected actions of an organization's actual and/or potential members. Given the institutions that are in place in an LDC farming community, do they have the impact of preventing the "free rider," "inconsequentiality," or "organizing" problems from precluding collective action by farmers to provide themselves with improved access to agri-support factors? Here there is a need to develop a conceptual framework that a researcher or practitioner could use to identify the relevant "institutions" in any particular LDC farming community. Existing models such the SSEM (see Figure 2), the Esman and Uphoff "local organization" model, Vincent and Elinor Ostrom's "institutional analysis and design" model (E. Ostrom, 1983; V. Ostrom, 1985; E. Ostrom, 1985), and William E. Smith's (1984) "systematic approach to managing institutional development" could provide useful starting points for developing a practical conceptual framework. In the interim, these models can sensitize the researcher to the range of potential areas in which relevant institutions may operate that could impact favorably or unfavorably on initiatives to support development of farmer organizations in an LDC.

The third component, which we may term the "performance capability" component (as per Figure 4), entails an analysis of the variables that impact on the capability of a farmer organization to perform effectively its role of providing members farmers with improved access to agri-support factors. Here the researcher needs to focus on specifying and testing models of a farmer organization's "performance capability." Based on the Doherty and Jodha (1979) study, conditions or variables influencing such performance capability would likely include "group structure," "group size," "group identity," and "group sanction." Further, the previously mentioned models could be screened to assist in specifying empirically testable hypotheses as regards the types of variables that determine the performance capability of a farmer organization. It should be noted, however, that the dependent variable in these models focuses on indicators (measures) of the characteristics of a farmer organization and not on the behavior of individual farmers (as would be the case in models of individual action and collective action). For example, one indicator of a farmer organization's "performance capability" in providing member farmers with improved access to agri-support factors could be whether or not the organization has been able to establish a capability to market the produce of the organization's member farmers at a higher price than that which nonmember farmers are able to obtain for their produce. Table 1's summary of the potential tasks of a farmer organization is suggestive of other potential areas in which indicators of a farmer organization's performance capability could be developed.

This section has explored the possibility of using the "incentive structure" concept as a potential analytical framework for an applied research-initiative (project) to develop an assessment methodology for determining the current status of and development potential for LDC farmer organizations. Further applied research to develop this assessment methodology is recommended.

Social Marketing: A Strategy for Developing LDC Farmer Organizations

While perspectives on public choice theory (e.g., collective action theory) can guide the development of research providing knowledge of the "incentive structures" required to support development of farmer organizations and the "interventions" required to create a particular "incentive structure," this knowledge falls short of providing an action model (strategy) that a development practitioner can apply to achieve the range of behavioral and institutional changes that may be needed to implement a desired set of "interventions" and "incentive structures." Indeed, because the type of organization (i.e., farmer organizations) of concern here is most relevant to a particular target population (i.e., LDC small farmers), it stands to reason that any effort to support the development of and greater reliance of LDC small farmers on farmer organizations should be based not only on knowledge of the "incentives" ("institutions" and "selective incentives") that are essential if such organizations are to be successful but also on a validated action model (strategy) that specifies the action steps a practitioner may take to create or support the development of these "incentives."

Such an action model may, of course, be based in part on a general knowledge of the "incentive structures" that support development of LDC farmer organizations and the "interventions" that are effective in creating these "incentive structures." However, the required action model will be useful to a practitioner in an LDC only if the model also provides specific guidelines on how information on the current status and development potential of farmer organizations in that LDC can be translated into an action program to develop the potential catalyst role of these organizations.

Various models of social action have been reported in the literature. One such model, the "construct of social action for small farmer agricultural development" (Byrnes, 1975) is based on a generalized model of instigated social change (Beal, et al., 1966; Beal and Hobbs, 1969:8-9). Another social action model (strategy) is the "institutional analysis and design" framework being developed by Vincent and Elinor Ostrom (E. Ostrom, 1983; V. Ostrom, 1985; and E. Ostrom, 1985). Yet another model is the "learning process" approach advocated by David C. Korten (Korten, 1980; Bagadion and Korten, 1985). For this paper, however, we shall focus on a fourth social action model, namely, social marketing, and the possibility of applying social marketing to the problem of designing and implementing action programs to develop the potential catalyst role of farmer organizations in the LDCs.

The term social marketing refers to the systematic application of marketing tools-- marketing research and product development, promotion, and pricing--to the design and implementation of action programs calculated to elicit socially beneficial responses in the behavior of a target audience. Social marketing, as a model (strategy) for increasing the impact of development assistance efforts in the LDCs, has already proven itself in such problem areas as population and health. Examples of social marketing as applied to contraceptive retail sales and oral rehydration therapy are reported in Altman and Piotrow (1980) and Meyer, et al. (1983), respectively. Indeed, the successes achieved to date by social marketing in population and health have prompted the United States Agency for International Development (A.I.D.) to direct increased attention to the potential of applying social marketing to other priority problem areas in the Agency's development assistance programs (Keene, Monk and Associates, 1985; Fox and French, 1985).

This increased attention to the potential applicability of social marketing to other problem areas being addressed by AID's development assistance program was evidenced in a recent AID-sponsored workshop on social marketing and economic development. The conclusions of this workshop include a number of statements on the potential applicability of social marketing to the agricultural sector, as follows (Keene, Monk and Associates, 1985:17):

The technology and processes of agriculture are complex and the farmer is expected to make major investments in agricultural products in a high-risk environment. Social marketing must recognize this risk and take it into account as marketing strategies are developed.

Agriculture is a sector where governments often play a very direct and active role. If a social marketing approach is to be tried, it is especially important, therefore, for the roles of the private sector and government institutions to be carefully defined and firmly agreed upon.

Specific opportunities do exist in the agricultural sector for social marketing of both products and services. Potential product applications include seeds, fertilizers and machinery, while service applications include technology and credit.

The workshop report concludes by recommending that:

AID should identify the aspects of social marketing about which more information and/or further research is needed and commission studies and research activities to meet those needs (Keene, Monk and Associates, 1985:21) [emphasis added].

Because social marketing provides a model (strategy) for encouraging and facilitating the adoption of socially beneficial practices by potential and actual beneficiaries, one may raise the question of whether social marketing can serve as an effective tool for designing and implementing action programs to foster development of the potential catalyst role of farmer organizations in the LDCs. More specifically, could a development practitioner (change agent) in an LDC apply social marketing as an action model (strategy) for motivating and facilitating small farmers in that LDC to utilize farmer organizations (an organizational product) as a vehicle for improving the access of member farmers to agri-support factors essential for increasing the productivity and income-earning capability of these farmers' agricultural systems? It is suggested, in light of the highlighted workshop recommendation that research directed to answering this question would be a worthwhile component of a research initiative (project) on LDC farmer organizations.

A variety of references are available which describe what "social marketing" is (Fox and Kotler, 1980; El-Ansary, 1984; Saunders and Smith, 1984; Fox and French, 1985) and how social marketing has been applied in various development problem areas (Altman and Piotrow, 1980; Meyer, et al., 1983). What is now needed, in view of the preceding discussion, is:

1. To specify, in a systematic way, an action model that delineates how social marketing, more specifically, marketing tools can be applied to the design and implementation of an action program that would effectively motivate and facilitate small farmers to use "farmer organizations" as a mechanism for improving the access of member farmers to essential agri-support factors; and
2. To test, modify as appropriate, and validate this model, that is, a model for the social marketing of farmer organizations in the LDCs.

Accordingly, this section will outline what such an action model might look like. However, the following cautionary provisos are in order: (1) that this outline only begins to scratch the surface of doing justice to the complexity involved in attempting to apply social marketing to the problem of instigating social change in small farmer agriculture in the LDCs; and (2) that the specification, testing, modification, and validation of a model for marketing farmer organizations in the LDCs will require a focused research effort involving agricultural, social science, and social marketing expertise.

The following outline of an action model for the social marketing of farmer organizations assumes that there is some organizational base (action agency) that plays a practitioner (change agent or facilitator) role in the process of implementing the model in a given LDC. The model itself contains five action steps: (1) marketing research, (2) product development, (3) product placement, (4) product promotion, and (5) product pricing. Some of these steps, although described here sequentially, would in practice overlap or recycle (e.g., ongoing marketing research and program evaluation).

