COMMENTARY

THE PUBLIC SECTOR AGRICULTURAL EXTENSION SYSTEM IN EGYPT:
A PLURALISTIC COMPLEX IN TRANSITION

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Abstract

A description of the agricultural extension system in Egypt reveals a complex of agricultural information transfer services mainly in the public sector with a small private sector component. Drawing from a review of secondary sources and their personal experiences, the authors suggest that the public sector extension system is in a transition phase, characterized by decentralization of programming decisions and operations, and a shift from an agricultural performance orientation to a more comprehensive, community development perspective. Implications of these trends are discussed.

Egypt's Agriculture Sector

Agriculture is a dominant sector in the Egyptian economy. It generates 20% of the gross domestic product and employs 35% of the labor force. Because only three per cent of the land is arable, holdings are small and farming is intensive. Nonetheless, favorable agro-climatic conditions, fertile soils, perennial water supply, and skilled farmers have enabled Egypt to achieve impressive yield levels in various crops (World Bank, 1995). Egypt also has a strong comparative advantage in fruits and vegetables, cotton, and wheat (USAID, 1994; World Bank, 1993).

Policy reform in the agriculture sector initiated in the mid-1980s removed stringent government controls on crop and area allotments, prices, input supplies, and marketing, and moved agriculture toward a free-market orientation. As a result of this reform, well-focused production support services, and technology dissemination by a research-extension system (Scoullar, 1994; World Bank, 1995), there has been an impressive increase in the productivity of commodities such as wheat, maize, cotton, and rice. Gains in productivity have not, however, been accompanied by growth of a modern marketing system (Scoullar, 1994; World Bank, 1995). Furthermore, farmers do not have access to market information, which could be gathered and disseminated by an extension service (Narayanan, 1991).

Most of the agriculture in Egypt is in the hands of individual farmers. Private farmers' groups have not been adequately developed. Most
cooperatives have traditionally been controlled by the government to support input distribution and marketing of controlled crops such as wheat, rice, and sugarcane. Thus, cooperatives lack the flexibility to take advantage of market forces and business opportunities (World Bank, 1995).

**Egypt's Agricultural Extension Complex**

Agricultural information and extension services are part of a pluralistic complex involving multiple systems within the public and private sectors to provide information, education, and problem solving assistance to farmers and their families. In Egypt, as in other countries, the tendency is for the public sector extension system, at least in theory, to serve the vast majority of small farmers, while the private sector suppliers and consultants work with corporate farms and large estates.

**Public Sector Extension**

Egypt's public agricultural extension system formally began as a government service in 1953. Since then at least nine presidential and ministerial decrees have reorganized and restructured the system. The present structure is the result essentially of decisions made in 1985. Basically, agricultural extension is a government-operated, ministry-based system, functioning at two levels: the ministry or national level and the implementation level in governorates-districts-villages. Figure 1 shows the overall structure of the system, and figure 2 the structure at the governorate level.

**Ministry Level**

The Central Administration for Agricultural Extension Services (CAAES), one of seven sectors in the Ministry of Agriculture and Land Reclamation (MALR), is the key national level organization. It is comprised of five functioning departments -- Extension Units and Agricultural Advisory Council Extension Programs, Extension Teaching Methods, Field Monitoring, Rural Development, a New Communities Department to be established - and a Department of Marketing Extension which is still in the planning stage. These departments provide technical supervision to Subject Matter Specialists (SMMs), Village Extension Workers (VEWs) and recently established district level Technology Transfer Specialists (TTSs) in the governorate extension services. Administrative supervision of extension services at the governorate level is the responsibility of agricultural directorates in each governorate. This dual supervision represents a source of conflict for both SMSs and VEWs.

Adding to this complicated structural arrangement are 15 other commodity-oriented central administrations in the Ministry, a majority of which are involved in extension, and have their counterpart structures and staff at governorate level. In general, CAAES extension specialists appear to work only with the central administration staff in crop production. The other commodity central administrations, such as animal production, horticulture, pest control, plant protection, rice, soil and water, sugarcane, and wheat have their own extension staff, who are untrained in extension methodology.

