Full Length Research Paper

The agricultural extension system and practices in Turkey

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This paper presents background information about the Agricultural Extension System (AES) in Turkey. It is concerned with the institutions, extension approaches and activities in the AES. In addition, some critical issues in public extension system are discussed. The AES, and the actors who provide extension and other services, are in both public institutions and private organizations. Agricultural extension activities are mainly performed by the Ministry of Agriculture and Rural Affairs (MARA). In addition, some farmers’ associations, agricultural cooperatives, charities and several marketing firms have been involved in farmer training and extension activities. Mass media are also part of the AES. Overall, extension activities have been mainly organized and delivered by public institutions. The private sector’s extension activities have only recently been developed, are limited in terms of coverage area, and are product specific.

Key words: Agricultural extension system, extension organizations, public extension, Turkey.

INTRODUCTION

This paper presents background information about the agricultural extension system (AES) in Turkey. It is concerned with the institutions, extension approaches and activities in the AES. In addition, some critical issues in public extension system are discussed. The agricultural extension system (AES) can be defined as an agricultural information exchange system which shows the actors, people and institutions, their interactions and communication networks between these actors to coordinate the information related processes (from generation to transfer, utilize and diffuse). The analysis of a national AES can provide the definition of stakeholders (actors) and structure of the system, the analysis of how different information sources use and support each actor, the relationships and interfaces between components, the understanding of how successfully the system works and on how to improve the system performance (that is system management) (Demiryürek, 2000). The AES in Turkey, and the actors who provide extension and other services (that is training, education, advice, expertise etc.) are in both public institutions and private organizations. The AES can be represented as in Figure 1.

Agricultural extension activities are mainly performed by the Ministry of agriculture and rural affairs (MARA). In addition, some farmers’ associations, agricultural cooperatives, charities and several marketing firms have been involved in farmer training and extension activities. Mass media are also part of the AES.

THE AGRICULTURAL EXTENSION SYSTEM IN TURKEY: ACTORS IN THE SYSTEM AND THEIR EXTENSION APPROACHES

Public extension services

MARA is directly responsible for public extension activities in agriculture. These activities are performed by
the departments of MARA and at different levels. The General Directorate of Organization and Support (TEDGEM) and its Department of Agricultural Extension are primarily responsible for the planning and management of agricultural extension activities throughout Turkey on behalf of MARA. In addition, TEDGEM also contains Department of Women Farmers which serves the rural women in terms of providing information about agricultural production methods, home economics and handcraft courses. In service training, courses have also been organized and implemented by TEDGEM to all MARA staff. The responsibilities of the Department of Agricultural Extension can be summarized as follows:

1. Develop extension programmes in order to introduce new information and technologies about agriculture and cooperative organizations;
2. Examine and approve annual farmer training and extension programmes proposed by provincial agricultural services, and help them in practice;
3. Manage and monitor foreign financed and local agricultural projects;
4. Coordinate the departments of MARA, and other ministries, universities and organizations related to projects and extension activities;
5. Define and provide mass media materials for extension activities.

Agricultural extension and related activities are implemented by agriculture directorates at 81 provinces, 803 districts (ÖZÇATALBAŞ et al., 2004) and thousands of villages, and the organizational structures of these are shown in Figure 2. Each provincial agricultural directorate consists of six sections, and administrative and financial departments. Although the farmers’ training and extension (FTE) Section is directly responsible for extension activities, other sections are involved in (and support) extension activities. FTEs focus on transferring information to and from farmers, and work with agricultural research institutes. FTEs organize the training programmes, seminars and extension services for farmers in the framework of the national support schemes whereas there is no scheme of extension services directly aiming at providing the extension services for a special national support scheme implemented by MARA. FTEs have also been supporting the farmers by giving information about the application rules and procedures of the support programmes, on interpretation of the handbooks and leaflets, the principles of the preparation of the business plans and documentation required.