1. Marketing Research

The action step of marketing research entails the application of an assessment methodology for determining the current status and development potential of farmer organizations in a given LDC. The required research would identify key market segments (or targets of opportunity) in terms of key agricultural commodities, agricultural production systems, and agri-support factors. Application of the assessment methodology would be implemented by the change agent in consultation with farmer leaders and representatives. The methodology would seek to identify:

1. Specific agricultural commodities, agricultural production systems, and agri-support factors around which farmers are currently organized and around which farmers would have an incentive to support collective action to make greater utilization of farmer organizations as a means for member farmers to obtain improved access to and control over agri-support factors for which there is significant actual or potential farmer demand;
2. The nature of the existing structure of incentives (e.g., institutions) that would provide support for farmers to act in a group-oriented way, that is, to establish, join, participate in, and support farmer organizations;
3. The changes in the existing incentive structure that would be effective in creating a favorable institutional climate for fostering collective (group) action to develop farmer organizations; and
4. The "interventions" (i.e., policies, reforms, methods, etc.) that could be used to (a) change the existing incentive structure to the desired incentive structure, and (b) provide any additional support to encourage and facilitate farmers to create, join, participate in, and support farmer organizations.

It should be emphasized that applied research is needed to develop a state-of-the-art assessment methodology that would provide a change agent with a diagnostic capability to identify the four listed items. It is suggested that this paper's discussion of the "incentive structure" concept provides a useful starting point for conceptualizing an analytical framework that could be used to design an applied research initiative (project) on LDC farmer organizations. Such an initiative would have as its principal objective the development of the required assessment methodology.

The rationale for having the change agent involve and consult with farmer leaders and representatives should be apparent. As one student of LDC farmer organizations has observed:

The reason thousands of farm co-ops and similar organizations designed and marketed by outsiders have failed in our half century or more of efforts in the third world is not because people including the farmers themselves were ignorant of the possible benefits from collective action, nor because those who designed them had weak marketing techniques. Rather, the reason is that when organizations are designed for and marketed to people by others, their would-be members do not hammer out in the process of organizing themselves the necessary organizational skills and constitution. Hence the organization fails to evolve internal accountability. Hence such an organization cannot serve the members' interests. It serves those whose creature it is, including those they chose to "represent" potential members. Organizations are "products" -- but products of their members' initiatives and design, not outsiders' (Grace Goodell, personal communication).

Marketing research provides the change agent as well as the collaborating farmers with a tool for developing an information base that will assist the farmers as well as the change agent in making more informed decisions as regards:

1. Which agri-support factors, if more readily available to farmers, would enable them to increase the productivity and income-earning capability of their agricultural systems in a manner that is acceptable to farmers in terms of the benefits, costs, and risks that would be incurred:
2. Whether there is potential for collective action to be effective in establishing a farmer organization that will have the performance capability to provide its member farmers improved access to desired agri-support factors; and
3. Which characteristics (attributes) a farmer organization will need to have to ensure that it will continue, on a self-sustaining basis, to have the performance capability to provide its member farmers with improved access to these agri-support factors.

Relevant data which need to be collected and analyzed in the marketing research phase include those that may be used to estimate the size of the existing market for farmer organizations, the major segments and behavioral characteristics of each segment, the potential demand for farmer organizations, and the benefit-cost impact of targeting different segments and designing appropriate campaigns for each segment (Fox and Kotler, 1980:25-26). An example of market segments in an LDC context would be farmers producing nontraditional export crops as compared with farmers growing only subsistence crops. This information, as well as other types of data (described below in the product promotion section), can provide a variety of leads for the design of communication messages or identification of institutional changes needed to support the total marketing effort. [9]

2. Product Development

The product in question is primarily the specific farmer organization(s) that is (are) to be created, joined, participated in, or otherwise supported by a specific target group of farmers in an LDC. The purpose of this action step is to identify, for a specified mix of agricultural commodities, agricultural production systems, and agri-support factors, the type of farmer organization or mix of farmer organizations that will be most appropriate in view of the market situation identified during the first action step (i.e., marketing research). The action step of product development entails several phases, including product design, market testing, and product improvement to meet the consumer's (i.e., the farmer's) requirements.

In the product design phase, the change agent works with representative farmers to design a "farmer organization" that meets theoretically-based conditions for collective action and farmer-specified conditions for institutional innovation (e.g., specific services which farmers would require of an organization providing farmers with improved access to credit). Here techniques used in farming systems research (FSR) (Ashby, 1985; Whyte and Boynton, 1983) to involve farmers in the design of technological innovations (e.g., a new fertilizer practice) can be adapted for use as a model to guide interaction between farmers and change agent as regard the design requirements for a farmer organization (e.g., a savings and loan society).

In the second phase of product development, the designed "farmer organization" is actually put to the test "in the market" (e.g., in a village or district) on a pilot scale. Such market testing is required to ensure that the farmer organization functions in practice as it was intended to function in the design concept. The market testing phase provides opportunity to obtain from farmers and other key actors (e.g., extension workers, bankers, marketing agents, etc.) feedback useful in evaluating the design specifications of a new farmer organization. This feedback can be especially useful in identifying any factors that may adversely impact on the incentive structure for farmer organizations in general or the particular farmer organizations being evaluated during the market test.

The feedback obtained during the market test phase, in turn, is used during the product improvement phase to identify the modifications needed to ensure that the redesigned farmer organization will have an adequate performance capability and that the existing incentive structure will encourage and facilitate individual and collective action essential for the establishment, operation, maintenance, and development of the redesigned farmer organization. The market testing phase also provides an additional data base which can be utilized during the development of the action steps of product placement and product promotion (discussed below).

3. Product Placement

A decision must be made at an early stage as regards the specific space (territoriality) and time dimensions that define the market within which an existing farmer organization is to be supported or a new organization developed. These dimensions determine in large part the scope of the organizational effort that will be involved. Relevant variables to be considered include the potential service area of the organization; the number

of farmers who are available as potential members; the appropriate size of the organization (condition of "group size") for service delivery to member farmers; the number of farmer organizations that will be required to cover the identified market (service area); the size of the cadre of trained personnel that needs to be developed to support the mix of product placement and other marketing decisions; the number of locations at and around which efforts will be initiated to introduce and develop the organization; whether the organizational effort will be initiated at these points on a simultaneous basis or, if resources are limited, from one location to the next on a sequential basis; and whether and how individual organizations will tie into an association or federation structure.

A related consideration is the nature of the distribution channels to be used to market services essential to establishment, operation, maintenance, and growth of farmer organizations. Such services could include, but are not limited to, start-up and operational capital, membership recruitment, technical and administrative training, leader effectiveness (or management communication) training, organizational and marketing development training, market intelligence (e.g., price trends in key markets), financial management and strategic planning, and other types of technical assistance. There would appear to be ample opportunity to utilize existing private sector firms (even successfully functioning farmer organizations) as channels for the transfer of technical and marketing know-how essential to product placement.

4. Product Promotion

The action step of product promotion really begins during the action step of marketing research. Such research can provide the change agent with data and information that are useful in designing, at the product promotion step, the communication messages that will be required to raise the target population's level of awareness of, knowledge about, and favorable attitude toward the potential contributions which farmer organization can make to their member farmers and to the farmers' country in general. Designing the right mix of messages and channels to get a given set of messages to their relevant audiences--farmers but also possibly agricultural researchers, extension agents, bankers, politicians, etc.--is, of course, a challenging endeavor in itself. Even more challenging, however, is the requirement that product promotion complement and support the overall marketing effort.

Effective product promotion campaigns must be designed on an adequate research base that informs the change agent about the "marketplace" in terms of the cultures, languages, institutions, values, beliefs, stereotypes, and behavioral patterns. Specific data of interest for designing a product promotion campaign for the social marketing of farmer organizations in an LDC include, but are not limited to, the following:

- * Current level of farmer participation in farmer organizations
- * Attitudes toward farmer organizations as held by farmers and other actors such as government officials, power and authority figures in the local community, and farmers who are de jure or de facto leaders
- * Awareness or knowledge actors have about farmer organizations and the requirements for their successful functioning.
- * Communication (e.g., media use) patterns of farmers and other actors
- * Information sources recognized by farmers as useful and reliable

Such data provide the information base necessary for designing messages and selecting message dissemination media (channels) that are compatible with the beliefs, attitudes, and behavior patterns of farmers (and other relevant actors), and that increase the probability that a message will be recognized, understood, and acted upon in a socially beneficial way by its intended recipient (e.g., the farmer).

