**The Learning materials attachments**

**Additional reading for topic 1**

**The term Extension and its functions**

The use of the word "extension" derives from an educational development in England during the second half of the nineteenth century. Extension, in general terms, is a function that can be applied to various areas of society. It operates in the industrial, health and education sectors, as well as agricultural and rural development. Originally derived from university extension, the term extension is therefore applicable to various areas of development.

**Agricultural and rural extension**

When agricultural extension is combined with rural extension goals, the extension function ranges even more widely in its purposes. Rural extension, for instance, includes non-agricultural activities such as microenterprise development.

**Non-farm Rural Microenterprise Development**. Most rural people depend upon multiple sources of income, such as petty trade, primary production, remittances, and casual employment. In short, rural people are not dependent solely on agriculture or natural resources for their livelihoods. As Carney (1998) points out, these might provide the basis for their survival but it may well be that the best prospects for significant livelihood improvement lie outside the natural resources sector in the generation of off-farm income». In addition to microenterprise development there is also the option of reaching the poor through rural public employment, i.e., labour-intensive rural public works projects (Ravallion 1990).

Since the AKIS/RD document combines rural with agricultural goals, and since rural development involves both farm-related and non-farm-related activities, it seems appropriate for certain extension programs to be engaged in activities beyond those already mentioned. FAO could promote the development of agriculture- related micro-enterprises in rural areas where such a priority would make sense for extension programs, and in this regard it might launch a special alliance with relevant organizations such as the Inter-American Development Bank.

**Technical Extension**. Agricultural and rural extension is the responsibility of various technical and service units, and serves many purposes. The various technical units within FAO indicate that agricultural extension is a function pursuing many different purposes: livestock development, forest use and conservation, fisheries engineering and capture, food and nutrition education, as well as well as crop development. Even in programs designed to foster agricultural crop production, extension may be concerned with providing information on other crucial issues such as food storage development, processing, farm management, and marketing. FAO has advocated and pursued all the above purposes of agricultural and rural extension at some time or another.

**Marketing Extension**. Other purposes of agricultural and rural extension include marketing extension. Marketing extension provides information on the post-harvest treatment of special crops and provides an important service in countries trading in food crops, including such fragile products such as bananas and cocoa. Other different types of marketing information services referred to as «market extension» also exist; these services provide information on variations in commodity prices; knowledge about where to sell some products; information on problems to do with the quality, availability and prices of inputs, and on the actual level of competition in the markets. These market information services should not be confused with marketing extension services that aim at improving the preparation and process of moving agricultural goods to market.

**Farmers’ Associations**. Agricultural and rural extension services can also help farmers and produce processors to organize themselves to meet their mutual agricultural interests. One of the Organization’s many ways of promoting people’s participation in development is through independent agricultural and rural development group associations). Financing economic self-reliance and the participation of the members in their organization’s activities is of central importance in such efforts to promote farmers’ organizations.

Some argue that extension can most effectively carry out its mandate, not by working directly with individual farmers but by working indirectly with and through farmers’ groups or organizations.

**Emerging purposes**. As populations grow and rural peoples flock to the cities, extension may (and already does in some countries) have to deal with urban and suburban clients (FAO 2000). What is currently considered «agricultural and rural extension» may eventually become «food and agriculture, rural and urban extension ». In fact, extension in high-income countries is already providing information and education services in urban areas, extending beyond technical agriculture and rural development alone.

Urban extension is a potential growth area for information transfer. As such, it addresses new audiences and new programs, and reflects the world’s rapid urbanization. This process will involve socio-economic and demographic changes that will affect food and nutrition, as well as epidemiological, institutional and socio-demographic changes. Food security, the employability of youth in the food industry, environmentally sound practices by small urban businesses, and other food and agriculture-related programs are likely to demand the attention of governments which are currently dismantling extension programs. Conceiving of extension purely as an agricultural production, rather than an educational service is short-sighted and limited.

**Topic 2 Case 1**

**Evolution of Extension in USA, Japan and other countries**

Two developments were of more significance to the evolution of agricultural extension in the United States. First was the Morrill Act of 1862, signed by President Lincoln during the Civil War, which was seminal in the creation of state colleges "of agriculture and the mechanic arts" in the northern United States; its land-grant provisions enabled the states to establish and fund their colleges. Second was the beginning at about the same time of the farmers' institute movement. These institutes organized one-or two-day (and later longer) meetings, which became popular after 1860, arranged by and for farmers.