Each province has a number of districts which have
also their own district directorate, responsible for agricultural and other services. The District Extension Officer (DEO) plans, organizes and monitors all extension activities and in-service training for Village Group Technicians (VGTs). Subject Matter Specialists (SMSs) are responsible for training VGTs regularly, assist DEOs and liaise with research staff. In selected villages, there are VGT centres. VGTs are intended to live in villages and be responsible for training farmer groups whose interests are the same. They also transfer farmers' problems to extension and research specialists. The extension system applied by MARA functions as a training and visit system. This started in 1983 in 18 provinces, as the First Agricultural Extension and Applied Research Project (AEARP 1). A second project (AEARP 2) was started in 1990 in 21 provinces. The aims of the projects are broadly to strengthen agricultural extension organizations and research centers, and improve the relations between these institutions. In addition, they aimed to introduce and diffuse modern agricultural technologies, help farmers to apply them, and increase the yields and production levels in agriculture (TKB, 1991). These projects provided an infrastructure, supported financially by the World Bank, by means of which VGT centers have been constructed in some selected villages. Additional vehicles for DEO and SMS mobility were also provided. Extension and research programmes have been improved through diagnostic surveys and in-service training activities organized abroad and in Turkey (Yünlü, 1993). Outside the project (AEARP) areas, the organizational structure of agricultural and extension services is similar. However, only a limited number of

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**Figure 2.** The organization structure of provincial agricultural directorates for information transfer (TKB, 1996).
VGTs have been employed at village level, and their financial resources are lower. In addition, the relations between extension staff and researchers are more limited compared to those in the project areas (Yünlü, 1993).

In addition to group extension techniques, MARA used television in farmer education through a Widespread Farmers’ Training Project by Television (YAYÇEP) between 1991 and 1995. Around 63,000 farmers throughout Turkey participated in this project. After the project was completed, the video cassettes of the programmes were sent to the provincial directorates to be used in training activities. This project depended on three important services, namely television programmes, printed materials and advisory support at the field level. The success of the project depended on these services being carried out simultaneously. However, some critical difficulties appeared. For example, the training books were sent to the participant farmers after the related television programmes had finished. Advisory and technical services at the field level had not been organized adequately to respond to questions and queries. The pilot application, monitoring and evaluation of the project had not been carried out. Hence, the problems related to the project stages could not be identified, and solved (Demiryürek, 1993, 2006).

In 2004, MARA implemented a new extension project in 1000 selected villages from 81 provinces. Project name was “1000 agricultural consultants for 1000 villages”. Project was financed by voluntary organizations, institutions, private sector and individual persons. Voluntary agricultural consultants worked under this project lived in the villages, in order to serve and transfer required information to farmers on time. Although there were many problems during implementation of this project, it has been important role by addressing private consultant role in agriculture extension system. “Legislation on Regulating of Agricultural Extension and Advisory Services” was issued in 08/09/2006 for systematizing extension services and regulating public and non-public extension activities after implementation of this project. Also, Agricultural Extension Development Project (TARGEL) has been started by MARA using gained experiences of it. TARGEL has just been implemented since 2007 in order to provide required information and training on timely, at the field level to the farmers by means of newly employed 2500 agricultural engineers and veterinary surgeons in the villages throughout Turkey (Çadirci, 2009).

The project of “Organic Agriculture for Turkey” was funded by the EU and implemented by an international consortium for MARA between June 2006 and November 2007. The project was concerned with policy development, capacity and institutional building, and training. The overall objective was to enhance sustainable development of organic agriculture and related sectors in accordance with the EU requirement. Specifically, the project had five tasks:

1) The alignment of Turkish organic agriculture legislation with EU;
2) Strengthening the capacity of MARA as regards supervision;
3) Promotion and extension of organic agriculture;
4) Implementation of an efficient control and certification system and
5) Exchange of organic farming information between farmers and other related stakeholders.