A second element of a product promotion strategy is the desirability of developing communication messages and promotional activities around a central or unifying theme. Organizing the various product promotion activities (of a program to market farmer organizations) around such a central theme serves to increase the chances that farmers will become aware of "farmer organizations" and will be sufficiently motivated to seek information that will help them learn in what ways such organizations are relevant to them and what action is necessary on their part to be able to share in the benefits (e.g., improved access to agri-support factors) of being a member of one of these organizations. This unifying or central theme may be expressed in one or several forms such as a slogan, logo, or symbolic spokesperson.

A third element of a product promotion strategy is the desirability of coordinating multiple communication channels such as radio, print media, and interpersonal channels. Certain channels will be more effective in achieving certain behavioral objectives. For example, radio can be effective in creating awareness of a newly created farmer organization; pamphlets and flyers can be effective in providing information about the benefits of being a member of the organization; and interpersonal channels (e.g., respected farmers who are members of the organization) can be effective in providing credibility to the organization and giving farmers someone with whom they can talk about the organization on a face-to-face basis.

A fourth element of a product promotion strategy is the idea of using incentives; the idea of using incentives in social marketing corresponds to the concept of "selective incentives" in Olson's perspective. As Fox and Kotler (1980:26) observe: "Social communicators concentrate on composing messages dramatizing the benefits or disbenefits of different kinds of behaviors. Social marketers go further and design specific incentives to increase the level of motivation." Farmers who by virtue of their membership in a farmer organization obtain improved access on a desired agri-support factor (e.g., credit), via a group loan from a local bank (a "group good" in Mitchell's terminology), has a special incentive (a "private good" in Olson's terminology) to be a member of this organization. There is, however, ample room for the change agent qua social marketer to use other types of incentives (so-called "selective incentives") to increase a farmer's motivation to join a farmer organization and, once a member, to actively participate in and support the organization. Such selective incentives might initially include a premium (e.g., a small gift) which the farmer receives if he becomes a member of the organization; in the longer term, the organization might provide each farmer, who has completed another year as a member of the organization, some type of public recognition (a social incentive) and/or economic benefit (e.g., a discount on the farmer's membership dues for the next year). There are, as Fox and Kotler (1980:26) suggest, numerous sales promotion tools which a change agent can use or adapt to provide selective incentives for collective action in support of a farmer organization.

A fifth element of a product promotion strategy is the desirability of providing mechanisms to facilitate the behavioral change required in the members of the target audience. Here the change agent recognizes that farmers who would like to change their behavior must invest time and effort; thus, the change agent must devise ways to make it easier for a farmer to adopt the required new behaviors. For example, such meetings as a farmer organization needs to hold should be scheduled at a time and place that is convenient to the organization's actual and potential member farmers. Similarly, farmers who may be interested in becoming members of a farmer organization must feel that the procedures involved in becoming a member can be easily and conveniently handled. For example, farmers residing at some distance from a village might more likely join a farmer organization if they can do so at a mobile registration unit that passes along the road these farmers travel as they go to and return from working in their fields.

The sixth element of a product promotion strategy is the desirability of monitoring the marketing program's various communication activities to ascertain whether they are achieving the impact that was originally intended. Such a monitoring component can serve to provide early warning signals of actual or potential problem areas and, thereby, a basis for making any mid-course corrections that may be required in product development (type or organization), product placement, product promotion (including design of communication messages, choice of message dissemination channels, or even special incentives offered), or product pricing which is now discussed.

5. Product Pricing

An individual farmer in an LDC obviously does not go into a marketplace and purchase a "farmer organization" in the same way that he (she) can purchase a contraceptive on an ORT packet, just to mention two products which have been socially marketed at nominal prices in LDC marketplaces. At the same time, the activities involved in establishing, operating, and maintaining a "farmer organization" will not be without cost to the farmers who are members of the organization, for such activities will entail opportunity costs as well as organizational and transaction costs, not to mention the cost (market value) of any agri-support factor (e.g., fertilizer) which the organization makes available for sale to its member farmers. All of these costs, of course, must be covered by a farmer organization if the organization is to function on a self-sustaining basis. Whether a particular farmer organization will attempt to operate at a profit or will simply seek to cover costs is a matter that only can be decided by the organization's members. Clearly, however, if a farmer organization is to be able to sustain itself in the long run without subsidies (i.e., outside funding support of the national government or an international donor), then the organization must provide some mechanism for recovering its incurred costs. Basically, four such mechanism are available to a farmer organization:

1. The price which the organization charges for enrolling a farmer as a member of the organization (i.e., membership dues);
2. Any charges which the organization imposes on member farmers in the process of providing them improved access to agri-support factors (e.g., the percentage a farmer organization is allowed to earn on a group loan which it has obtained for its members from a local bank);

3. Earnings from other activities of the organization (e.g., monies earned through fund raisers or interest on savings); and
4. Contributions in kind or in labor (e.g., providing labor for field channel maintenance in a water users group).

There are, of course, many other factors to be considered in terms of the action step of product pricing (cf. El-Ansary, 1984:34-40). However, for the present, the preceding discussion provides an idea of the potential applicability of the marketing tool of product pricing to the design of an action program for the social marketing of farmer organizations in the LDCs.

The discussion in this section has attempted to illustrate the potential applicability of marketing tools--marketing research, product development, product placement, product promotion, and product pricing--to the problem of developing an action model for the social marketing of farmer organizations in the LDCs. Further applied research to develop such an action model is recommended.

VIII. Agenda for an Applied Research Initiative (Project)

Part VI's discussion of the "incentive structure" and "social marketing" concepts as research issues implies an ambitious research agenda. A few reviewers of an earlier draft of this paper expressed some reservation about that paper's proposed agenda for addressing these issues. One reviewer took the position that the proposed approach was

a very positivistic deductive one that relies on prior identification of concepts, 'factors' and 'hypotheses' for testing. . . . The hypothesis testing approach...often precludes the researcher from learning anything from the situation being analyzed, usually produces less than certain findings and often is too narrowly focused to produce policy implications. This approach also tends to lead the researcher to adopt survey data collection procedures...that minimize the time spent by the researcher interacting with the information sources and usually do not allow the interaction to occur in the natural context of the human behavior being studied.the approach being suggested... seems...to be too distant from the real experience of existing farmer organizations and the realities of government programs to organize farmers -- two important sources for...learning more about the problems at hand (Walter Coward, personal communication).

As an alternative, the reviewer proposed that one approach

the research setting with far fewer assumptions and hypotheses to be tested (though not with a complete absence of perspective and hunches) and attempt...to induce from an analysis of the existing situation a deeper understanding of what is going on and why (Walter Coward, personal communication).

An inductive approach, the reviewer proposed, could be developed as follows:

1. Utilize a network approach in which a number of researchers from different countries are brought together to discuss what they think they already know about farmers' organizations and to identify information gaps.
2. Encourage the researchers to formulate research strategies and plans based on in-depth studies of particular farmer organizations and/or government programs to create/sustain farmer organizations.
3. Emphasize research approaches that study these phenomena in their natural settings and employ a variety of data collection means including key informants and participant observation.
4. Assemble, at appropriate junctures, research network members to review "findings", consider the interpretation of these, and identify additional data needs and alternative observational techniques.
5. Following the data collection and interpretation, have researchers discuss their findings with policymakers and program planners for the purpose of formulating new strategies for assisting farmer organizations.

6. Implement new strategies in the field with close monitoring and documentation as the basis for testing preliminary approaches.

While the reviewer points to some genuine weaknesses observed on occasion in past studies, the present writer eschews the proposed inductive approach as one that carries with it a great risk. This is that such an inductive approach can generate a great deal of data about particular organizations but with much of this data being highly specific to these organization and little of it providing any basis for generalization across cases. This risk would be even further compounded to the extent that the various researchers in a network utilized different research designs (i.e., different types of organizations studied, different sampling procedures, different data collection instruments, different analysis techniques, etc.), thereby minimizing or precluding systematic comparison across cases and generalization of findings. As a result, the inductive approach runs a risk, indeed almost a certainty, that the researchers will generate a great deal of information about the few cases studied but little information that is of policy relevance for the great many other cases that were not studied.

This risk is well illustrated by the findings of the A.I.D.-sponsored case study (A.I.D., 1985b) of Guanchias Limitada (a Honduran agrarian reform cooperative) and this cooperative's relationship be Standard Fruit. The authors point to the study's potential importance to A.I.D. when they write:

Because AID has already invested heavily in Honduran development, it might draw some lessons from the Standard-Guanchias experience. This relationship touches on all four pillars of AID's development efforts; namely, policy reform, involvement of the private sector, institution building, and science and technology transfer. . . . the study of the Standard-Guanchias relationship raises questions about whether the lessons learned from the partnership could be adopted by other cooperatives or independent grower associations in Honduras and elsewhere (A.I.D., 1985b:31-33).