By 1890, when the second Morrill Act granted federal funds for the establishment of agricultural colleges in the remainder of the United States, the farmers' institutes had spread throughout and become a national institution with federal support and supervision, further stimulated by the formal establishment of experimental work at the state colleges of agriculture under the 1887 Hatch Act.

Thus, by the end of the last century, a system of agricultural extension work had become well established in a large part of North America. In the United States, the colleges and their leading professors, including several notable proponents of more practical extension work, progressively took over the initiation and organization of the activity. This culminated in 1914 with the passage of the Smith-Lever Act, establishing the Cooperative Extension Service - a tripartite cooperation of federal, state, and local county governments, with the state college as the extension agency - "in order to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same."

Extension work also became established along the wide coastal belts of southern and eastern Australia. Several agricultural ("show") societies were formed in the second half of the nineteenth century, although their effect was slight, but as the state administrations became more organized, departments of agriculture were established in the 1870s and 1880s with the aim of developing the potential of their territories

**Japan**

Agricultural extension work had also started before 1900 in Japan. Following the Meiji Restoration in 1868, new administrative structures and various modernizing policies were adopted. Two agricultural colleges were established in the mid-1870s, staffed by Western (mainly European) teachers.

At these colleges and government farms, experimental work was conducted and new practices were tested and developed. At the same time, agricultural fairs and exhibitions were begun, and progressive Japanese farmers gave talks and demonstrations at them. These led to the development of many agricultural societies from 1881 onwards, a "movement" formalized by legislation in 1899.

The development and organization of agricultural extension work was not entirely confined to temperate countries. In a variety of ways, it had also begun in tropical areas, especially in colonial territories.

**Asia and African countries**

The first was to establish experimental and demonstration "botanical gardens." The earliest was opened in 1821 at Peradeniya, Sri Lanka (Ceylon), and two others were established in the country later in the nineteenth century. Smaller ones were also created in several Caribbean islands and some West African territories. During the early years of this century, some of these developed considerably, although others were short-lived. Those which succeeded provided important sources of agricultural knowledge and innovation and formed the basis for an interest in agricultural societies and agricultural instruction. Some attempts were also undertaken to improve "native agriculture." This was often associated with the creation, as part of the administration, of departments of agriculture and the appointment of professional agriculturists as directors of agriculture.

A central department of agriculture was established in India after the 1866 Orissa famine, and the government of India soon after resolved to establish departments in each province. However, it was 1905 before a central government directive ordered every province to appoint a full time director of agriculture who should organize agricultural research and demonstration farms with staff who could advise farmers. The first British colony to appoint a director of agriculture was Zanzibar in 1896. Of more significance, however, was the creation in 1898 of the Imperial Department of Agriculture for the West Indies, with headquarters in Barbados. Before 1914, such departments of agriculture had been created in several African and Southeast Asian territories, as well as in several Caribbean islands. In Sri Lanka, a few agricultural instructors had been appointed about 1880 to work alongside government agents. When in 1904 the Ceylon Agricultural Society was formed to promote experimental work, it also began an agricultural extension service with the objective of reaching native cultivators .Along with school gardens, the extension workers were considered an effective way of demonstrating improved cultivation practices to villagers. Similar developments also occurred in the Caribbean.

**Topic 4**

**Case 1 Ministry-Based General Extension**

Shortly before or after independence, organizing agricultural extension work under the wings of the ministry of agriculture seemed to be an ideal solution for many African and Asian governments. All options for reaching large numbers of clients and serving their needs in terms of quality information and assistance appeared to be open. The original colonial model combined research and extension within the same organization. All important aspects of small-holder agriculture - plant production, animal husbandry, home economics - could be attended to as the ministry established respective sections under its jurisdiction. The fact that the ministerial hierarchy followed the country's territorial subdivision allowed the systematic expansion of the system "down" to the village. The generalist nature of field extension staff functions corresponded to the set of problems faced by noncommercial growers.

To cater the specific needs - in terms of technology or in terms of target groups - specialists could be employed. Thus, clientele included all persons engaged in agriculture in principle. Commercial service and support organizations are lacking. Village-level extension staff could be expected to supplement information by rendering necessary services productively. A uniform and nationwide organizational pattern seemed to facilitate information flow - including the infusion of expatriate expertise - and corrective measures whenever weaknesses were identified. Public interest was to guide goal setting, program formulation, and the implementation of fieldwork.

