

Full Length Research Paper

Developing participatory extension applications in Turkey

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The purpose of extension is to increase the living standard of the farmers and their families in the rural areas. Extension services in Turkey have been implemented mainly by the Ministry of Agriculture since the 1940s and are currently organized by the administrative districts of the Provincial Agricultural Directorates. Agricultural extension approaches in Turkey have been mainly derived from extension applications in different countries and the previous projects of the World Bank and FAO. For that reason Turkey has tremendous experience on the application of agricultural extension approaches from many countries. Agricultural extension activities are implemented by several institutions; each of them has a different legal status. The extension programmes were accepted and implemented using six approaches during different periods in Turkey. During this period the dominant approach was the promotion of technology transfer by the 'general agricultural extension approach' until the 1990s. The 'training and visit approach' has also been used since the 1984s. The common characteristic of these two approaches was the lack of farmers' participation. This was an important detriment to the effectiveness of extension services in Turkey. The implementation of participatory extension approaches was very limited but effective. The contribution of universities, NGO's (e.g. producers' organizations and farmers' unions) and private firms to extension activities were limited. Thus, it will be very useful to apply the participatory approach where rural people have to take the initiative and think about their own problems with appropriate solutions by relevant extension organizations in Turkey.

Key words: Turkey, participatory extension, farming system, extension systems.

INTRODUCTION

Public extension services play a key role in the implementation of rural development programs for the sustainable management of natural resources. However, the agriculture sector suffers from restricted financial and human resources (Pokorny et al., 2005). As it is known, the agricultural extension work has spread throughout the modern world because, in the long run, no country can

afford to neglect its rural population. Every nation needs an adequate and dependable supply of staple foodstuffs and fiber for its entire people. Recently governments have realized that, if the general standard of living is to rise, agricultural production must provide enough to feed and clothe not only the farmers and their families, but also those workers in other occupations, such as health, education, transportation, defense, industry and administration. Extension work has frequently been described as "helping people to help themselves" (Jacobsen, 1987a). This approach is valid for many countries around the world, has traditionally been focused on farmers

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and rural communities (Jacobsen, 1987b). Rural populations face a range of new problems in the context of rapid globalization and economic liberalization (Jodga, 2000). The Agricultural extension services in developing countries have been widely criticized for their ineffectiveness (Dulle, 2000). Actually not only extension, participation is a very important concept for all field and disciplines. For example, on the base of participatory methods for problem assessment, food problems were attributed to several factors, such as limited arable land, poor soils, lack of access to improved seeds and other agricultural services arising partly from the lowland and gender biases of national planners (Gurung and Gurung, 2000).

The basic models for agricultural extension are: technology transfer, farmer first and participatory approach (Foster et al., 1995; Vanclay and Lawrence, 1995). The first model involves a top-down technology transfer from researchers to farmers. The second is a bottom up approach that emphasizes the important role of farmers to contribute to the design and implementation of research and extension services. The third model is a participatory approach which, in some ways, integrates and extends the first two models. The participatory approach relies on the involvement of researchers and farmers, as well as other stakeholders (Foster et al., 1995). Since the 1980s, participatory approaches to agricultural extension and research have been promoted across all continents by groups of development promoters. An increasing number of organizations are now implementing participatory technology development in various settings (Anonymous, 2002). Governmental and non-governmental institutions increasingly acknowledge the need to move away from top-down instructions and pure technology transfer towards a more participatory approach that directly involves farmers and rural communities in defining and achieving their own development goals.

The starting point for this change is the recognition that rural people are the owners of their own development. This realization entails a number of changes for all involved actors. Rural people have to take the initiative and think about their own problems and find appropriate solutions. For agricultural extension agents, this means fundamental changes in the way they work. They have to learn how to interact and become the listeners and facilitators of development processes as in farmer-to-farmer extension, farmer field schools, partner-centered extension and participatory extension (Anonymous, 2004).

Participatory extension provides the mechanism to achieve this goal. To improve the effectiveness of extension, it is necessary to equip development workers with techniques and tools of participatory planning, farming systems, monitoring and evaluation. Sustainable agricultural development has induced the need for more participatory extension and research methods. The

approach to monitoring and evaluation increases the chances of the finding solutions, and is a process that builds local capacity in decision-making and problem solving and requires special knowledge and skills (Abukar, 2002). The objective of this study was to examine the importance and implementations of participatory extension methods in Turkey.