One may commend the study's rationale and its recognition of the potential lessons the study could offer for supporting development of farmer organizations elsewhere. However, in attempting to discuss the study's policy implications, the authors state:

Although factors contributing to the growth of Guanchias, the strength of its relationships with Standard, and mutual benefits for the partners can be identified, a text book formula for the replication of this relationship is difficult to derive. The success depends, in part, on unique factors whose relative importance and contribution are difficult to isolate. Nevertheless, the study does offer insights into conditions for success, providing the basis for some general observations... of...management and policy issues (A.I.D., 1985b:28) [emphasis added].

The ensuing discussion, however, never makes explicit what these "conditions for success" are, focusing instead on a number of questions which different parties (the cooperative's members, the Honduran government, foreign assistance donors, etc.) may need to address concerning the future of Guanchias. Thus, while the authors take the position that the cooperative's

"success depends, in part, on unique factors whose relative importance and contributions are difficult to isolate," they fail to make explicit the "conditions for success" that are not "unique" and what are the "relative importance and contributions" of these conditions.

There is, therefore, a high risk that an inductive approach,--one that attempts "to induce from an analysis of the existing situation a deeper understanding of what is going on and why"--will lead to results that are neither conclusive nor generalizable. It is for this reason that this paper has defined a broad conceptual framework (see Figure 4) that may be applied in any case setting. Within this framework, the paper identifies three different but interrelated levels of analysis--individual action, collective action, and performance capability--that need to be examined in order to identify the conditions or variables (characteristics) that will lead farmers to support group-oriented efforts (farmer organizations) aimed at providing group members with improved access to agri-support factors. The paper recognizes the need for developing an assessment methodology that would provide practitioners with an improved diagnostic capability to assess the current status of and development potential for farmer organizations in a developing country setting. Further, the paper recognizes that the results of applying such an assessment methodology will be of little practical consequence unless there exists some systematic way in which these results can be translated into programmatic action. It is here that the paper suggests the possibility, which yet needs to be empirically tested, that social marketing could provide a useful model for designing and implementing programmatic action to support the development of farmer organizations where there is an identified potential for such organizations to make a meaningful contribution.

It is in view of this line of thought, as well as the previously noted limitation of the inductive approach, that this concept paper proposes a more deductive approach and research agenda as the best route to take to address the need for a research initiative on the potential catalyst role of LDC farmer organizations. The proposed agenda is basically the same as presented in the earlier draft paper although reviewers' comments and suggestions have been incorporated at appropriate points along the way. The proposed research agenda is comprised of six phases, as follows:

Phase 1:

Development and specification of an analytical framework that can be applied to the problem of generating hypotheses on the conditions that are necessary and sufficient to provide an "incentive structure" that motivates and facilitates individual farmers to engage in collective action to improve their access to agri-support factors. This phase would entail further development and refinement, within a public choice theoretical framework, of the "incentive structure" concept outlined in Part VI. This refinement would entail a preliminary indication of the conditions (characteristics) that need to be in place, for a particular agricultural commodity, agricultural production system, and social system, to provide farmers with adequate incentive to engage in collective action, through a farmer organization, to gain improved access to specific agri-support factors. The idea here is that the characteristics of different kinds of agri-support factors, agricultural commodities and production systems, and the social systems in which these

are embedded have implications for whether or what kinds of farmer organizations will be viable in providing member farmers with improved access to agri-support factors (see Uphoff and Van Dusen, 1984:35-58; Esman and Uphoff, 1984:213, footnote 6). The desired framework should identify the conditions (characteristics), including "selective incentives" and "institutions," required (a) to motivate and facilitate farmers to support collective action to develop farmer organizations that can provide their member farmers with improved access to particular types of agri-support factors; and (b) to sustain the performance capability of these organizations. As Mervin Yetley (personal communication) notes;

Social and economic barriers and incentives may vary both in substance and form between 'input' and 'marketing' farmer organizations. This implies different management problems to sustain the organization over time. Attempts to combine both into one farmer organization at the start may prove too large a task.

The output of phase 1 will be a state of the art paper that identifies, within a refined and extended public choice theoretical framework, and analytical framework for systematically examining the nature of the incentive structure(s) essential for (a) motivating and facilitating farmers to engage in collective action to obtain through farmer organizations improved access to agri-support factors, and (b) sustaining the "performance capability" of such farmer organizations. This paper should specify a set of phase 1 hypotheses (predictive models) as regards the nature of the incentive structure(s) required to achieve (a) and (b) for different types of agri-support factors.

Phase 2:

Testing of phase 1 hypotheses (predictive models) against already established empirical findings (as reported in published studies) and secondary data sets such as those that were analyzed and reported on in Local Organizations: Intermediaries in Rural Development (Esman and Uphoff, 1984), Strategies for Small Farmer Development (Morss, et al., 1976), and numerous AID-sponsored evaluations of projects having a farmer organization (e.g., cooperative) component.

The output of phase 2 will be a technical report that sets forth a preliminary set of empirically-tested hypotheses (predictive models) on the nature of the incentive structure(s) required to (a) motivate and facilitate farmers to engage in collective action to support farmer organizations that provide their members with improved access to essential agri-support factors, and (b) sustain the performance capability of these organizations.

Before proceeding to phase 3 (collection and analysis of primary data), the research findings emerging at phase 2 should be critically reviewed by scholars and practitioners to refine hypotheses and identify the most appropriate procedures for subsequent data collection and analysis. The reader may also note that the total cost of phases 1 and 2 would be relatively low. David Leonard (personal communication) points out that

from the point of view of research management...a low cost...start... protects against the danger of ending up with an expensive and not terribly useful product and also greatly increases the probability of getting well-focused, relevant research at the next stage. The product that you will get back for this modest investment is also likely to be interesting and helpful in its own right and useful in generating support for a larger, more focused research investment later on.

Leonard (personal communication) adds that such a limited start "will...result in a much more narrowly defined and focused set of hypotheses that need further study and will give a better idea of the research strategy that is likely to be fruitful in addressing them."

Phase 3:

Testing of phase 2 hypotheses (predictive models) via a series of data collection activities designed to provide primary data for testing of the phase 2 hypotheses as regards the impact of farmer organizations on the productivity and income-earning capability of farmers. For example, where sample surveys are appropriate, they should include both farmers who are and are not members of farmer organizations. Sampling designs should ensure samples which are representative of key characteristics of existing agricultural commodities, production systems, agri-support factors, farmer organizations, and social systems. Data collection activities would be conducted in selected developing countries where farmer organizations and/or farmer access to agri-support factors are problem areas of priority interest to the host country government and the corresponding U.S.A.I.D. mission.

The output of phase 3 will be (a) a revised model of the incentive structure(s) essential for fostering development of LDC farmer organizations, (b) an assessment methodology that could be used by practitioners to assess the current status of and development potential for specific types of farmer organizations in a given LDC situation, and (c) guidelines for designing interventions (policies, reforms, methods, etc.) effective in creating incentive structures that support the development of farmer organizations. Mervin Yetley (personal communication) cautions that phase 3's findings "should have the benefit of critical review by scholars and practitioners before proceeding to the social action model...phase. To do otherwise invites building any bias or errors of interpretation the researchers may have directly into the social action model."

Phase 4:

Specification of a social action model (e.g., social marketing) that could be applied, in a step-by-step fashion, to develop and institutionalize incentive structure(s) that motivate and facilitate farmers to utilize collective action as a vehicle for establishing farmer organizations that provide their member farmers with improved access to essential agri-support factors. This model will need to be tailored to the environmental conditions imposed by the specific mix of conditions (or characteristics) that defines a given agricultural situation. Such a situation, for example, might consist of a specific commodity (e.g., maize rather than cucumber), a specific production system (e.g., rainfed rather than irrigated), a specific agri-support factor (e.g., credit rather than irrigation), a specific farmer organization (e.g., a credit group rather than a water users group), and a specific social system (e.g., Mexico rather than Indonesia).

The output of phase 4 could possibly be a small set of potentially feasible approaches--action models (strategies)--for implementing "interventions" aimed at creating "incentive structures" that support the development of LDC farmer organizations.