Research programs and their coordination with extension are a function of the Agricultural Research Council (ARC), an autonomous body under the Minister of Agriculture. The ARC is organized into research and extension sections. A Deputy for Research heads the research institutes and regional research stations, all of which are commodity or problem oriented, except for the Agricultural Extension and Rural Development Research Institute (AERDRI). A Deputy for Extension heads the units on Extension and Subject Matter Specialization.

In addition, four regional research and extension councils were authorized by recent ministerial decrees (Nos. 1523/1993 and 148/1994) in an effort to bring research and extension services closer to farmers, and to open up the decision-making process to local interests. These councils are intended to (a) discuss agricultural production constraints and suggest area-specific
solutions, (b) formulate research and extension programs, (c) coordinate and integrate university and research centers’ programs, (d) develop mechanisms for supporting research and extension, and (e) monitor and evaluate research and extension activities.

Implementation Level

At the implementation level, extension is organized with administrative and technical staff at the governorates, districts, and villages. A governorate administers about 170-180 districts. Each district administers 35-40 villages, and each village is organized into 150-200 geographic blocks called "hodes".

The staff at the implementation level have distinct roles. The role of the SMSs who are employed by the ARC is to assist the other extension workers (TTSs and VEWs), but there is some question as to the efficacy of this presumed assistance. Indeed, there is a lack of collaboration, which appears to be due, at least in part, to the fact that the SMSs are employees of the Agricultural Research Center (ARC) and not the CAAES. They are reported to be providing assistance primarily for high-value crops.

The Technology Transfer Specialists (TTSs), recently added to the extension services at central, governorate, and district levels, serve as the link between VEWs and district-level SMSs. Their principal role is to assist VEWs with the dissemination of technical information to the farming community, and to facilitate interaction among farmers, researchers, and extension personnel. In practice, however, there is little linkage between farmers, researchers, and VEWs.

VEWs based in villages are the cornerstone of Egypt's extension effort, extending new agricultural technologies directly to farmers. VEWs have a number of untrained assistants who help with sundry tasks. In theory, there is at least one VEW and several village assistants for each of the 4,000-5,000 villages in Egypt.

Obviously, the CAAES with its administrative and technical structure at the ministry and implementation levels, and the agricultural directorates at the governorate level, are the major functionaries in the public sector agricultural extension system of Egypt. The CAAES has employees at the district (TTSs) and village (VEWs) levels. In addition, extension functions are carried out through (a) the Ministry's commodity-oriented central administrations of different high value crops, (b) individual projects funded through bilateral and international arrangements (AID, World Bank), and (c) special regional-level campaigns for particular crops or new practices, coordinated by the ARC. As a result, public sector extension in Egypt is a pluralistic complex of extension services with a large body of staff organized under different administrative and technical structures attempting to influence the productivity of agriculture in the country.

This overlapping, multiple system of public extension is reflected in the large number of extension personnel, estimated at around 25,000, in government services. Exact figures are hard to determine, and records are unsystematized. Nevertheless, it is estimated that approximately 5,000 VEWs and 14,000 extension staff, including village assistants, work at the village level. An additional 3,600 technical staff belong to the ARC, whose research personnel, according to Presidential Decree Number 19, devote at least 30% of their time to extension-related activities. The AERDRI which conducts extension research, adds another 1,000 part- and full-time ARC government staff who are involved in extension activities. In sheer numbers, therefore, agricultural extension is the largest sector in the MALR.

A Multiple Extension System.
The government administration of agriculture itself employs a total of about one-half million people, nearly 12% of the formal agricultural labor force, and 12% of all government employees. Only a fraction of these workers is highly skilled. Poor pay, and lack of well-trained staff are significant problems for the administration. In addition, there is the problem of overstaffing as a result of the government’s guaranteed employment policies for secondary school and university graduates. Reform measures are being taken to make proper use of human resources while relieving the administration of excess staff.

Private Sector Extension

Extension in the private sector is conducted by private companies that provide information and advisory services to corporate farms, and consultants who sell their services to large estates, and undertake extension and farm management activities. In addition, large private producers of high-value crops such as fruits and vegetables often have their own staff of horticulturists, agronomists, and engineers. Often, these large producers will have production contracts with small producers, and use extension specialists to work with these...
producers, who sometimes may be large in number.