RESULTS AND DISCUSSION

The participatory extension approach

The participatory extension approach (PEA) was first developed in Zimbabwe by the Department of Technical and Extension Services (AGRITEX) in cooperation with two GTZ-assisted projects during the 1990s. Since then, the approach has been developed further in a GTZ-assisted project in South Africa (Anonymous, 2004). The "participatory" part of a PEA means that farmers are the principal decision-makers in defining goals, planning, implementing and evaluating development activities. PEA is different from conventional extension approaches. In this approach, the principal task of extension workers is not first and foremost to transfer agricultural know-how and technology to farmers (Anonymous, 2004). PEA puts emphasis on strengthening farmers' problem-solving capacities from the very beginning. The principal instrument for practicing problem-solving skills is the PEA learning cycle. The learning cycle makes flexible use of a variety of participatory methods and tools (e.g. participatory rapid appraisal, participatory technology development or action learning).

Instead, the role of the extension worker is to facilitate an in-depth situation analysis by the farmers themselves at the beginning of the relationship between the extension service and a community. Once the farmers have become aware of the root causes of their problems and have identified the most pressing of these, the extension workers provide technical knowledge and technologies, which may be useful to resolve the problems identified. To perform well in a PEA, extension workers need not only agricultural expertise, but also good analytical, pedagogical and facilitating skills (Anonymous, 2004).

The situation of agriculture and extension in Turkey

Agriculture in Turkey

Agriculture sector is still important for socio-economics in national economy. The contribution of agriculture to GDP is about 14% (SIS, 2004). Around 33.9% of total population employed in agriculture sector 31% of the total population living in rural areas, population grow rate 1.8%. Agricultural contributes about 15% of total exports, but if the processed agricultural products are taken consideration this ratio is up to 25%. Average farm size is

Table 1. Applied extension approaches by the ministry (MARA) and others.

Period	Approach	Level and place	By (Implementors)
1950s-1980s	The general agricultural extension approach	National	MARA
1963-	The project approach	Regional	MARA and Int. Finance Institutions
1963-1978	The training and visit approach (T and V)	Regional	MARA and Int. Finance Institutions
1982-	The commodity specialized approach	Regional, second crop research and extension project	MARA
1984-1997	The training and visit approach (T and V)	National- regional	MARA and Int. Finance Institutions
1987-	Participatory cost-sharing approach	Regional-Tekirdag province leader farmer project (OCP)	TZOB, DLG (The Union of Turkish Chambers of Agriculture and the German Agricultural Society)
1990-1998	The farming system development approach	Regional – Taurus mountains project (Adana and Mersin Provinces)	Faculty of Agriculture of University of Cukurova, The Ministry and ICARDA
1991-1994	The participatory rural appraisal	Regional – (Sivas, Kayseri provinces)	Central Research Institute for Field Crops of the Ministry, ICARDA
1998-2000	Participatory learning and action approach	Regional – Odemis district of Izmir Province (Bademli village)	The Agricultural Research and Extension Center of University of Ege, Izmir
1999-2001	The participatory rural appraisal	Regional –Menemen district of Izmir Province (Suleymanli, Belen, Musabey, Seyrek, Harmandali, Kesikkoy villages)	The Agricultural Research and Extension Center of University of Ege, Izmir
2004-2005	Participatory group-based learning approach farmer field school	Regional – Development and adoption of good agricultural practices of farmers, in Burdur Province	EU, Chamber of Agriculture of Burdur province, the Turkish Employment Organization
2005-2007	Participatory group-based learning approach farmer field School	National, organic agriculture for Turkey	MARA, FAO
1998	Participatory rural appraisal	Regional –Kemalpassa district of Izmir province.	The Agricultural Research and Extension Center of University of Ege, Izmir

around 6 hectares. The sector produces enough food for population and exports some of the production as well.

Extension in Turkey

Turkey has much experience in the application of agricultural extension system and approaches in terms of relationships between farmers and extension- research organizations (Table 1). Training and extension services are primarily under the responsibility of the Ministry of Agriculture and Rural Affairs (MARA). Extension services are organized at administrative districts by the Provincial Agricultural Directorates. In Turkey, the first application of

the Training and Visit System (T and V) approach recommended by the World Bank was applied in 1963. Agricultural education in Turkey started in 1848. However, the main developments on agricultural research and extension have occurred since the 1930's (Senocak, 1967). Agricultural extension activities in Turkey have been mainly influenced by extension applications in the USA and Western European countries. In addition, these new systems and approaches in agricultural extension suggested by the World Bank, International Rural Development Bank (IBRD) and other international donor institutions have been implemented in Turkey. The main change in the field of agricultural extension in Turkey occurred in 1984, when a new programme, the

