

**OPERATIONALISATION OF AGRICULTURAL  
TECHNOLOGY MANGEMENT AGENCY (ATMA)  
UNDER EXTENSION REFROMS SCHEME**



**NATIONAL INSTITUTE OF AGRICULTURAL EXTENSION  
MANAGEMENT**

**RAJENDRA NAGER, HYDERABAD- 500030**

## **EXTENSION REFORMS SCHEME**

### **AGRICULTURAL TECHNOLOGY MANGEMENT AGENCY ATMA**

#### **Introduction:**

The purpose of Extension Reforms Scheme is to promote new institutional arrangements and operational procedures – not merely strengthen the existing extension system. One key concept or goal is to decentralize decision – making to the district level through the creation of Agricultural Technology Management Agency (ATMA). A second goal is to increase farmer input into programme planning and resource allocation, especially at the block level, and to increase accountability to stakeholders. A third major goal is to increase programme coordination and integration, so that the programme thrusts such as Farming System Innovations, Farmer Organizations, Technology gaps and Natural Resource Management can be more effectively and efficiently implemented.

#### **What is ATMA?**

ATMA is a society of key stakeholders involved in agricultural activities for sustainable agricultural development in the district. It is a focal point for integrating Research and Extension activities and decentralizing day-to-day management of the public Agricultural Technology System (ATS). It is a registered society responsible for technology dissemination at the district level. As a society, it would be able to receive and expend project funds, entering into contracts & agreements and maintaining revolving accounts that can be used to collect fees and thereby recovering operating cost.

#### **Why ATMA?**

The ATMA at district level would be increasingly responsible for all the technology dissemination activities at the district level. It would have linkage with all the line departments, research organizations, non-governmental organizations and agencies associated with agricultural development in the district. Research and Extension units within the project districts such as ZRS or substations, KVKs and the key line Departments of Agriculture, Animal Husbandry, Horticulture and Fisheries etc. would

become constituent members of ATMA. Each Research-Extension (R-E) unit would retain its institutional identity and affiliation but programmes and procedures concerning district-wise R-E activities would be determined by ATMA Governing Board to be implemented by its Management Committee (AMC).

### **Roles and Responsibilities of ATMA**

ATMA is supported by Governing Board (GB) and Management Committee (AMC). The Governing Board is a policy making body and provide guidance as well as review the progress and functioning of the ATMA. The Management Committee would be responsible for planning and executing the day-to-day activities of ATMA.

### **ATMA GOVERNING BOARD (GB)**

Composition:			
Sl.No			
1	District Magistrate / Collector	-	Chairman
2	Chief Executive officer (CEO) Chief Development Officer (CDO)	-	Vice – Chairman
3	Joint Director / Deputy Director (Agri)	-	Member
4	A representative from ZRS / Krishi Vigyan Kendra	-	"
5	One Farmer representative	-	"
6	One Livestock Producer	-	"
7	One Horticulture Farmer	-	"
8	Representative of Women Farmers interest group	-	"
9	One SC / ST farmer representative	-	"
10	A representative of NGO	-	"
11	Lead Bank Officer of the District	-	"
12	A representative of District Industrial Center	-	"
13	Representative of Agriculture Marketing Board	-	"
14	Representative of input supplying Associations	-	"

15	One Fisheries / Sericulture representative	-	"
16	Project Director ATMA	-	Member-Secretary cum Treasurer (Ex-officio)
Appointment / Nomination / Term of Members:			
Non – official members of GB will be appointed for a period of 2 years by A.P.C on the recommendation of the Chairman of GB			
<ul style="list-style-type: none"> <li>ii. Some initial appointments would be staggered to ensure that about two-thirds of the members would be carry over for an additional year on the GB.</li> <li>iii. Thirty per cent of the farmer representatives on the GB would be reserved for women farmers to ensure their interests are fully represented.</li> </ul>			

### **Key functions of ATMA Governing Board**

- i. Review and approve Strategic Research and Extension Plan (SREP) and annual work plans that are prepared and submitted by the participating units.
- ii. Receive and review annual reports presented by the participating units, providing feedback and direction to them as needed, for various research and extension activities being carried out within the district.
- iii. Receive and allocate project funds to carry out priority research, extension and related activities within the district.
- iv. Foster the organization and development of Farmers Interest Groups (FIGs) and Farmers Organizations (FOs) within the district.
- v. Facilitate the greater involvement of private sector and firms and organizations in providing inputs, technical support, agro-processing and marketing services to farmers.
- vi. Encourage agriculture lending institutions to increase the availability of capital to resource poor and marginal farmers, especially SC, ST and women farmers.
- vii. Encourage each line department, plus the KVK and ZRS, to establish farmer advisory committees to provide feedback and input into their respective R – E programs