A review of the last thirty years of extension work in Africa and Asia shows that reality is quite far and causes of failure are complex and manifold. The reasons for failure are complex and manifold and cannot be reduced simply to incompetence or the ill-will of national governments.

One reason is the contradictory nature of goals. Public interest implies serving farmers *and* the urban population, securing subsistence production *and* promoting cash crops for export, reaching the masses of rural households *and* serving the needs of specific groups, extending assistance to high-potential *and* disadvantaged producers. In short, priorities will have to be set, and these are all too often pro urban in terms of price policy, favoring innovative individuals within the modem sector, neglecting poorer strata, and forgetting about women farmers. In many ways, the hierarchical and highly bureaucratic way in which the services are organized hampers a full realization of their potential. Priority setting for research is rarely based on extension field evaluations because the system does not foster critical upward communication. The way in which technical (and other) knowledge is transformed into field messages frequently leads to distorted and outdated information. In the eyes of the ministry, extension has never been a purely educational activity. This is a legitimate view as long as the different functions to be performed by extension personnel are compatible and basically client oriented (such as helping to organize input supply). Non-educational activities may include anything from statistical data collection to attending to foreign visitors. Incompatible with and clearly detrimental to regular extension work are such activities as supervising credit repayment, policing disease control measures, organizing "voluntary" community work, and electioneering. Ministry-based extension has been unable to reach a majority of its potential clientele for economic, socio-psychological, and technical reasons. Even dramatic quantitative increases in personnel - more staff closer to the farmer - have not produced manageable client-to-agent ratios. In recent years, the trend has even been negative. Financial constraints have produced a strong pressure to reduce staff, and the field level has been hit hardest. Those remaining have little if any material resources left to maintain mobility.

In addition, many extension workers select the more responsive section of their clientele. They may have to fulfill production plans, they may want to improve job satisfaction or status, or they may simply be prejudiced against certain target groups. Lastly, extension often has little to offer in terms of messages to large sections of the rural population. Adequate and location-specific answers to a farmer's problem are often not available because it has not been a research concern or the solution has simply not reached the field. Today's situation is aggravated by two additional aspects which refer to the internal structure of the service: management problems and lack of control from below. Ministry extension employs thousands of persons working under a wide variety of circumstances. Decision making and management are highly centralized and formalized. Extension fieldwork, on the other hand, demands location-specific, flexible, and often quick decisions and actions. Managing the "invisible" man or woman must be highly ineffective as long as he or she is expected to receive and execute orders. All these problems are well known, and criticism has come both from within and outside the ministry. What has been lacking is organized feedback from clientele. Farmers may show their discontent by refusing to cooperate with extension, but they have virtually no way of influencing institutional reforms.

**Case 2**

**Training and Visit Extension (T&V)**

In the strict sense of the word, T&V is not a separate approach but one way to organize ministry-based extension. The controversial debate on the merits of T&V tends to obscure the fact that it was originally meant to solve some very specific problems of conventional extension services.

Benor and Harrison's original paper - one of the most influential extension publications ever - critically evaluates the ministry-based extension system of the 1970s. They found:

-An inadequate internal organizational structure

-Inefficiency of extension personnel

-Inappropriateness or irrelevance of extension content

- Dilution of extension impact

Whichever impact is reached serves "only a few favored farmers in favored areas rather than the bulk of the farming community".

When first being introduced, T&V seemed to be strikingly original and promising because it combined a set of convincing simple elements in a plausible way. Rather than trying to reach all farmers directly, the system concentrates on *contact farmers* expected to pass information on to fellow farmers with similar problems. To ensure regular field contacts, facilitate supervision and communication, and set clear and attainable objectives, fixed *visits at regular intervals* are prescribed. Similarly, regular sessions for extension workers to receive *training* and discuss administrative matters are held. Thus costly refresher courses are avoided, knowledge may be enhanced step-by-step, and up-to-date information can be fed into the system.

In addition, T&V operates under the assumption that its extension workers are exclusively engaged in educational activities and that a unified extension service exists. Agricultural research must not only be effective but also work in close collaboration with extension. Both external and internal evaluations are to be used to constantly modify and adapt the system to changing conditions.