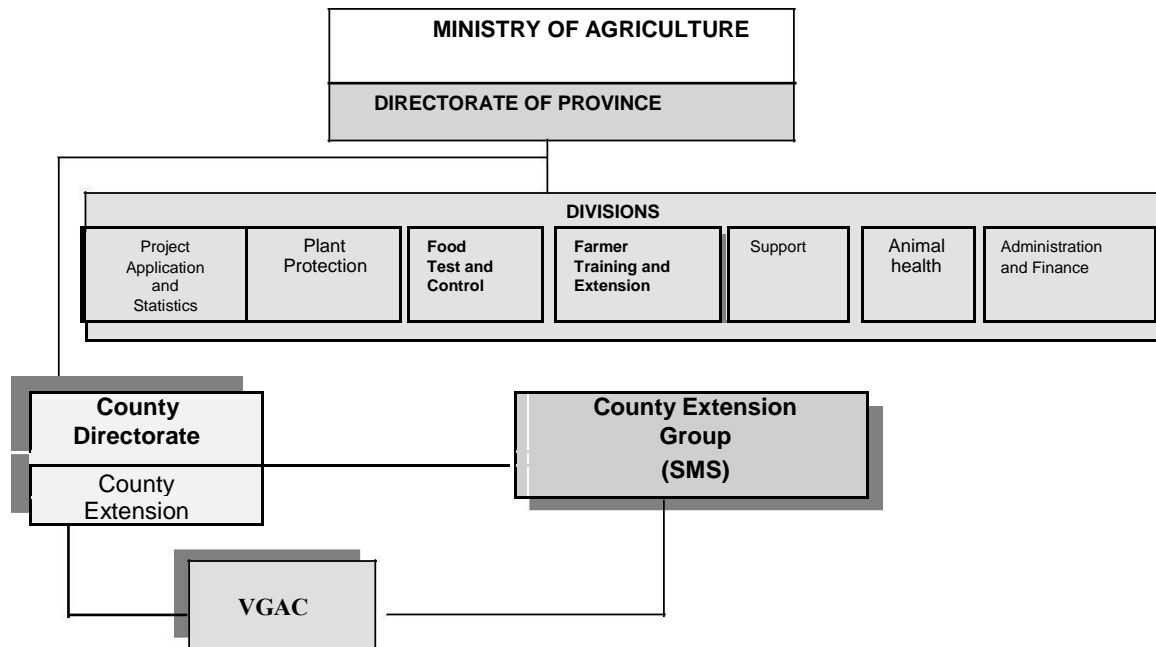


Figure 1. The extension organization in provincial level in Turkey.

“Agricultural Extension and Applied Research Project (AEARP)”, was implemented, and the T and V system of the project has been implemented throughout the country, so far (Kumuk and Oktay, 1994; Ozcatalbas and Gurgun, 1998).

Agricultural extension includes needed elements to farmers’ productivity. In Turkey, the agricultural extension has been focusing on the technology transfer approach as a methodology for enhancing the productive capacity of agricultural producers. According to this, the dominating approaches are the technology transfer, as ‘general agricultural extension approach’ until 1990s and the T and V approach also are dominated after the 1984s until today. Common characteristic of these applied approaches is the lack of farmers’ participation. This is the most critical disadvantage for impact of extension. In the country the implementation of participatory extension approaches were very very effective but the application area was very limited.

Public extension organization in Turkey

In Turkey, extension services for farmers has implemented mainly by the Ministry of Agriculture and Rural Affairs. Extension services are organized at administrative districts by the provincial agricultural directorates. Applied agricultural extension approaches are based on “technology transfer”.

Technology transfer typically involves a top-down approach where scientists determine research priorities, generate innovations they believe are good for farmers

and provide the results to extension agents (Chambers et al., 1989).

In Turkey, “Agricultural Extension and Applied Research Project (AEARP), and T and V” were applied at the country level in 1984. As it is known, T and V aims to correct the elements (inadequate on job training, inadequate visits to farmers, weak links between research and extension) of the general extension system and to offer structural changes (Kumuk and Oktay, 1994; Ozcatalbas and Gurgun, 1998). The current organization of extension in Turkey can be divided into two main parts. Those are the central organization in the capital (Ankara), and town and village organizations. Extension services in the towns are the first links of the extension chain out of the capital (Figure 1). The last links of the extension chain are the village extension services which reach rural communities through Village-level Extension Workers (VGAC) (Kumuk and Crowder, 1996; Ozcatalbas and Gurgun, 1998).