One of the important tasks of this project was to set up Farmer Field Schools in five pilot project areas which can be used as a model to replicate this work in other parts of the country in the future. The project contributed to the institutional support and the development and promotion of the organic sector in Turkey (Demiryürek et al., 2008). Young Farmers Training Project targeted 15 to 24 years old farmers who live in rural areas has also just been put into practice, in order to use young farmers voluntary staffs of agricultural extension system by providing them necessary information and training. These trained young, dynamic and open minded farmers will be contact farmers. In summary, recently implemented public extension projects (TEDGEM, 2009) are as follows:

1. Farmers Training Project by Television
2. Agricultural Mechanization Training Centre for Irrigation Areas Project
3. Agricultural Extension Services Support Project
5. Agricultural Extension Development Project
6. Young Farmers Training Project
7. Cooperative Trading System Trainings
8. Training of Rankers on Agricultural Issues

The development of farmer training and agricultural extension programmes are presented in Table 1. They include demonstrations, farmers’ meetings, on-farm trials, home economics programmes, farmer training courses in different subjects, exhibitions and contests and field days. In order to support extension activities, printed materials such as books, newsletters, brochures and magazines were prepared and distributed to the farmers. In addition, slides and videos were used as audio-visual materials in extension activities. The numbers of activities organized and farmers involved have been increasing quantitatively. However, the quality and degree of impacts can be easily speculated due to coverage, distribution of regions, lack of staff, finance and materials used in these activities. “Legislation on Regulating of Agricultural Extension and Advisory Services” issued in 08/09/2006 for systematizing extension services and regulating public and non-public extension activities. This legislation was put into practice in order to provide farmers’ needs regarding information, experience and technical methods adequately and timely at the field level. This was also introduced in
Table 1. Farmers training and extension activities organized by MARA, Turkey.

<table>
<thead>
<tr>
<th>Years</th>
<th>Demonstrations No</th>
<th>Field days Farmers No</th>
<th>Farmer meetings Farmers No</th>
<th>Courses Farmers No</th>
<th>Farmer visits Farmers No</th>
<th>Competitions Farmers No</th>
<th>Conferences Farmers No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>22.709</td>
<td>1.102</td>
<td>33.977</td>
<td>35.980</td>
<td>4.506</td>
<td>137.093</td>
<td>-</td>
</tr>
<tr>
<td>2004</td>
<td>9.327</td>
<td>35.723</td>
<td>1.188</td>
<td>27.822</td>
<td>559.079</td>
<td>1.360</td>
<td>33.037</td>
</tr>
<tr>
<td>2006</td>
<td>7.654</td>
<td>38.403</td>
<td>1.269</td>
<td>36.830</td>
<td>47.105</td>
<td>1.228</td>
<td>30.767</td>
</tr>
<tr>
<td>2007</td>
<td>5.503</td>
<td>27.414</td>
<td>554</td>
<td>18.763</td>
<td>30.935</td>
<td>653</td>
<td>18.976</td>
</tr>
<tr>
<td>2008</td>
<td>9.340</td>
<td>44.000</td>
<td>890</td>
<td>32.660</td>
<td>56.500</td>
<td>1.010.550</td>
<td>24.900</td>
</tr>
<tr>
<td>Total</td>
<td>47.706</td>
<td>232.800</td>
<td>7.060</td>
<td>220.860</td>
<td>4.851.600</td>
<td>11.890</td>
<td>307.430</td>
</tr>
</tbody>
</table>

Source: TEDGEM (2009).

order to integrate agricultural extension and advisory systems compliance with EU standards.