Simple as the prescriptions seemed, implementation proved to be difficult. First, the contact farmer concept - implying a two-step flow of information from the extension worker to the contact, farmer and from there to other farmers - has frequently failed. Extension workers have been blamed for "wrong selection," but the root of the problem lies within the purely technical philosophy of T&V. Other aspects such as communication skills, leadership, and organizational capacities are neglected. In practice, T&V has been a top-down approach leaving little possibility for participation and initiative, both for farmers and village extension workers. Too little emphasis has been put on critical feedback based on self-evaluation. As a result, rigidity rather than flexibility characterizes local fieldwork.

Secondly, Benor's fear that extension services may "rapidly run out of anything to extend" (Benor & Harrison, 1977) characterizes many T&V field situations. The standardized messages passed on are often of little relevance to local conditions. Once T&V was extended to less favoured regions, it soon became clear that technology of the green revolution type showing quick and visible results is not available. Still, training sessions were held and visits made according to schedule, leaving behind disinterested farmers and de-motivated extension workers.

The limited success of T&V in its present form as a nationwide extension system should not discredit the quality and appropriateness of many of its elements. Applied less rigidly and combined with the tools of human resource development as well as with the concept of participation, these elements may constitute a valuable base for reforming extension organizations, large or small.

**Case 3**

**The Integrated (Project) Approach**

Integrated approaches aim at influencing the entire rural development process. Extension is only one though often crucial element in this strategy which targets the entire population in a given area but emphasizes work with disadvantaged groups. Integrated approaches are generally implemented in the form of large-scale and foreign-funded projects aiming at alleviating mass poverty in rural areas on the basis of "a simultaneous improvement in the utilization of natural resources and of human potential" (Rauch, 1993). Measures to promote production are coupled with a strong emphasis on self-help. The underlying concept is typically multi-sectoral.

Evaluations of more than a decade of integrated rural development (IRD) projects have revealed serious shortcomings in reaching the goal of mass poverty alleviation. Sizeable numbers of the poor were not reached by project activities, nor were positive effects consolidated on a sustainable basis. Project deficiencies were in part management related and very often due to a serious underestimation of the great complexity of multisectoral programs with ambitious goals. The disregard of the target group principle and due consideration for framework conditions (economic and institutional) played an even more important role, than the lack of compatible technical solutions.

Recent efforts to improve regional rural development (RRD) projects and enhance chances for a broad and sustainable impact are relevant for all general extension approaches. The key concept is the availability of locally adapted solutions established on a common basis. This requires not only participatory technology identification, test, and dissemination, but also an active role by the change agency in mediating between different institutions involved and their interests. A particular emphasis is laid on dealing with adverse framework conditions, explicitly taking them into account and attempting to influence them in favors of clients. Finally, in order to achieve these improvements, new efforts must be made to specify and operationalize (extension) objectives and concepts (sustainability, participation, gender-specific target-group approach, and poverty alleviation).

**Case 4 University-Based Extension.**

While the Cooperative Extension Service (CES) of the United States is still the only system in which the main extension function remains within the university, some developing countries, notably India, have integrated educational institutions into practical extension work. Within the United States of America, state universities have traditionally cooperated with local counties and the U.S. Department of Agriculture in doing extension besides education and research. Within the last 130 years, extension goals of the land-grant colleges have shifted from practical education to technology transfer and, more recently, to a much broader concept of human resource development.

With the emergence of strong private and other public sector research and development organizations and dramatic changes within the agricultural production sector, CES is facing new challenges with regard to coordination and cooperation. Apart from its traditional roles, *networking* will become a primary role. In this model, industry as well as intermediate and end users of knowledge become part of the extension system.

While in most countries, the main contribution of educational institutions to extension will be the training of qualified, dedicated, and responsible personnel; some Indian agricultural universities have come close to the U.S. model without taking over the full load of extension work. In the field, they have taken over functions which are only inadequately performed by the ministry, thus supporting general extension work. Remarkable features are direct assessment of clients' needs, user-oriented research, quality training for state personnel, and a strong linkage between academic education and field practice. Models vary from state to state. The Punjab Agricultural University (PAU) has its own multidisciplinary extension team in each district, engaged in adaptive research, training, and consultancy. Backed up by extension specialists on campus, they are transmitters and receivers of experiences from researchers, farmers, and state extension workers. At PAU, a unique system of processing these experiences is practiced. Regular workshops are held which unite university and department staff from research and extension together with outstanding farmers. New findings and feedback are presented, evaluated, and published as a "Package of Practices" to be used by all extension staff for the next season.