Private extension and agricultural advisory system in Turkey

The private extension which have an extension function in the agricultural information system in Turkey are the farmers’ associations, cooperatives and charities, and profit- oriented private marketing firms, exporters, private consultants and mass media. 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.

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 (Demiryurek, 2002; Ozcatalbas et al., 2010).

Public institutes have played a major role in the agricultural information system in Turkey. The contribution of private firms and farmers' organizations to the production and dissemination of information is increasing, but their role is not likely to be a major substitute for public sector involvement in the agricultural information system. The international donor institutes mainly cooperate with public institutions and therefore concentrate on disseminating existing information rather than producing new information.

Turkey has many agricultural and related organizations that have made considerable contributions to agricultural development within the country. Despite this, there is no effective communication network between agricultural institutions. This has inhibited the generation and dissemination of new technologies. Special attention should be given to coordinating the whole system that produces and disseminates agricultural information. This would make it possible to conduct studies that are more effective than those that currently exist. There is a parallel between increasing the efficiency of MARA in the agricultural information system and increasing the contributions of other interested sectors to that system. As mentioned above, there are currently critical insufficiencies in the public extension system. For this reason it is suggested that, in addition to increasing effectiveness of public extension, steps must be taken to increase the effectiveness of farmers' organizations and the private sector in the field of extension (Ozcatalbas et al., 2004).

Koymer and Targel projects

In 2004, MARA implemented a new extension project in 1000 selected villages from 81 provinces. Project name was "1000 agricultural consultants for 1000 villages" and then called KOYMER (Village Centered Agricultural Production Support Project). This 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. Agricultural Extension Development Project (TARGEL) has been started by MARA using gained experiences of KOYMER. 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 2,500 agricultural engineers and veterinary surgeons in the villages throughout Turkey (Demiryurek and Akın, 2010; Ozcatalbas et al., 2010).

A new legislation on extension and advisory services

"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 (Anonymous, 2006). 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 order to integrate agricultural extension and advisory systems compliance with Europe (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 (Demiryurek and Akın, 2010; Ozcatalbas et al., 2010).

Important case studies from Turkey

In the last thirty years, an increasing number of governmental and non-governmental organisations promote participatory approaches for rural community and regional development in all continents. Various participatory techniques are applied. The followings are the salient achievements of the projects based on participatory extension approach. According to these, the relevant approaches were concluded and the results of the case studies are summarized.

Participatory and cost-sharing approach

1. Leader farmer project: The Chamber of Agriculture (TZOB) had carried out a Leader Farmer Project (OCP) in four Districts of Tekirdag province since 1987, planned and implemented with the support of the German Agriculture Union (DLG) and the Association of German Technical Cooperation (GTZ). 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. The project established close relations between farmers and advisors in extension and other activities. The development of an evaluated private advisory system was the overall aim. A group of between 80 and 100 farmers established a working group in their district and employed an advisor. Members of the group elected an administrative committee consisting of 3 or 4 farmers to plan and manage an annual programme according to the priorities and problems of the working group. The cost was met by membership fees and diminishing financial support from TZOB. Cooperation between the working groups, the local university, public and private agricultural organizations developed. Common machine use had been promoted. In addition, private marketing companies (seed, machine, fertilizer and pesticide) had organized introduction meetings.

After the sponsors decreased their contributions to the total cost, the working groups faced collapse; they had not achieved financial self-sufficiency and administrative independence in the planned time. Another problem was that the number of farmers in a group was more than an advisor could service; the advisors were also responsible for keeping farmers' records, providing inputs and so on. Some advisors left their jobs, and transferred to local private marketing firms (Demiryürek, 2002).

2. Participatory rural appraisal approach: Participatory Rural Appraisal (PRA) helps communities mobilize their human and natural resources to define problems, consider previous successes, evaluate local institutional capacities, prioritize opportunities, and prepare a systematic and site-specific plan of action- a village resource management plan for the community to adopt and implement. PRA is a new way to systematize a very old approach to rural development community participation. PRA offers a significant alternative to centrally planned and externally managed development efforts, many of which have proven difficult to sustain. Ultimately, among the most important strategies to sustain rural development are approaches that rural communities can manage and control (Noah-Odour et al., 1992).