Phase 5:

Comparative field testing and evaluation in different environments of the specified social action models (strategies) for promoting development and institutionalization of farmer organizations. Such field testing and evaluation would be conducted as part of field projects, partially funded by U.S.A.I.D. Missions or other collaborators (e.g., World Bank) as appropriate, in those LDCs electing to implement the required interventions, incentive structures, or modifications thereof.

The output of phase 5 will be a validated social action model (strategy) for creating and putting into place an incentive structure that will foster the development and institutionalization of farmer organizations as an organizational mechanism for representing and advancing the economic interests of member farmers.

Phase 6:

Synthesis of the empirical findings, analytical tools, data collection techniques, predictive models, social action model (social marketing strategy), and theoretical framework, developed during the research initiative (project), into a farmer organization assessment methodology.

The output of phase 6 will be a series of reference and training materials to provide practitioners with guidance on procedures for applying the assessment methodology and the social action model in a given LDC. These reference materials could include an information-sharing network (quarterly newsletter), case studies, a training simulation, slide set, videocassette, a training manual, and a pilot training program which could be adapted, as required, for implementation in any LDC.

Appendix 1. What is a Cooperative?

1. The A.I.D. Policy Paper on Cooperative Development (A.I.D., 1985a) by A.I.D.'s PPC Bureau makes two key statements which are contradictory:

- a. "A cooperative, because it is recipient owned, has an automatic incentive to maximixe benefits to the members (A.I.D., 1985a:1) [emphasis added].
- b. "Cooperatives...are...for-profit business organizations..."(A.I.D., 1985a:2) [emphasis added].

A cooperative that seeks to "maximize benefits to [its] members" achieves this objective by providing its members a given level of goods and/or services at the least possible cost. An efficiently run cooperative will legitimately aspire to do no worse than break even after any "profits" from operations have been returned to members as dividends, thereby effecttively lowering the cost which each member has incurred for any good or service received via membership in the cooperative. If a cooperative turns a "profit" and returns such "profit" as a dividend to the cooperative's membership, it is clear that the cooperative is not operating with a "for-profit" objective but that benefits have been maximized at the least cost for all of the cooperative's members.

The apparent contradiction in the PPC document arises because PPC's discussion of cooperative development mistakenly deals with cooperatives as if they are not in any way different from a privately-owned, "for-profit" firm. This, of course, creates confusion in the reader's mind and is indicative that the Policy Paper on Cooperative Development does not provide a sound basis for policy guidance vis-a-vis the potential role of cooperatives in development.

2. The confusion is compounded further when one attempts to interpret PPC's policy guidelines on cooperative development in light of the A.I.D./PRE/CSBD-sponsored study on "Cooperatives in Development: A Review Based on the Experiences of U.S. Cooperative Development Organizations" (D.A.I., 1984). This report contradicts PPC statement 1b, as follows:

The goal of a private, profit-oriented institution must be to maximize profits, and the normal way to do this is to minimize benefits. Cooperatives have an inherent orientation to maximize benefits to the membership (D.A.I., 1984:viii) [emphasis added].

In effect, the PPC Bureau states that cooperatives have a "for-profit" orientation, while the PRE Bureau document states that cooperatives have a "maximize benefits" orientation. This latter document further notes that:

Cooperatives generally serve a different population than formal private sector alternatives. It is precisely because profit-oriented private institutions do not find it profitable to engage in the provision of services to individual poor farmers...that cooperatives are established (D.A.I., 1984:viii) [emphasis added].

Thus, the document circulated by AID/PRE takes a clear stand that that cooperatives have a service or benefits, not a "for-profit", raison d'etre, while the PPC document assumes and states the contrary (see 1b above).

Appendix 2. Definitions of Market & Non-Market Groups (Adapted from Olson, 1965: 50-51)

Market Groups

1. Pure Monoploy -- only one firm in the industry.
2. Oligopoly -- where the firms are so few that the actions of one firm would have a noticeable effect on some one other firm or group of firms.
3. Atomistic Competition -- where no one firm has any noticeable effect on any other firm.

Non-Market Groups

1. Analog to Pure Monoploy (or Pure Monopsony) -- the single individual outside the market seeking some noncollective good, some good without external economies or diseconomies.
2. Analogs to Oligopoly --
 - a. Privileged Group -- a group in which each of its members, or at least some one of them, has an incentive to see that the collective good is provided, even if he has to bear the full burden of providing it himself. In such a group there is a presumption that the collective good will be obtained without any group organization or coordination whatever.
 - b. Intermediate Group -- a group in which no single member gets a share of the benefit sufficient to give him an incentive to provide the good himself, but which does not have so many members that no one member will notice whether any other member is or is not helping to provide the collective good. In such a group a collective good may, or equally well not, be obtained, but no collective good may ever be obtained without some group coordination or organization.
3. Analog to Atomistic Competition -- Latent Group (the very large group) -- a group in which if one member does or does not help provide the collective good, no other member will be significantly affected and therefore none has any reason to react. Thus an individual in a 'latent' group, by definition, cannot make a noticeable contribution to any group effort, and since no one in the group will react if he makes no contribution, he has no incentive to contribute. Accordingly, large or 'latent' groups have no incentive to act to obtain a collective good because, however valuable the collective good might be to the group as a whole, it does not offer the individual any incentive to pay dues to any organization working in the latent group's interest, or to bear in any other way any of the costs of the necessary collective action.

TITLE Farmer Organizations			FUNDS Agriculture, Rural Development, and Nutrition	PROPOSED OBLIGATION (in thousands of dollars) FY 87			LIFE OF PROJECT
NUMBER GRANT <input checked="" type="checkbox"/>	LOAN <input type="checkbox"/>	NEW <input checked="" type="checkbox"/> CONTINUING <input type="checkbox"/>	PRIOR REFERENCE None	INITIAL OBLIGATION FY 87	ESTIMATED FINAL OBLIGATION FY 92	ESTIMATED COMPLETION DATE OF PROJECT FY 93	

Purpose: To strengthen the capability of LDC farmer organizations (FOs) to represent and advance the economic interests of their member farmers.

Background: There is great potential for FOs in the LDCs to play a catalytic role in representing and advancing their members' economic interests. However, evidence indicates that this potential role of FOs is not currently being realized and that very little is known, in a systematic way, about how this role could be most effectively developed. Applied research is needed to determine the incentive structures that will support the development of FOs that can advance their members' economic interests.

The objective of this project is to identify: (1) types of FOs that can play a catalytic role in helping their members access agricultural production support systems (credit, production inputs, markets, etc.) essential to increasing the farmer's productivity and income-earning capability; (2) incentive structures essential for supporting development of FOs; and (3) guidelines for designing interventions (policies, reforms, methods, etc.) effective in creating incentive structures that support development of FOs.

The project will: (1) develop predictive models of FO performance based on social science theories/concepts and development experience; (2) validate these models through testing against secondary data sources and primary data from farmer and organizational surveys to be conducted in approximately 6 selected LDCs; (3) design incentive structures and interventions for each selected LDC; and (4) evaluate the impact of these interventions and incentive structures on FO performance in those LDCs electing to implement these interventions, incentive structures, or modifications of these structures and interventions.

The project's output will be an assessment methodology (and predictive models) that will enable the user to identify in a LDC: (1) the current status of and development potential for FOs; (2) the conditions which must yet be established to create an incentive structure that will stimulate development of existing or potential FOs; and (3) specific interventions to establish the identified incentive structures.

To disseminate its output, the project will: (1) train host country personnel in applying the FO assessment methodology; (2) prepare and distribute informational materials (e.g., newsletter, case studies, training simulation, slides/videocassettes, training manuals); (3) develop an information-sharing network to link researchers and

practitioners interested in the problem of developing FOs in the LDCs; and (4) hold regional workshops on "Farmer Organizations as a Catalyst for Agricultural Development". These workshops will provide each LDC participant an opportunity to: (a) review the project's FO assessment methodology; (b) discuss the implications of this methodology for design and implementation of incentive structures that support development of FOs; and (c) draft an action plan identifying steps which the participant's own country can take to stimulate design and implementation of incentive structures that support development of FOs.

Host Country and other Donors: Host country organizations and other donors will cooperate closely with AID in implementing this project. Technical consultation, information exchange, and coordinated funding with other donors will be continuing features of the project.

Beneficiaries: The project's beneficiaries will be the farmers who are members of FOs.

