AGRICULTURAL EXTENSION AS A DEVELOPMENT STRATEGY FOR
WAR-TORN COUNTRIES: THE CASE OF LEBANON

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Abstract

Large scale civil wars, especially since the Second World War, have plagued resource poor countries. Lebanon is one such country that was devastated by a long civil strife. Agricultural extension is perceived as a major policy instrument to stimulate rural development in the reconstruction process. Selected socio-economic data about farmers and farming systems in Lebanon are presented. A district level public/private extension system is proposed, and steps in administering an effective extension system are suggested.

Introduction

A substantial proportion of large scale civil wars since World War II have occurred in Third World countries (Davis, 1975). The civil war in Lebanon was a result of a breakdown in the political system of the country. Soon after Lebanon's independence from France in 1943, religious groups shared responsibility for ruling the country. Political power was divided among the major religious groups according to the 1932 census. Thus, the president was a Meronite Christian, as it formed the single largest religious group; the Prime Minister and the Speaker of the Legislature were from among the Sunni and Shiite Moslems, as these formed the next largest groups; the Greek Orthodox Christians and the Druze were also given government offices.

This political system worked for many years. However, in the face of growing population and economic inequality, the Moslems demanded a greater role in the country's government. As a result, civil war broke out in 1958. A compromise was reached but the basic political system remained unchanged. A civil war broke out again in 1975. Moslem and Christian groups split into factions, each with its own army. The Moslems fought against the Christians and other Moslems as well; Christians fought other Christians.

When the civil war erupted, other countries became involved. Israel, Syria, Iran and the United States became part of Lebanon's conflict. In 1982, Israel invaded Lebanon to drive out the Palestinian Liberation Organization (PLO), and destroyed much of southern Lebanon where the PLO had been based, and then advanced to Beirut. By the mid 1980s, Lebanon was in a state of anarchy. No government, army or police could maintain order. However, in the late 1980s, the Meronite Christians agreed to a
plan that gave more political power to the country’s Moslems, and the fighting stopped in the early 1990s.

It was estimated that the war took the lives of over 150,000 people (Baerwald & Fraser, 1995). The war also created about 600,000 handicapped people, and displaced 800,000 with only a few of them returning to their place of origin (Crom, 1995).

In post war environments, the countries experiencing war are likely to have some common economic characteristics. Collier and Gunning (1995) noted that the economies of these countries have been extremely short of private investment for many years, and that the return from investment is likely to be high. They further emphasized the importance of building public infrastructure to attract private investment, where it is estimated that the rate of return of such investments is as high as 39%.

Though Lebanon does not have a Ministry of Agriculture Extension System, agricultural extension is seen as a policy instrument that the national government can use to stimulate development in the post-war era. Because countries use extension to achieve different objectives, there is no one definition for it. However, in all cases, there is a considerable emphasis on the use of extension for the development of human beings to increase their capacity for rational decision making (Roling, 1990). Ban (1986) noted that extension often transfers technology from researchers to farmers, advising and educating them on the decisions they make to stimulate rural development.

Extension service is not new in the Lebanese development program. The extension department was first organized under the Ministry of Agriculture in 1954 to improve citrus and poultry production (USDA, 1965). After a considerable improvement in extension programs, this service was discontinued during the civil war in the early eighties. However, a form of private extension service is run by companies to promote the use of certain agricultural inputs. A 1995 survey to assess socio-economic characteristics of Lebanese farmers indicated a high demand for a much more comprehensive extension service (Betru, 1995).

Objectives

The general objective of this study is to enable decision makers to plan the future of extension in Lebanon given its re-emerging status, and secondarily, to illustrate a process for extension professionals in other settings to consider, given their situations. More specifically, the study (a) presents selected socio-economic data about farmers and farming systems in post-war rural Lebanon, (b) proposes an extension system, and (c) suggests guidelines in administering a strong extension system in Lebanon.

Methodology

A descriptive research method with the use of a survey technique was employed to collect field data. The survey method is an important fact-finding tool to obtain personal and social information about beliefs and attitudes (Kerlinger, 1986). Areas of largest concentrations of farmers were identified from northern, central, and southern Lebanon. A national sample of 240 farmers was identified by using a standard procedure for sample size determination (Casley & Kumar, 1988), and subjects were randomly selected to be interviewed. A procedure was followed to obtain a proportional number of subjects from each region. A questionnaire was developed and pre-tested for the interview.