Menemen county case of Izmir province

The study is implemented by Ege University in Turkey (Ozkaya et al., 2003; Karaturhan, 2004) and some important results are given below:

- i. The farmers accepted many innovations and some of the innovations were transferred "from farmer to farmer".
- ii. These are; such as farming practices, new inputs or varieties, etc. Some new crops, like mushroom, organic vegetable (by women in their home gardens for the

family) were accepted by farmers.

- iii. Farmers planned and implemented some adaptation research conducted by farmers for the whole village.
- iv. Some collective actions had been performed (such as planting eucalyptus trees, collecting soil samples to analyze, etc).
- v. The Gediz river pollution problem again became the most important part of the county agenda by the efforts of a project village leader and team. A council for that problem had been established.
- vi. In a village (Harmandali) the men's group could not succeed because of facilitator problems. But the village leaders and men were also not interested in sessions.
- vii. Women work intensively in milk production and the men are retail sellers in the city. The women group was very effective in milk production. The women group and their actions became a driving force in milk production for the whole village as also happened in waste problem.
- viii. With this project the governmental organizations could enter the villages about the women health problems, birth control problems, human relations problems, women rights.
- ix. The women empowered relatively. Self-confidence increase was very high for some woman.

Sivas and Kayseri provinces case

The study is implemented by Central Research Institute for Field Crops of the Ministry of Agriculture and Rural Affairs. The project is funded by the Ministry and Icarda in Aleppo between 1991 and 1994. The project was aimed multi discipliner work with all stakeholders in related provinces.

Halilbeyli village case of Izmir province

The study is also implemented by Ege University in Halilbeyli Village of Izmir province of Turkey (Ozkaya et al., 1998) and some important results are given below:

- i. The vaccination rate against the foot and mouth disease has increased from 50 to 80%.
- ii. The maintenance rate of the milking machines raised from 1 - 2% to 100%.
- iii. For animal feeding the silage making tendency among the farmers has gone up from 3 to 15%.
- iv. The nutrition habits have been amended.
- v. The increasing of the knowledge levels of women about health.
- vi. Knowledge improvements was attained.

Farming system development approach

Farming System Research (FSR) was developed based

on the premise that activities commenced with an understanding of the problems of farmers, with the input of local knowledge and practices are an essential part of innovation development. In all these FSR approaches a participative approach is recommended, though the activity may differ on degree of participation, and also on how farmer-directed research is managed (Carberry, 2001).

The Farming System Research and Extension (FSR/E) approach to agricultural development involves development and implementation of production technologies for the traditional and small scale farming sectors (Ozcatalbas and Erkan, 1996). FSR requires active participation of farmers in the research activities. Farmers are not passive anytime in such a system. The relation between farmers and researchers and extension worker are very close. All activities are directed to the farmers' needs and conditions (Ozcatalbas and Erkan, 1996; Ozcatalbas, 2001).

Taurus mountain villages project

The study was implemented in the villages of Adana and Mersin Provinces by Cukurova University in Adana Province of Turkey and Institute of ICARDA in Aleppo (Syria) supported (Erkan et al., 2001) and some important results are given below:

- i. New improved cultivars of wheat, barley and chickpea have been adopted in the project area.
- ii. A very clear increase in yields and in quality in these crops was achieved.
- iii. The project introduced new enterprises on the farms that did not exist before the start of the project. The notable examples of these are vetch– oat combination, triticale, sainfoin and new fruits such as cherry and grapes.
- iv. A significant decrease in the fallowed land was achieved.
- v. The changes in the breeds of animals (cattle, sheep and goat) significantly increased the income of the farmers.
- vi. Livestock feeding methods have also changed. Farmers produce more fodder crops, and thus spend less in buying feed concentrates.
- vii. An important progress was achieved in apiculture. It was found that changing queen bee in the beehives every year or once in two years.
- viii. Significantly increased honey production.
- ix. The project also succeeded in creating awareness of farmers, development agents, and district administration in the importance of the availability of new inputs with reasonable prices in the local markets.
- x. Technological changes which are not very costly to farmers and government, the "farm income" of partner farmers increased by 64.58% during the project period.

xi. The average farm income has increased from \$ 1,999 in the first year to \$ 3,290 in the final year.

xii. Women in the project were also given attention. Food and human nutrition courses were organized for them.

xiii. Economic progress on the farms, some efforts were made to improve farmers' and their family's health.