FY 1987 Program: The project will focus on developing FO performance models and the design of a FO assessment methodology, via literature review, specification of alternative FO performance models, and testing of these models against secondary data sources.

Major Outputs:

FO Performance Capability Model(s)	1
FO Assessment Methodology Paper	1
Social Marketing of FOs (Concept Paper)	1
Workshop on Conducting FO Assessments	1
FO Assessments (1 per each of 6 countries)	6
Intervention & Incentive Structure Designs	6
Intervention Evaluations (up to 6)	6
Information-Sharing Network (Quarterly Newsletter)	25
Case Studies / Training Simulation (5 / 1)	6
Slides Set / Videocassette (1 of each)	2
Regional Workshops	3
FO Assessment Methodology Training Manual	1
Pilot FO Assessment Methodology Training Program	1

AID Financed Inputs in \$000: FY 1987

Personnel
Project Support Costs
TOTAL

-67-

U.S. FINANCING (in thousands of dollars)		Expenditures	Unliquidated	Funding Period	Principal Contractors or Agencies
	Obligations				
Through September 30, 1984	0				To Be Determined
Estimated Fiscal Year 1985	0				
Estimated through September 30, 1985	0				
Proposed FY 1986	0				
Estimated through Fiscal Year 1986	0				
Proposed FY 1987					
		Future Year Obligations	Estimated Total Cost	3/87 - 2/88	

Appendix 4. Comments of Reviewers of Draft Concept Paper as Regards the Need for a Research Initiative on LDC Farmer Organizations.

The following summarizes reviewers' comments on the draft concept paper as regards the need for a research initiative on LDC farmer organizations.

Dr. Michael Bratton, Associate Professor, Department of Political Science, Michigan State University

"I am delighted that you are taking a hard look at the role of farmer organizations in agricultural productivity. Work is urgently required on both the theoretical and practical aspects of the subject; your efforts are important and timely. So much the better if you can persuade AID to make a commitment in this area. . . . Congratulations on trying to get farmer organizations into the mainstream of AID thinking. AID's own 1984 policy document on Local Organizations in Development demands no less."

Dr. Michael Cernea, Sociology Adviser, The World Bank

"I was pleased to see that AID has undertaken such a research. ...I'd like to strongly encourage your further interest and give a firm positive answer to the question on whether or not an applied research project should be developed and sponsored by AID on farmer organizations in the LDCs."

Dr. Robert Chambers, Institute of Development Studies, University of Sussex

"I believe a major potential from farmer's groups is as part of a parsimonious paradigm for agricultural research which would shortcircuit much of conventional farming systems research. . . . Research on any such groups...would seem to me the highest possible priority."

Dr. E. Walter Coward, Jr., Professor of Asian Studies, International Agriculture, and Rural Sociology, Cornell University

"I share with you a fundamental concern with this research topic.appropriate research could help identify some important principles to be used in developing policies and strategies for forming and sustaining farmer organizations...."

Dr. John Eriksson, Deputy Assistant Administrator for Research, Bureau for Science and Technology, Agency for International Development

"I think this is an extremely important subject, and I agree with [the author] that it has not received the systematic research attention it deserves. I believe that [the author] has set out a good first cut at a framework for a project that would yield the kind of research we need."

Mr. Robert Flick, Project Officer, Latin America and the Caribbean,
Agricultural Cooperative Development International

"AID should support...farmer organizations if it is serious about rural/agricultural development. By working strictly with governments all that is accomplished is the strengthening of government's hand at the expense of the private sector. . . . It would be far better to help develop self help farmer directed organizations that would stand a chance of becoming self sufficient than keep pouring billions into government white elephants."

"The proposed research, to the extent it establishes a methodology that could be used by practitioners to identify the necessary incentives in each specific country and micro-region within a country, could be useful.... . . . I would support the research and believe that AID should too."

"If we knew the answers to all of [the questions on page 2] there would be no problem developing farmer cooperatives in the developing countries."

"By determining the incentives and understanding them the work of starting new organizations could be greatly simplified."

"The agenda of the applied research seems ok to me. I think AID should support it."

Dr. Cornelia Butler Flora, Professor, Department of Sociology, Anthropology,
and Social Work, Kansas State University

"...in terms of investment by the U.S. Agency for International Development, [farmer organizations] must be viewed as a means to an end and the prior analysis must revolve around which ends are best met through farmer organizations."

"The focus on...the incentive structure and the action strategy that contribute to small farmer organizations which increase access to external resources or control over them which then leads to agricultural development is a useful model."

Dr. Dennis R. Foote, President, Applied Communication Technology, Menlo Park,
California

"I think the combined approaches of small farmer organizations and social marketing methodologies would each contribute to the other, and I would encourage the Agency to pursue some plan for furthering this work."

Dr. Grace E. Goodell, Director, Program on Social Change and Development, and
Associate Professor of Anthropology, School of Advanced International Studies,
The John Hopkins University

"We need research on this serious subject of what makes farmers' organizations work well, when they do."

"I am very pleased to see USAID taking seriously the question of farmer organizations, certainly more consistent with President Reagan's shift toward local-level instead of bureaucratic responsibility than many USAID programs."

"Ultimately, the problems of the Third World do not spring from lack of capital or 'research' but from weak government accountability (which can only be remedied by stronger local organizations) and from initiatives that do not consolidate above the individual level. Hence the topic you focus on is of utmost importance. I am glad to see the present administration turning our attention to it."

Dr. David K. Leonard, Associate Professor, Department of Political Science,
University of California, Berkeley

"...well-researched, well thought-out, and on an important topic."

"Over a decade ago the work of the Cornell group led by Norman Uphoff and Milton Esman demonstrated the importance of small farmer organizations to agricultural development. This finding has been reinforced by the research of Walter Coward, David and Frances Korten, and others. . . . Despite the acknowledged importance of these organizations, they have not been easy to form nor to manage well and much remains to be learned about the accomplishment of these tasks."

"...that public choice theory is a powerful tool of analysis and that further research is needed to make it useful for problems of agricultural organization in developing countries, for most of the empirical work on which the theory is built comes from industrialized societies. . . .
...would welcome a study which reinterpreted the previously done research on farmer organizations and put it into a public choice framework. I think...that this would generate new insights and would extend the theory further. ...this reinterpretation might suggest some quite specific hypotheses...deserving of further systematic research."

"I support further research on farmer organizations from a public choice perspective and believe that this concept paper makes a good case for doing so."

Mr. John V. D. Lewis, Rural Development Officer, USAID/Haiti

"...that you and the paper...have pinpointed an agricultural development process worthy of systematic attention."

"The paper itself strikes a very welcome, and long overdue, note in attempting to bring public choice (collective action) theory into the analysis of farmers' organizations problems."

"The paper correctly suggests some...well thought out, collective action paradigms as a way of sorting out the key constraints in particular cases. . . . We look forward to working with your research initiative in designing the hillside farming projects proposed in our action plan."

Dr. Mancur Olson, Professor, Department of Economics, University of Maryland

"This line of research seems to me to have promise. It certainly focuses on an important problem and it also has a good analytic starting point."

Dr. Elinor Ostrom, Co-Director, Workshop in Political Theory and Policy Analysis, Indiana University

"I find the concept paper on farmer organizations to be very interesting. I do not know anyone who is specifically applying some of the problems of collective action to farmer organizations. . . . I think it is quite important to separate out the notion of organization for provision from organization for production. Farmer organizations are largely consumer organizations. Farmers as producers of agricultural products need to consume a lot of factors of production in their individual production processes. Access to these factors is something which is enhanced if they organize as opposed to each trying to bargain effectively with seed companies, credit organizations, and other owners of the factors of input."

Dr. C. Ford Runge, Assistant Professor, Department of Agricultural and Applied Economics, University of Minnesota

"I applaud the general effort represented by the paper, which constitutes precisely the sort of 'institutional analysis' around which so much talk has centered in the Agency. The direction of the effort is correct...."

Ms. Susan Saunders, Associate Director, Communication for Technology Transfer in Agriculture (CTTA) Project, Academy of Educational Development (AED) Dr. Howard Ray, CTTA Project Director and Vice President and Director, Agricultural Sciences and Technology, AED; and Mr. William Smith, Senior Vice President and Associate Director, International Division, AED

"The paper is impressive overall. . . . An investigation of the type proposed is well justified."

Dr. Norman T. Uphoff, Associate Professor of Government and Chairman of the Rural Development Committee, Center for International Studies, Cornell University

"It is a very worthwhile undertaking...."