This new legal framework is expected to contribute to the public extension system by means of training and certifying private advisors. Train agricultural advisers by extension scientists and/or extension professionals in universities or in chambers of agricultural engineers and giving them certificates of competency. They will then work independently or in private extension organizations to support public extension system and help farmers to be informed about public agricultural support policies and benefited from agricultural supports. This system will initially provide financial support to the farmers who receive private advisory services, and then to private advisors. This will also contribute employment to certified advisors, because thousands of agricultural graduates are unemployed in Turkey (Çadirci, 2009). Evaluation of extension approaches and activities of MARA identify some critical issues exist in public extension. These can be summarized as follows (Demiryürek, 2000, 2002). First, the public extension approach has (to a large extent) been organized centrally, with a lack of farmer participation in extension activities from planning to implementation. Second, is the lack of coordination between the departments of MARA which manage extension activities.

Arguably, the general extension strategy of the country should (third) be changed from agricultural production to human resource development (Taluğ et al., 1990), and the tasks and responsibilities of the extension staff be more clearly defined (Yünlü, 1993). Research conducted by Cinemre et al. (1995) suggests that, the Ministry lacks technical staff, and that the distribution of staff throughout Turkey has not been balanced; some provinces lack staff and others, especially in the west, are over-staffed. The numbers of training and extension activities performed, training materials used and farmers participating in these activities have decreased year by year. The finance given to extension activities has also decreased. Much of the investment has been in the establishment of a physical infrastructure such as facilities and equipment, and human development in agriculture has not been effectively considered. In addition, due to the lack of finance, some planned investments and activities have not been realised in AERP (Yünülü; Cinemre et al., 1995; Demiryürek, 2000, 2002). Extension activities and farmer training have mainly focused on production techniques aimed to increase farm production. Hence, farmers’ preferences, their other requests and problems have been insufficiently considered. Finally, the provision of education for women and youth in agriculture has not been widespread (Taluğ et al., 1990, Cinemre et al., 1995, TKB, 1996).

There were some achievements, evaluation of AERP in 1990, conducted by MARA, concluded that research-extension-farmer relations had been developed and strengthened, and infrastructural investment such as in the establishment of VGT centres and their equipment had been completed. In addition, the yields of some crops had increased, input use in agriculture had intensified, and the land which was left uncultivated had decreased in the project areas (TKB, 1994). Overall however, evaluations suggest that, MARA had been more interested in physical
development than in human development in agriculture, support farmers through farmers organizations and facilitate the development of private sectors and advisors to contribute to the AES in Turkey.

Private extension activities

Actors in the private sector which have an extension function in the AES are the farmers' associations, cooperatives and charities, and profit-oriented private marketing firms, exporters, private consultants, mass media and universities.

The Chamber of Agriculture (TZOB) is the biggest farmers' association in Turkey, with more than two million members (TKB, 1996). Its effectiveness is limited to advocating farmers' rights (lobby activities), and providing services to its members. The government gives financial support to the TZOB budget, and so it is not independent administratively. Farmers have to be members in order to get credit from The Bank of Agriculture and some other credit cooperatives. Thus, membership tends to be perceived as obligatory. During the fieldwork, many of the respondents stated that, the only function of TZOB was the collection of membership fees, and complained about the insufficiency of its activities.

However, TZOB had carried out a Leader Farmer Project (ÖÇP) in four districts of Tekirdağ province since 1987, planned and implemented with the support of the German Agriculture Union (DLG) and the Association of German Technical Cooperation (GTZ) (TZOB, 1987). This facilitated the farmers' active participation in extension activities, supported the cost of services, and aimed to solve the farmers' own problems with the help of advisors. Actors in the private sector which have an extension function in the AES are the farmers' associations, cooperatives and charities, and profit-oriented private marketing firms, exporters, private consultants, mass media and universities. The Chamber of Agriculture (TZOB) is the biggest farmers' association in Turkey, with more than two million members (TKB, 1996). Its effectiveness is limited to advocating farmers' rights (lobby activities), and providing services to its members. The government gives financial support to the TZOB budget, and so it is not independent administratively. Farmers have to be members in order to get credit from The Bank of Agriculture and some other credit cooperatives. Thus, membership tends to be perceived as obligatory. During the fieldwork, many of the respondents stated that, the only function of TZOB was the collection of membership fees, and complained about the insufficiency of its activities.