Few non-profit, non-governmental organizations (NGOs) are committed to rural development, and none of them is involved in supplementing or complementing the work of the public sector in extension. This is a serious gap which needs to be considered by NGOs concerned with agricultural, rural and human resource development.

This review shows that Egypt's extension system is in transition. On the one hand, the private sector is gradually expanding its influence in specific high-value commodities with large private or corporate farms. On the other hand, extension in the public sector is broadening the scope of its programs, and making a concerted effort to decentralize from the central ministry to regional/governorate levels.

**Broadening Scope of Public Sector Extension**

The role and purpose of agricultural extension vary considerably in different contexts. Analysts have interpreted extension's function according to their individual perspectives and the purposes they assign to it. The role and purpose of extension in Egypt is expanding from a purely agricultural performance orientation to rural community development, and indeed it appears to be moving toward a comprehensive service for farmers, farm families, youth, and rural communities.

The agricultural performance orientation views extension basically in terms of improving production and profitability of farmers. The rural community development perspective expects extension to advance rural communities, including the improvement of agriculture. The comprehensive, nonformal, continuing and community education orientation views extension as a provider of nonformal agriculturally-related continuing education for multiple audiences: farmers, spouses, youth, communities, and urban horticulturists (Rivera, 1989).

In developing countries like Egypt, emphasis has generally been placed on the development, improvement and expansion of agricultural performance services. The tendency among policy makers has been to view extension from a narrow but practical perspective as a system for agricultural information and technology transfer. This performance-oriented view aimed at greater production, productivity and income-generation is experiencing a broader operational interpretation. The current challenge is not just to make existing services function better, but to appraise the potential role and contribution of agricultural extension within the society's agricultural, institutional, and human development strategy. Therefore, Egypt's public sector extension is being expanded in two distinct directions: (a) commodity-oriented services, and (b) rural and human development, including family planning. At the same time, the Ministry is considering issues of privatization and decentralization of agricultural extension services.

**Decentralization of Public Sector Agricultural Extension**

Many countries are privatizing, decentralizing or otherwise changing their agricultural extension systems. High-income countries, including federally constituted countries, are privatizing through contractual arrangements, or charging farmers fees for agricultural information. Middle-income countries are following suit, sometimes devolving authority to subgovernments for mobilizing revenue and delivering extension services, or creating voucher systems, like Chile and Costa Rica, and promoting private sector extension consultant services.

Developing countries, especially those with a socialist background are approaching the challenge of decentralizing agricultural extension more tentatively. Egypt, for instance, is gradually deconcentrating its national authority for extension to the regional level (Rivera, 1996a; Rivera, 1996b). Deconcentration is defined as the transfer of effective control by central agencies to regional,
At present, extension decentralization in Egypt is equated with deconcentration strategies. Some officials claim that the extension system is already decentralized because it is implemented at the governorate-district-village level, and regional bodies are, in principle, responsible for working with governorates.

The establishment of Regional Research and Extension Councils mentioned earlier is an effort to bring research and extension services closer to farmers, and to open up the decision-making process to local interests. These councils indicate a clear movement toward regional deconcentration of the national agricultural extension system.

For Egypt, as for many developing countries, the question is what decentralization strategy is best to achieve the goals of greater efficiency, increased choice, and enhanced user responsiveness. Once this decision is made, then the next issue is the feasibility of implementing a decentralization strategy, i.e., the possibility of winning political acceptance for a given decentralization strategy.

If Egypt's subnational (governorate) governments are to acquire larger proportions of the public sector budget, they must be provided budget institutions that can constrain fiscal excesses, and be given the technical expertise to plan, implement and evaluate extension programs. When revenue raising is centralized and expenditures are decentralized, a higher level of spending ensues. Local capacity to regulate local taxation and greater reliance of local governments on their own resources appear to be essential to the success of decentralization (Hommes, 1995).

Concerns for human, social and agricultural development are becoming important challenges to agricultural extension in Egypt. Human development programs in particular seem likely to become a main pillar of Egypt's efforts to revitalize agricultural extension services.