Dr. Dennis M. Warren, Anthropologist, Department of Sociology and Anthropology, Iowa State University

"I am very excited about what [the author] has pulled together--and so are some of my sociology colleagues."

Dr. Mervin J. Yetley, Agricultural Economist, Agricultural Development Branch,
International Economics Division, Economic Research Service, United States
Department of Agriculture

"Farmer organizations do have the potential for improving the productivity and income-earning capacity of farmers in developing countries. ...this paper, which suggests and outlines a research project on Farmer Organizations, is a relevant topic for AID to consider for funding."

"...[the paper's] approach [of using concepts from theoretical work on collective action to analyze farmer organizations] has considerable promise for yielding useful results."

Footnotes

- [1] John Ericksson (personal communication) raises another question about farmer organizations: "Do or should small farmer organizations address such issues as off-farm employment (e.g., dairy processing) or nonagricultural, farm household income-earning activities?"
- [2] Inefficiencies and monopolistic structures and practices in the distribution and marketing network for a commodity can exert an independent influence on the prices actually received by farmers and paid by consumers.
- [3] Cornelia Butler Flora (personal communication) notes that: "Nature, including weather and pests, is a constraint and at times farmer organizations can overcome or at least minimize the impact of this through providing pesticides or through irrigation schemes. Price is always a risk, particularly in market economies. . . . Again, farmer organizations through the political process or through marketing organizations may make a difference in reducing the risk of price variability." Flora raises the question of whether the role of a farmer organization is to negotiate or implement: "in Colombia we found that very often farmer organizations were more effective if they negotiated with the market system, rather than if they set up their own marketing organization."
- [4] Olson proposes that social incentives can be effective in bringing about group-oriented action in a large or latent group only when the large group is a "federal" group or "federation" -- "a group divided into a number of small groups, each of which has a reason to join with the others to form a federation representing the large group as a whole. If the central or federated organization provides some services to the small constituent organizations, they may be induced to use their social incentives to get the individuals belonging to each small group to contribute toward the achievement of the collective goals of the whole group. Thus, organizations that use selective social incentives to mobilize a latent group interested in a collective good must be federations of small groups" (Olson, 1965:63). In Sri Lanka's Gal Oya water management project, the turn-out groups are federated into distribution channel associations and these into district-level associations.
- [5] In a similar vein, Brubaker (1975:158) states:
- The opportunities for eliciting more nearly voluntary economic expression of individual priorities for collective goods may be far greater than most of the contemporary orthodox literature suggests. If so, it may be eminently worthwhile to explore more carefully means to expand the scope of voluntary arrangements for provision of collective needs while perhaps in some measure of correspondence reducing reliance on coercive institutions with their own potentially detrimental effects.
- [6] The condition of "group sanction" includes such variables as government policies on and attitudes toward farmer organizations.

[7] Norman Uphoff (personal communication) observes that "functional identity" is another way of saying that what he has called "the spite factor" may operate sometimes, "where people will cut off their figurative noses to spite their actual faces. If some benefit more than others (or benefit without paying costs), some people (or some cultures) will refuse to engage in collective action, even if individual benefits exceed their individual costs (which is 'irrational,' but unfortunately common)."

[8] Robert Flick (personal communication) observes that "one does not want all potential farmers as members of the cooperative since some will be bad credit risks and others trouble makers. Only the best farmers should be sought out...."

[9] Robert Flick (personal communication) points out that "social marketing could and should be used by the farmer organizations themselves to support their causes and enlist 'popular' support."

References

- A.I.D.
1984 A.I.D. Policy Paper: Local Organizations in Development. U.S. Agency for International Development, Washington, D.C. 20523.
- 1985a A.I.D. Policy Paper: Cooperative Development. U.S. Agency for International Development, Washington, D.C. 20523.
- 1985b "Guanchias Limitada: A Case Study of an Agrarian Reform Cooperative and Its Long-term Relationship with a Multinational Firm in Honduras," A.I.D. Special Study No. 22, U.S. Agency for International Development, Washington, D.C. 20523.
- n.d. Blueprint for Development: The Strategic Plan of the Agency for International Development. U.S. Agency for International Development, Washington, D.C. 20523.
- Alers-Montalvo, Manuel
1960 "Social Systems Analysis of Supervised Agricultural Credit in an Andean Community," Rural Sociology, (25):51-64.
- Altman, Diana L. and Phyllis T. Piotrow
1980 "Social Marketing: Does It Work?", Population Report: Family Planning Programs, Series J, No. 21, January (Reprinted March 1984), Population Information Program, The John Hopkins University, Hampton House, 624 North Broadway, Baltimore, Maryland 21205.
- Ashby, Jacqueline A.
1985 "Learning from Farmers: Methodologies for Implementing Farmer Participation in Fertilizer Testing," a paper prepared for the Fertilizer Efficiency Research and Technology Transfer Workshop for Africa, Douala, Cameroon, January 21-25, 1985.
- Bagadion, Benjamin U. and Frances F. Korten
1985 "Developing Irrigators" Organizations: A Learning Process Approach to a Participatory Irrigation Program," in Michael M. Cernea (ed.), Putting People First: Sociology Variables of Rural Development. Oxford University Press (forthcoming).
- Beal, George M. and Daryl J. Hobbs
1969 "The Process of Social Action in Community and Area Development," Soc.-16. Cooperative Extension Service, Iowa State University, Ames, Iowa.
- Beal, George, Ross C. Blount, Ronald C. Power, and W. John Johnson
1966 Social Action and Interaction in Program Planning. Ames, Iowa: Iowa State University Press.
- Bertrand, Alvin L.
1967 Basic Sociology. New York: Appleton-Century Crofts.

- Bratton, Michael
 1963 "Farmer Organizations in the Communal Areas of Zimbabwe: Preliminary Findings." An unpublished report.
- 1985 "A Share of the Plow: Small Farmer Organizations and Food Production in Zimbabwe," Department of Political Science and African Studies Center, Michigan State University, East Lansing Michigan.
- Brubaker, Earl R.
 1975 "Free Ride, Free Revelation, or Golden Rule?," The Journal of Law and Economics, 18:147-161.
- Byrnes, Kerry J.
 1975 A Construct of Social Action for Small Farmer Agricultural Development. Iowa State University, Ames, Iowa. Unpublished Ph.D. Dissertation.
- Chambers, Robert
 1983 Rural Development: Putting the Last First. London: Longmans.
- Cernea, Michael
 1981 "Modernization and Development Potential of Traditional Grassroots Peasant Organizations," pp. 121-139 In Directions of Change: Modernization Theory, Research and Realities, ed. M.O. Attir, B. Holzner, and Z. Suda. Boulder, Colorado: Westview Press.
- 1985 "Alternative Units of Social Organization Sustaining Afforestation Strategies," Chapter 9 in Michael M. Cernea (ed.), Putting People First: Sociological Variables of Rural Development, Oxford University Press (forthcoming).
- D.A.I.
 1984 "Cooperatives in Development - A Review Based on the Experiences of U.S. Cooperative Development Organizations, Development Alternatives, Inc., Washington, D.C.
- Doherty, Victor S. and N.S. Jodha
 1979 "Conditions for Group Action among Farmers," pp. 207-223 in Group Farming in Asia: Experiences and Potentials. Singapore: Singapore University Press.
- El-Ansary, Adel I.
 1984 "Social Marketing: Its Nature, Scope, Tasks and Relationships," a paper prepared for Keene, Monk and Associates, Inc. for the U.S.AID/PPC/PDPR Workshop on Social Marketing and Economic Development, Washington, D.C., November 19-20, 1984.
- Erickson-Blomquist, William and Elinor Ostrom
 1984 "Institutional Capacity and the Resolution of a Commons Dilemma," Workshop in Political Theory & Policy Analysis, Indiana University, 513 North Park, Bloomington, Indiana 47405.