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Private consultants provided information support to their clients, mainly in developed areas such as in the west and south of Turkey. The wealthier farmers had generally hired these advisors. Agricultural companies such as canning factories and exporters have commonly applied a contract farming model. Information, technical support, and inputs are given to their contract farmers in order to obtain high quality products related to demand. Contracts are especially used in west Turkey, and places where traditional agricultural export products are grown. In particular, some private firms have organic production projects to export these products.

Recently, the bread factory (Istanbul Halk Ekmek, IHE) of Istanbul Municipality has organized and implemented Organic Agriculture Project which is a comprehensive social responsibility project which aims to reach small and poor farmers in Eastern Turkey. In 2006, IHE contracted those farmers to produce organic wheat, make bread and sell it to the relatively wealthier consumers in Istanbul in the hope and expectation that it would create significant impact on poverty alleviation and rural development but the potential benefits are multidimensional. Farmers in the project area adopt organic agricultural practices for their incomes which are increased through market guarantees and premium prices. Thus, the project may limit the drift from the land, help the development of domestic markets and hence persuade other producers to farm organically (Demiryurek et al., 2008).

RESULTS

Public and private organizations which are responsible for farmer training and extension activities constitute the AES in Turkey. Public extension activities are mainly provided by MARA and their directorates at province, district and village levels. The organizational structure of MARA is top-down, and their extension activities are managed through the Training and Visit System. Public extension lacks technical staff and finance, which has decreased the number of activities organized and the training materials used for farmers since the beginning of the 1990s. The lack of participation evident in the system is the consequence of centre-planned public extension programmes. The number of people in the rural areas mainly involved in agriculture (about 4 millions farm holdings, mainly small and over-fragmented) is beyond the sources (finance, staff and infrastructure) of public extension services (that is MARA) and they are mainly of a low level of education and lack farmers’ organizations (Demiryürek, 2002; Özçatalbaş et al., 2004).

Widespread Farmers’ Training Project by Television (YAYÇEP) was very successful in widening the context of the extension work and reaching more rural people, especially making them aware of various innovations on agricultural, social, cultural and health subjects. However, some issues were emerged related to the project. The lack of monitoring and evaluation at every stage, to spot these insufficiencies and the failure to do necessary adjustments are some of the critical weaknesses of this project. In parallel with the previous research on distance education in the world, limited empirical research on YAYÇEP shows that, the television programmes were very effective in increasing the awareness about agricultural techniques. However, their effectiveness was limited as to the process of adoption and field applications. This was mainly due to the lack of suitable advisory services and demonstrations at the field level necessary to support television programmes.

Farmers’ associations and cooperatives mainly focus on input and credit supply, and the marketing of agricultural products. However, they are involved in some farmer training and extension activities. Their financial support by government limits their independence and effectiveness in advocating their members’ rights, and providing services. Turkish Development Foundation has directed activities to special groups which have been partly neglected by MARA such as poor farmers, rural women and youth. However, its coverage area is limited. This charity fosters organization and participation in its rural development and extension activities. Agricultural input suppliers have organized meetings in villages in order to introduce their products. Private consultants and their services are limited to high income farmers. Some agricultural processors and exporters have recently introduced contract farming. The organic marketing company is one such firm. In addition to credit and input supply, these processors provide information and technical support to their clients, and give market guarantee to their contract farmers. This fosters the farmers’ involvement in the project, and increases the rate of adoption of techniques introduced by the company.

Conclusion

Overall, extension activities have been mainly organized and delivered by public institutions. There is a lack of effective communication between agricultural information providers. The private sector’s extension activities have only recently been developed, are limited in terms of coverage area, and are product specific. Thus, there is a need for effective coordination of the information dissemination in the system.

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