Participatory learning and action approach

Participatory rural appraisal and participatory learning and action approach methods are used for poor and not in good condition of the communities of developing countries. It is the promotion of interactive learning, shared knowledge and very flexible to different targets and demands. As well known, this kind of participatory approaches requires an interdisciplinary work such as agriculture, community health and rural life development and others. They offer opportunities for mobilizing rural and local people for joint action (Chambers et al., 2004).

Participatory learning and action project

By the experts of Ege University Agricultural Research and Application Center, in Bademli village of Odemis District of Izmir province, participatory learning action project was conducted. "The determination of the state and the priorities in nursling technologies and participatory learning and action project for research and education" project was supported by the Ege University Agricultural Research Fund and Research Project Unit. The aim of this project is to establish high quality and healthy seedling production facilities. The planning for this for a good, Aegean University and is a collaboration by Bademli village. Thus important to identify research topics, research, and farmer cooperatives to provide the most high-level cooperation is aimed at.

Project team is composed from 15 persons who are village leaders (small, medium and large farmers), and project team and cooperative managers. In the first session, in the village of nursling problems and market problems are discussed in relation to nursling. Participants were considered 20 issues. The most important issue has been expressed as a marketing problem. Very low-quality nursling production and marketing difficulties have to be concluded. Problems can be solved with the cooperation of consensus was reached. Group discussions covered seedling diseases and pests, soil and plant nutrition problems; content of soils, drip irrigation. Soil analysis was done. According to the analysis of very low pH and lime increased.

Increased demand for soil analysis in the village. The most important action of the cooperative is to buy 3 - 4 ha of land for seedling rootstocks, and for the production, Faculty of Agriculture, Plant Protection Department, viruses, nematodes and bacteria free nursery plants,

decided to prepare for the sub-projects. Greenhouse for nursing production was decided to cooperate with the Governor (Ozkaya, 2000).

Participatory group-based learning approach

The Farmer Field School (FFS) is a group-based learning process. During the FFS, farmers carried out experiential learning activities that helped them understand the ecology of their rice fields. These activities involve simple experiments, regular field observations and group analysis. The knowledge gained from these activities enables participants to make their own locally-specific decisions about crop management practices. This approach represents a radical departure from earlier agricultural extension programmes, in which farmers were expected to adopt generalized recommendations that had been formulated by specialists from outside the community (Anonymous, 2010).

Good agricultural practices for field schools

The study was prepared and consulted by the staff of Akdeniz University of Turkey (Ozcatalbas, 2009). The project of "Development of rural laborers and adoption of good agricultural practices in Burdur province" is funded by the European Union (EU) and implemented by the Chamber of Agriculture of Burdur province and for the Turkish Employment Organization between 2004 and 2005. The project was concerned with human capacity and institutional building, training and extension. In Burdur province, agricultural sector is one of the main sectors and rural population rate is higher than Turkey. For that reason hidden unemployment is very significant problem for Burdur province.

The main objective of the project was to gain skills and knowledge about good agricultural practices and in particular the use of computers to teach. To reduce the risk of job loss and thus improve their business skills in 20 villages with 600 farmers (including 200 women farmers) through extension and farmers field schools. Specifically, the project had important task for farmers and sustainable agriculture in future. In the rural areas of Burdur province, to re-skill hidden unemployed 600 farmers (200 women), to develop their skills for productivity; to enhance adoption of good agricultural practices. One of the important functions of this project was to set up farmer field schools in the 20 villages which can be used as a model to replicate this work in other parts of the province in the future. Main components of the project are soil analysis and fertilizer practices for field crops, fruits and vegetables; animal health and animal husbandry and practices. Group moderators have been trained, and participatory approaches and practices in agricultural extension. Farmer groups were formed

based on the principle of voluntary participation. Programs, "Group-based participatory learning process" was organized taking into consideration. November 2004 until September 2005 that were made for each group of 10-day program. Course, each participant received 70 h, with group-based participatory approach (Ozcatalbas, 2009).

Organic agriculture for farmer field schools

The project of "Organic Agriculture for Turkey" is 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, training and extension. 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. The alignment of Turkish organic agriculture legislation with EU; strengthening the capacity of MARA as regards supervision, promotion and extension of organic agriculture; implementation of an efficient control and certification system and 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).

CONCLUSION

The participatory approaches were implemented in the local and very limited areas in Turkey. But the studies have showed that, participatory approaches can be used by farmer's unions, non-governmental organizations, rural-agricultural co-operatives, extension centers of universities and ministry of agriculture and rural affairs. It is useful to apply the participatory approaches where rural people must take the initiative and think about their own problems and appropriate solutions by the extension organizations in Turkey.

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