A second major source of data was the perceptions of 25 officials from the Ministry of Agriculture, mainly regional agricultural directors and extension planners. They were questioned about alternative systems of extension available to decision makers, the process by which extension service should be conducted, and major problems of establishing a responsive extension system in Lebanon. These individuals were interviewed at a workshop sponsored by the World Bank and the Ministry
of Agriculture entitled "Decision Making in Agricultural Extension: Applications and Principles", held at the American University of Beirut in March 1996.

Data were analyzed using simple frequency distributions and percentages. Furthermore, a review of literature as a source of secondary data was incorporated in the analysis.

Results and Discussion

Lebanon encompasses 4,015 square miles. It is located on the eastern shore of the Mediterranean Sea with a population of about 4.5 million. It has a mild climate, an open social environment and Western-style economy.

The Lebanese government considers the "village" (municipality) as the smallest administrative unit with the 'Moukthar' (mayor) as the administrator elected by the villagers. The "Cassa" is the next largest administrative unit in the Lebanese government structure, similar to the county in the United States. The "Mohafazah" is the largest administrative unit at a regional level. There are 5 administrative regions, 22 Cassas, and 1,982 villages (Mousawi, 1983). The city of Beirut is in the Mount Lebanon administrative region.

According to the Hariri Foundation (1987), 15% of the population lives in rural areas while the remaining are urban dwellers. About one third of the population receives income from agriculture and related activities. Agricultural activities are restricted by the country's predominantly mountainous topography which limits the development of farmland.

One fourth of the farmland is used for crop production; the remainder is mainly rangelands for migratory flocks of sheep and goats. Of the cultivated area, more than one-half is terraced. The population pressure on the land is great with about 1,000 persons per square mile. Land holding is characterized by small farms.

Crop production is either rain-fed (80%) or irrigated (20%). Rain-fed crops are grains and pulses, while vegetables and fruits are grown with supplemental irrigation. Wheat and olives are the major crops in the north taking over 50% of the cultivated land, followed by grapes and other fruits. Vegetables, wheat, grapes, tobacco, sugar beets and pulses like beans are widely grown in eastern and central Lebanon. The production of vegetables under controlled environments such as plastic houses is gaining importance.

Agriculture contributes 20% of the Gross National Product, with 80% accruing from non-agricultural sectors, mainly services. Citrus fruits and apples are the main agricultural exports.

Lebanon is a net importer of agricultural commodities. Grains, meat (or live animals), cotton, wool, hides, and skins are among the major agricultural imports.

There are different forms of agribusinesses in the country. They include agricultural input companies, farm machinery dealers, and modern poultry farms. Sugar beets production and processing is an example of a vertically integrated agribusiness in the country.

Problems of agricultural production in Lebanon are diverse. Agricultural land has been drastically reduced as the result of growing urbanization; zoning of rural and urban regions is inadequate; the cost of land rent has increased drastically in the last ten years; farm lands are small and fragmented; capital investment in agriculture is low; very limited credit is available from commercial banks and individuals, and only at high interest rates. This situation is even worse for small farmers who cannot provide the credit guarantees required by creditors (Achour, 1994).

Farmer Interview Data

The survey results indicated that the average family size in rural Lebanon was seven. Sixty-six percent of these families had only one member working on the farms. Twenty three percent of the interviewed farmers were
illiterate, 40% had an elementary education, and the remaining 37% were above secondary school, including technical and university education. Women constituted 60% of the adult illiterates. A great majority of the farmers (75%) had farmed for over ten years. Only 14% of the interviewed farmers were members of agricultural cooperatives.

The survey indicated that 34% of the farmers engaged in non-agricultural activities for additional income. The non-agricultural component constituted 53% of these households' incomes.

Land tenure patterns indicated that 23% of the farmers had land of their own; 27% were renters, and the remaining 50% practiced mixed ownership. Fifty percent of the interviewed farmers operated on less than five hectares of land. In general, there were more vegetable farmers than either fruit or cereal producers.

Ranking of agricultural production problems by the interviewed farmers showed that marketing was at the top of the list. The specific agricultural marketing problems include: lack of accurate, timely market information, processing, handling, and contracting. Other agricultural problems and their relative importance ranked from high to low include: government support in terms of financial, technical and agricultural policy particularly in foreign trade; plant diseases; and availability of irrigation water and agricultural land.