In the Philippines, which works with ministry-operated extension, university field contacts have been combined with practical development work. The University of the Philippines at Los Baños (UPLB) has its own "social laboratory" in rural areas. Transfer of ideas is not limited to production technology, but includes the testing of communication strategies as well as helping farmers to organize themselves. Experiences are channeled back into UPLB teaching and research.

**Case 5 Commodity Based Extension**

Next to the ministry-operated general approach, commodity-based extension run by government, parastatals, or private firms is the most frequent extension organization. Clients may be dispersed over a large area or closely connected, as in the case of large, centrally operated irrigation projects. Commodity-based extension is the predominant feature in many francophone countries of Africa (Schulz, 1973), but is also strong in other countries with commercial or export crops.

The original rationale was the generation of revenue as well as the assured supply of tropical products for the colonial powers. Today, goals are still clearly and intentionally production and profit oriented. All aspects of producing and marketing a particular crop are vertically integrated, spanning the whole range from research, advice, and material support given to farmers, to organizing marketing and even exports. Proponents of the approach argue that, by infusing modern technologies and monetary incentives into traditional farming, a cumulative chain of effects are triggered, thus contributing to overall development.

Advantages in terms of organizing the extension function seem obvious. One generally works with well-tested technologies.

Objectives and targets can be clearly defined and the organizational structure is kept simple. The focus on only one or two crops facilitates training of extension workers who are agents of the society or board concerned. Control of agents and farmers is easy, because they are judged in terms of defined targets. A closer look at these advantages reveals that they are largely defined from the perspective of the commodity organization. This poses no problem as long as organizational and clients' goals are identical, as was the case for coffee, tea, or sisal boards in the private plantation sector. For small farmers, the situation may be quite different. The rigidity of the system leaves little room for incorporating farmers' needs. The border between control and coercion is often crossed, for example, when farmers are forced to plant commercial crops at the expense of traditional subsistence crops. Extension workers are regarded as successful once they have brought farmers to producing "what and how" the organization wants. The obvious advantage of guaranteed marketing does not automatically entail security for the agricultural producer. Farmers cannot react quickly to price fluctuations, and in some cases quality standards are arbitrarily set in order to increase personal or organizational profits. Many governments have used the approach to excessively extract revenue by dictating low farm-gate prices. Strengths as well as limitations of the commodity approach lie in its narrow focus. It is useful in terms of technology transfer but leaves out important public interest issues (such as environmental protection), as well as target groups (such as noncommercial producers). A successful combination of general and commodity-based extension at the national level, as practiced in East Africa, demands clear policy goals and highly efficient management.

**Case 6 Extension as a Commercial Service**

Commercial extension is a rather recent phenomenon and typical of either industrialized forms of agriculture or the most modem sector of an otherwise traditional agriculture. It may be either part of the sales strategy of input supply firms or a specialized consultancy service demanded by an agricultural producer. In both cases, the goal of the organization or the individual is profit earning, which in turn is tied very closely to customer satisfaction. Most directly this is the case for private consultants who will be retired only if their clients feel that expenses made have been profitable. Large input supply firms or rural banks that use their own extension workers as sales personnel must also have a long-term perspective with regard to the competitiveness of their products and services. Negative effects of incorrect application or use will be attributed to the product itself. The clients of commercial extension will also be profit oriented. Their objective is the optimal utilization of purchased inputs or contracted expertise.

The emergence of commercial extension has influenced the debate on who should bear the costs of extension. With escalating budget deficits, the idea of extension as a free public service is no longer being generally accepted. It is argued that those who can afford it should actually pay for advisory services. In the case of commercial input suppliers, the solution is very simple: the costs of extension are included in the product price, as are the costs for research or advertisement. Private consultancy, on the other hand, is costly and affordable only to either large-scale or highly specialized producers.

As a general trend, one observes that public extension in industrialized countries has been under pressure to introduce cost sharing or altogether commercialize advisory work. An approach which combines commercial and public elements is at present being introduced in some of the eastern states of Germany. For example, the Ministry of Agriculture in Brandenburg subsidizes consultancies once they have actually taken place.

Farmers have the option either to organize themselves in "extension rings" and employ their own extension workers or to choose an extension consultant who is officially accredited by the ministry once he or she organizes at least twenty clients in an "extension association." In both cases, up to 80 per cent of extension costs within a certain limit are reimbursed to the farmer.