- Esman, Milton J. and Norman T. Uphoff
 1984 Local Organizations: Intermediaries in Rural Development. Ithaca: Cornell University Press.
- Fox, Karen F.A. and Charles E. French
 1985 "The Contributions of Marketing to AID Overseas Development Efforts," a paper commissioned by the United States Agency for International Development.
- Fox, Karen A. and Philp Kotler
 1980 "The Marketing of Social Causes: The First 10 Years," Journal of Marketing, 44(Fall):24-33.
- Galjart, Benno and Dieke Buijs
 1982 Participation of the Poor in Development. Leiden Development Studies No. 2. Institute of Cultural and Social Studies, University of Leiden.
- Gasson, Ruth
 1977 "Farmers' Participation in Cooperative Activities," Sociologia Ruralis, 17:107-123.
- Grabowski, Richard
 1981 "Induced Innovation, Green Revolution, and Income Distribution: Comment," Economic Development and Cultural Change, 30(1):177-181.
- Hardin, Russell
 1982 Collective Action. Baltimore, Maryland: The Johns Hopkins University Press.
- Harwood, Richard R.
 1979 Small Farm Development: Understanding and Improving Farming Systems in the Humid Tropics. Boulder, Colorado: Westview Press.
- Hayami, Yujiro and Vernon W. Ruttan
 1984 "The Green Revolution: Inducement and Distribution," The Pakistan Development Review, 23(1)(Spring):37-63.
- Heath, Anthony
 1976 Rational Choice and Social Exchange: A Critique of Exchange Theory. Cambridge: Cambridge University Press.
- Johnston, Bruce F. and William C. Clark
 1982 Redesigning Rural Development: A Strategic Perspective. Baltimore: The Johns Hopkins University Press.
- Johnston, Bruce F. and Thomas P. Tomich
 1984 "Feasibility of Small Farm Development Strategies," a report submitted to the Bureau of Policy & Program Coordination, Agency for International Development, Washington, D.C. 20523.
- Keene, Monk and Associates, Inc.
 1985 "Social Marketing and Economic Development: A Workshop Report," a paper prepared for the U.S.AID/PPC/PDPR.

- Kimber, Richard
1981 "Collective Action and the Fallacy of the Liberal Fallacy," World Politics, 33:178-196.
- Korten, David
1980 "Community Development and Rural Development: A Learning Process Approach," Public Administration Review, 40(5):480-511.
- Kottak, Conrad Phillip
1985 "When People Don't Come First: Some Sociological Lessons," in Michael M. Cernea (ed.), Putting People First: Sociological Variables of Rural Development, Oxford University Press (forthcoming).
- Lele, Uma
1981 "Cooperatives and the Poor: A Comparative Perspective," World Development, 9:55-72.
- Loomis, Charles P.
1959 "Toward a Theory of Systemic Social Change. Rural Sociology in a Changing Society." Proceedings of North Central Committee (NCR-5) Seminar. Ohio State University, Columbus: Ohio Agricultural Extension Service.
- McInerney, John P.
1978 The Technology of Rural Development, Staff Working Paper No. 295, Washington, D.C.: The World Bank.
- Meyer, Anthony J.
1983 "Teaching Mothers Oral Rehydration," Horizons, 2(4)(April):14-16.
- Mitchell, Robert Cameron
1979 "National Environmental Lobbies and the Apparent Illogic of Collective Action," pp 87-121 in Collective Decision Making: Applications from Public Choice Theory, ed. Clifford S. Russell. Baltimore: The Johns Hopkins University Press.
- Montgomery, John D.
1983 "When Local Participation Helps," Journal of Policy Analysis and Management, 3(1):90-105.
- Morss, Elliott R., John K. Hatch, Donald R. Mickelwait, and Charles F. Sweet
1967 Strategies for Small Farmer Development, 2 vols. Boulder, Colorado: Westview Press.
- Nesman, Edgar G.
1981 Peasant Mobilization and Rural Development, Cambridge, Massachusetts, Schenkman Publishing Company, Inc.
- Obern, Catherine C. and Steven D. Jones
1981 "Critical Factors Affecting Agricultural Production Co-operatives: A Review," Annals of Public and Co-operative Economy, 52(3):317-349.

- Olson, Mancur
1965 *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge: Harvard University Press.
- 1982 *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven: Yale University Press.
- Ostrom, Elinor
1983 "A Method of Institutional Analysis," pre-publication version of Chapter 23 in Kaufmann, F.X., G. Majone, and V. Ostrom (eds), *Guidance, Control, and Performance Evaluation in the Public Sector*. New York: de Gruyter (was projected to be published in 1984).
- 1985 "Doing Institutional Analysis," a paper presented at a conference on Institutional Analysis and Development, Washington, D.C., May 21-22, 1985.
- Ostrom, Vincent
1985 "Conceptualizing the Nature and Magnitude of the Task in Institutional Analysis and Development," presented at a conference on Institutional Analysis and Development, Washington, D.C., May 21-22.
- Ostrom, Vincent and Elinor Ostrom
1979 "Public Goods and Public Choices," pp 7-49 in E.S. Savas (ed.), *Alternatives for Delivering Public Services. Toward Improved Performance*. Boulder, Colorado: Westview Press.
- Oxby, Clare
1983 "'Farmer Groups' in Rural Areas of the Third World," *Community Development Journal*, 18(1):50-59.
- PCARR
1981 *State of the Art: Farmers' Organization Research, Socio-Economic Series No. 1*, Philippine Council for Agriculture and Resources Research.
- Popkin, Samuel
1981 "Public Choice and Rural Development: Free Riders, Lemons and Institutional Design. pp. 43-80 in Russel and Nicholson (1981).
- Runge, Carlisle Ford
1981 "Common Property Externalities: Isolation, Assurance and Resource Depletion in a Traditional Grazing Context," *American Journal of Agricultural Economics*, 63:595-606.
- 1983a "The 'Tragedy of the Commons' and Resource Management," a paper presented in the Ministry of Local Government and Lands, Gabarone, Botswana.
- 1983b "Sources of Institutional Innovation: An Interpretative Essay," Discussion Paper No. 176., Center for Economic Research, Department of Economics, University of Minnesota, Minneapolis, Minnesota 55455.

- 1984a "Common Property and Collective Action in Economic Development," Working Paper No. 1, Center for Natural Resource Policy and Management Studies, University of Minnesota, St. Paul, Minnesota 55108.
- 1984b "Institutions and the Free Rider: The Assurance Problem in Collective Action," *The Journal of Politics*, 46:154-181.
- n.d. "Learning about Institutional Innovation and Technology Transfer: The Role of the Agency," a paper prepared for the Agency for International Development.
- Russell, Clifford and Norman Nicholson (eds.)
1981 *Public Choice and Rural Development*. Baltimore: Johns Hopkins University Press.
- Ruttan, Vernon W.
1978 "A Postscript on Alternative Paths of Induced Institutional Change," Chapter 14 in Binswanger, H.P., V.W. Ruttan, et al., *Induced Innovation: Technology, Institutions and Development*. Baltimore: Johns Hopkins University Press.
- Ruttan, Vernon W. and Yujiro Hayami
1984 "Toward a Theory of Induced Institutional Innovation," *The Journal of Development Studies*, 20(4)(July):203-223.
- Saunders, Susan and William A. Smith
1984 "Social Marketing: Two Views, Two Opportunities," *Development Communication Report, No.47 (Autumn)*, Clearinghouse on Development Communication, 1255 23rd Street, N.W., Washington, D.C. 20037.
- Smith, William E.
1984 "A Systematic Approach to Managing Institutional Development," a report prepared for the World Bank.
- Sproule-Jones, Mark
1982 "Public Choice Theory and Natural Resources: Methodological Explication and Critique," *The American Political Science Review*, 76(4):790-804.
- Torgerson, Randall E.
1977 "Farmer Cooperatives," *The Annals of the American Academy of Political and Social Sciences*, 429(January):91-102.
- Ullman-Margalit, Edna
1977 "Coordination Norms and Social Choice," *Erkenntnis*, 11:143-155.
- Uphoff, Norman and Katy Van Dusen
1984 *Local Institutional Development for Agriculture, Special Series on Local Institutional Development--No. 5*, Rural Development Committee, Cornell University.

Wakeley, Ray E.

1957 "Sociological Research on Farmers' Organizations and Agricultural Cooperatives," *Rural Sociology*, (22):274-280.

Warren, Dennis M.

1984 "The Role of Indigenous Knowledge Systems and Indigenous Organizations in Facilitating a Participatory Approach to Agricultural and Rural Development," a paper presented at the International Seminar on the Role of Rural Organizations in the Process of Development, University Centre of Dschang, Cameroon, July 15-20.

West, Patrick c.

1983 "Collective Adoption of Natural Resource Practices in Developing Nations," *Rural Sociology* (48:1):44-59.

Whyte, William F. and Damon Boynton (ed.)

1983 *Higher Yielding Human Systems for Agriculture*. Ithaca, New York: Cornell University Press.