The aftermath of the civil war was visible everywhere in Lebanon. Farm roads, secondary schools, small scale industries and establishments were reported not adequately available for the villagers' daily living. However, worship sites, elementary schools, shops and tractors were abundantly found.

Practically all the interviewed farmers expressed strong needs for farm information and advice. Ninety-five percent of the farmers agreed to collaborate with scientists from the American University of Beirut for research and extension activities on their farms.

**Ministry of Agriculture Officials Interview Data**

Extension planners and regional directors of the Ministry of Agriculture (MOA) were interviewed during a workshop held at the American University of Beirut. Responses indicated that extension should be decentralized, and that clientele should share the cost of extension programs with the government. MOA officials also recommended that agricultural faculties in the Lebanese universities, agribusinesses, special project implementation units, and village administrative councils need to be encouraged to provide extension services.

When asked to rank major rural development problems in Lebanon, MOA officials identified agricultural marketing, agricultural policy, the conservation of natural resources, the establishment of credit institutions, strengthening the extension system, and fighting rural out-migration. Lack of technical personnel, a clear extension mandate, budget, and facilities were indicated as problems of the Ministry of Agriculture in establishing an effective extension system.

**Analysis of Selected Literature**

Analysis of literature about the possible participation of institutions suggested by MOA personnel to provide extension services indicates that agribusinesses were involved most frequently. The major forms of agribusinesses include:

1. **Processors**: Agricultural processors such as sugar, vegetable and fruit conserve factories are operating very well in Lebanon. They are interested in obtaining raw material according to planned schedules. An interesting example of an extension service provided by processors is given by Onyango (1987); in Kenya sugar companies offer sugar cane farmers various incentives.

2. **Input Companies**: These are generally involved in the promotion and sale of...
agricultural inputs such as chemicals, fertilizers and farm machinery. The sales and promotion agents of input companies are generally motivated and efficient. However, they are criticized for a lack of objectivity, and a tendency to focus on large farmers, neglecting small farm units that also need extension services (Arnon, 1989).

Exporters: Companies that export agricultural commodities frequently provide extension services to producers. For example, Rice (1974) noted that the United Fruit Banana Company in Ecuador provides improved practices and required inputs to the growers. A similar pattern can be used in Lebanon with apple growers that produce this major export.

4. Commodity Boards: This form of agribusiness does not exist in Lebanon, but is reported to be potentially useful. The focus of such boards is on the marketing of a single high value commodity, such as apples in the case of Lebanon. Swanson & Claar (1984) indicated that, in such systems, production and marketing is fully organized and vertically integrated.

A Proposed Extension System

Lebanon is a net importer of food crops. Thus, expanding the commercial production of such crops as sugar beets need to be encouraged. For example, tax policies can encourage sugar manufacturing companies to help sugar beet farmers increase their production to specified qualities.

Second, special project implementation units can be encouraged to provide extension services in the rural areas. These are usually donor-assisted projects for a particular area that focus on a set of production problems. An example is the United Nations Integrated Development Program in the northern region. This unit is responsible for extension activities in the whole district (Cassa) of Hermel in the Baalbek Administrative Region.

Third, agricultural faculties in Lebanese universities can provide pre-service and in-service training for agents involved in development programs. The universities with agricultural programs in Lebanon are the American University of Beirut, Saint Joseph University and Beirut University College. Universities can also serve as sources of technical subject matter expertise.

Fourth, networks of village administrative councils particularly at district (Cassa) level can provide flexible, decentralized extension services that would attract active participation of local residents. Since farmers' associations and agricultural cooperatives are not well developed in the rural areas, utilizing the initiatives of local administrative councils in rural areas can serve the interests of farmers and the non-farm population dependent upon agriculture.

The Cassa is considered the feasible unit to offer extension services from the standpoint of the administrative unit's economic characteristics, geographic size and number of residents. Each Cassa can be encouraged to establish an Extension Program Planning and Implementation Council (EPPIC) proportionally representative of villages within the Cassa. The EPPIC determines extension programs, the number of staff and budget, and negotiates the proportion of costs to be covered by the government and other cooperators. Institutions such as agribusinesses, faculties of agriculture, development banks and non-governmental organizations can be encouraged to be represented in EPPICs. The number of EPPICs in a Cassa can be adjusted depending on the population to be reached and diversity of extension programs. The extension activities of the Cassas can be coordinated and supervised by the regional offices of the Ministry of Agriculture and the headquarters in Beirut. Therefore, a decentralized Cassa-oriented extension service is perceived to be the most feasible approach that combines private individual and commercial initiatives and government interests.