**Conclusion**

Examination of Egypt's public sector agricultural extension system reveals a multifaceted agricultural information transfer complex that is in transition. It is observed that the system is moving toward rural development programs in addition to its traditional agricultural extension activities, and is making efforts to decentralize its operations.

Egypt's public sector agricultural development strategy will likely continue to focus on promoting smallholder production, and increasing smallholder accountability for program development. It appears that such a strategy can best be pursued by empowering farmers in the management decision-making processes of agricultural development support services, such as research and extension.

The participation of farmers could be ensured through the creation of village-level farmer advisory groups, district farmer advisory committees, and governorate farmer advisory councils. These groups would improve agricultural and rural program relevance and outcomes, and empower farmers toward greater involvement and responsibility for managing agricultural development support services.

At present, major questions are being asked: Who will pay for public sector extension, and how will the funds be acquired? Who will deliver, and to whom? Underlying these questions are equally fundamental questions such as who will control, and what will be the purpose of agricultural extension; what will be the "right mix" of public, private, and mixed-type extension services for clientele conditions; what structural and/or functional changes should be made to improve these systems. While involving difficult questions, current directions in the development of Egypt's agricultural information/extension transfer complex suggest
a major reformulation of extension policy in the new millennium.

References


Endnotes

1 In general, the extension complex includes a diversity of private enterprises: (i) for profit, such as domestic enterprises--large farm estates, domestic firms, and cooperatives--and multi-national enterprises (MNEs) and their subsidiaries; (ii) membership associations, e.g., farmers associations, and (iii) non-profit organizations, e.g., the NGOs. Domestic and multi-national firms, despite certain differences, share a common market orientation: they all seek to make a profit by selling goods and services. Membership associations share an interest in profit-making but are not set up for that purpose. NGOs, in general, are non-profit. Thus, we note two basic types, or differences, among private sector organizations, namely, those which are market-oriented and those which are not.

The array of providers, purposes and functions that can be attributed to agricultural extension justifies calling it "a complex." Its providers are not only multiple but involve both public and private sectors, and often these overlap or are mutually supportive. However, different providers will tend to emphasize distinct functions--whether information (technology) transfer, education by way of farm-management training, or problem solving through on-farm and office consultation. This complexity of provision and purpose contributes to making discussion of agricultural extension difficult and sometimes confusing or contradictory.

In addition, a general examination of different agricultural institutional settings shows that extension-type functions may be primary to an agency or organization, as with the agricultural extension service; secondary, as with private firms and cooperatives; or supportive, as with credit institutions, supply agencies, and marketing agencies. Also, new extension-type activities are being developed, such as "marketing extension" (Narayanan, 1991).

2 In discussions of public sector production extension systems a frequent assumption is that there is one unified extension system. This is not usually the case; indeed, there are usually multiple systems of agricultural extension within the same country, employed by a variety of agencies and programs. Production extension services may exist independently for crop, livestock, forestry and other agricultural products. Rarely is only one public agency in charge of all production extension activities in a country--patterns differ from country to country. In many of the English-speaking Caribbean countries, for instance, separate divisions exist for provision of livestock and crops services. Indeed, agencies other than the Ministry of Agriculture are normally responsible for export crops, such as tea, cocoa, coffee, rubber and coconut. Research, extension and training for a single commodity are usually based either in a separate Ministry or in an export-oriented board. Thus, we see that various agencies may be responsible even for production extension.

A different organizational pattern prevails in some West African countries previously under French colonial rule. In these cases, the Ministry of Agriculture is responsible for planning and coordinating agricultural development, maintains only a few central services (administration, staff training, etc.), and gives responsibility for research and extension to parastatal organizations or special project implementation units that often operate free of central government regulations concerning personnel recruitment, contracting, budgeting, procurement and other matters.

3 Governorates represent the intermediate government level between the national government and municipalities. There are 24 governorates (comparable in size to counties in the United States).

4 There is a lack of clarity between what is research and what is extension. Since the extension sector, including the various central administrations as well as CAAES, falls under the supervision of the ARC, it is unclear as to what constitutes extension and what constitutes research. Subject matter specialists in the various commodity-oriented central administrations often consider themselves to be extension personnel although they have no training in extension processes. What constitutes extension needs to be clarified throughout the entire agricultural sector.