Privatization and cost sharing are propagated in the name of greater effectiveness and efficiency, but are largely motivated by financial constraints. It is obvious that the private sector will be active only in case of reasonable returns, and they will not be concerned with public interest issues:

Because of the selective participation of the private sector, the provision of public good types of information will have to remain a public sector responsibility... public and non-profit organizations will have to work together to satisfy the needs of those in "orphan" areas.

**Case 7 Client-Based and Client-Controlled Extension**

One way of dealing with the shortcomings of large extension systems has been to localize extension and utilize the self-help potential of rural groups. Often organized by outsiders, these decentralized approaches are in a better position to serve the needs of specific target groups, notably those in disadvantaged positions. Close contact with their clients and intimate knowledge of their life situations are essential for the planning of problem-oriented extension activities. Local personalities are identified who take over leader functions once the external (nongovernmental) organization withdraws. The principles of these organizations (awareness, empowerment, participation, self-help) are close to the philosophy of Animation Rurale without the national dimension.

The impact of client-based approaches must be seen on two levels. Directly, they provide benefits to their clients. The diversity and large number of small projects forbid a general statement on their effectiveness in terms of human resource development. It appears, however, that their weakness lies more in the technical field.

Besides, they can reach only a very limited number of people. Apart from this, they perform an important role as organizational innovators. They have proved that participation can work in practice and that many farmers are highly competent partners in technology development. Government extension services have been forced to rethink their top-down approach, to accept human resource development as an equally important extension goal, and to address the problems of rural women.

A rather unique approach has been practiced in Taiwan, where a large share of extension work is done through farmers' associations. Organized at provincial, county, and township levels, membership totaled 90 per cent of Taiwanese farmers. Extension education is done by agents employed by the farmers' associations at the township level and financed largely by the farmers themselves.

Unlike the small self-help groups discussed above, there are strong and institutionalized linkages with research and other services. The overall extension policy is defined by the government. On the other hand, the clientele is quite different: farms are highly modernized and extension advice is demand driven.

# Case 8 Participatory Extension Approaches

In many countries, agricultural extension is being reoriented to provide more demand-based and sustainable services, taking into account the diversity, perceptions, knowledge, and resources of users. The new farmer-centered approach to extension, participatory extension approach (PEA), calls for a bottom up way approach of planning, implementation and evaluation of extension programs. PEA is broadly defined as a multi-directional communication process between and among extension staff and farmers, involving the sharing, sourcing and development of knowledge and skills, in order to meet farmers’ needs and develop innovative capacity among all actors, in which farmers have a controlling interest (Chandrapatya, 2002).

improved if local knowledge and resources are tapped to both diagnose problems and experiment with solutions (when researchers, extension staff and farmers become like partners in technology generation and dissemination). In participatory extension, it is assumed that farming people have much wisdom regarding their environment, but their living standards could be improved by learning more of what is known outside (which they do not normally know), that effective extension cannot be achieved without the active participation of the farmers themselves as well as of research and related services, that there is a reinforcing effect in group learning and group action, and that extension efficiency is gained by focusing on important points based on expressed needs of farmers through their groups or organizations instead of through individualized approaches (World Bank, 1995; Röling and Pretty,1997; Hagmann, *et al.,* 1999; Van den Ban, 2005). According to Hagmann, *et al.* (1998), if participatory extension approaches are institutionalized in extension organizations, they can help to improve organizational performance at the interface between the service providers (the extensionists) and the clients (the farmers).

**Characteristics of participatory extension approaches**

• They integrate community mobilization for planning and action with rural development, agricultural extension and research;

• They are based on equal partnership between and among farmers, researchers and extension agents who can learn from each other to contribute their knowledge and skills;

• They aim to strengthen rural people's problem-solving, planning and management abilities;

• They promote farmers' capacity to adapt and develop new and appropriate technologies / innovations;

• They encourage smallholder farmers to learn through experimentation, building on their own knowledge and practices and blending them with new ideas. This takes place in a cycle of action and reflection which is called “action learning.

They recognize that communities are not homogenous but consist of various social groups with conflicts and differences in interests, power and capabilities. The goal is to achieve equitable and sustainable development through the negotiation of interests among these groups and by providing space for the poor and marginalized in collective decision-making