Proposed Administrative Guidelines

Guidelines are suggested to administer a strong
extension system. Extensive literature concerning this issue is available in USDA (1945) and ICA (1952). Specific guidelines to administer an effective extension system include:

1. Make available benefits of extension to all people regardless of class, ethnic background or religious affiliation (Maunder, 1972). In this way, extension as an instrument for development of a country torn by civil strife can further contribute to a nation's social reconstruction.

2. Establish a legal basis and a basic charter for the extension service. A legal charter assures that the parties responsible for extension services can continue to maintain their status and obtain funds for extension activities. Alternatives are available to policy makers to determine the institutional base of the anticipated extension system selected from the Ministry of Agriculture, faculties of agriculture, agribusinesses (processors, input companies, exporters, and commodity boards), cooperatives, farmers' associations, agricultural credit institutions, special project implementation units (non-governmental organizations), village administrative councils, and private consultants. Field data reported earlier encourage national extension planners to guide agribusinesses, faculties of agriculture and special project implementation units in conducting extension services with the Cassa EPPICs forming a network of local extension systems. The legal charter should clearly indicate the degree of involvement of the government in the Cassa-oriented extension system, and foster the development of an organizational plan. An organization plan for extension opens lines of communications among the Cassa extension offices, regional officials and headquarters administrators of the Ministry of Agriculture; and indicates the roles of agribusinesses, faculties of agriculture and non-governmental organizations.

3. The parties involved in the extension service, in this case, the Cassa EPPIC and the regional and national agricultural extension planners, must know the rural peoples' farm situations, living conditions, needs, attitudes toward adopting new ideas and capacities to co-invest in extension from farm and, perhaps, non-farm sources of income. The field data indicate that agriculture contributes only 20% to the Gross National Product. On top of that, 34% of farmers engage in non-farm activities for additional income. This implies that the extension service should focus not only on agriculture, but also on activities such as human nutrition and other agriculturally related income producing goals.

4. Decide whether Cassa EPPICs should concentrate on a few problems in depth, or lightly touch on many problems. Choosing between these alternatives or a combination is not easy. However, selecting a few problems for which results can be released quickly is probably feasible. As experience is gained and more resources become available, solutions to other pressing problems can be sought. After the value of extension has been demonstrated, and its acceptance by key leadership assured, extension planners can give more consideration to longer term agricultural problems.

Extension programs should be prioritized by carefully gathering information from both extension personnel and extension clientele. The Cassa EPPIC provides an effective site for data gathering and analysis. For example, interview data from both farmers and personnel of the Ministry of Agriculture indicate that agricultural marketing is the major problem. Therefore, marketing information to assist in decision making related to import substitution and export commodities could be a start in developing Lebanon's renewed extension system.

5. Arrange to obtain and train extension staff in subject matter and in teaching methods. Extension personnel without a high degree of education can contribute. However, the less training an extension worker has, the more technical supervision must be provided. A strategy to attract outstanding men and women is to recognize extension as a profession. This implies offering salary and fringe benefits...
commensurate with education level and experience. These employees will see the career opportunities and will improve through self-study and analysis as well as through formal advanced training.

6. Develop integrated extension education programs. An extension program includes educational projects that reflect people's needs and resources and a plan for allocating additional human and other resources. It plans for coordinating disciplines to assure cooperation and smooth exchange of information. It outlines the results expected from the planned extension effort; it estimates the time to implement major actions and outlines dynamic relationships among activities.

Summary and Conclusion

Problems of rural communities in a developing country context are diverse and complex. Problems are even more difficult when the country comes out of a long, devastating civil war. The rural reconstruction process is costly and time consuming. Agricultural extension is proposed as a major development strategy to address such problems. Three extension-system options for the Lebanese rural reconstruction program include: (a) a government sponsored extension system, particularly if increased equity is a primary goal, (b) a private sector extension system if flexible management and direct interaction with farmers is desired, and (c) a mixed, public-private, extension system that is responsive, intensive, flexible and politically influential. Neither the public nor private sector in Lebanon is established to conduct extension services independently. The third option, namely a mixed public and private system, is perceived to be the most feasible option. This can be achieved by adopting a Cassa-oriented extension system that is decentralized and responsive to both private entrepreneurial initiatives and societal goals. Professional principles can guide the administration of a similar system in other countries as well that are recovering from civil strife.

References


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