- viii. Enter into contracts and agreements as appropriate to promote and support agricultural development activities within the district.
- ix. Identify other sources of financial support that would help ensure the financial sustainability of the ATMA and its participating units.
- x. Establish revolving funds / accounts for each participating unit, and encourage each unit to make available technical services, such as artificial insemination or soil testing, on a cost recovery basis moving towards full cost recovery in a phased manner.
- ix. Arrange for the periodic audit of ATMA's financial accounts; and  
Adopt and amend the rules and by-laws for the ATMA.

**ATMA MANAGEMENT COMMITTEE (AMC)**

1	Project Director of ATMA	Chairman
2	District Head of Dept. Agri.	Member
3	District Head of Dept. Horticulture	"
4	District Head of Dept. Animal Husbandry	"
5	District Head of Dept. Fisheries	"
6	District Head of Dept. Sericulture	"
7	District Head of other appropriate line Departments, that may be important within a district	"
8	Head, Krishi Vigyan Kendra	"
9	Head, Zonal research Station	"
10	One representative of NGO' incharge of farmers organization	"
11	Two representatives of Farmer's organizations (one year rotation basis)	"

**Key Functions of Management Committee (MC)**

The Functions and tasks to be carried out by the ATMA Management Committee would include the following:

- i. Carryout periodic Participatory Rural Appraisal (PRAs) to identify the problems and constraints faced by different socio-economic groups and farmers within the district.
- ii. Prepare an integrated, strategic Research and Extension Plan (SREP) for the district that would specify short and medium term adaptive research as well as technology validation and refinement and extension priorities for the district: these priorities should reflect during the PRA.
- iii. Prepare annual work plans that would be submitted to the ATMA Governing Board for review, possible modification and approval
- iv. Maintain appropriate project accounts for submission to Technology Dissemination Unit (TDU) for audit purposes
- v. Coordinate the execution of these annual work plans through participant line departments, ZRSs, KVKs, NGOs, FIGs /FOs and allied institutions, including private sector firms.
- vi. Establish coordinating mechanisms at the Block level, such as Farm Information & Advisory Centers (FIACs) that would integrate extension and technology transfer activities at the block and village levels,
- vii. Provide annual performance reports to the Governing Board outlining the various research extension and related targets that were actually carried out, including targets achieved.
- viii. Provide secretariat to governing board and initiate action on policy direction, investment decisions and other guidance received from the Governing Board.

#### Linkage Mechanisms

The following Research Extension-Farmer (R-E-F) linkage mechanisms have been proposed under Extension Reforms Scheme in addition to the existing mechanisms.

**I. *The State Level Inter-departmental Working Group*** is constituted to ensure effective coordination among the departments like agriculture, horticulture, animal husbandry, fisheries, soil conservation and State Agricultural Universities (SAUs) under the chairmanship of the Agriculture Production Commissioner / Secretary (Agriculture). It will promote and establish integrated approach in transfer of technology at state, division and district level by agriculture and line departments. It also oversees and support

agriculture extension and research activities being undertaken by ATMA and to make policy interventions on interdepartmental matters etc. A Nodal Cell would be established with the office of the Agriculture Production Commissioner / Secretary (Agriculture) / Director (Agriculture) to monitor scheme activities in each the selected districts of the state. This working group shall meet once in a month.

**II. *Agricultural Technology Management Agency (ATMA)*** would be established in each selected district for integrating research and extension activities and for decentralizing day-to-day management of the public agricultural technology system. ATMA would be responsible for technology dissemination activities and have linkages with all the line departments, research organization as well as the NGOs and agencies associated with agriculture development in the district.

**III. The Governing Board (GB) and Management Committee (MC), ATMA.** The governing board constitute of 16 members representing all the stakeholders and farmers representing different enterprises in the district. It is a policy making body and provide guidance as well as reviews the progress of functioning of the ATMA. It will review and approve the strategic annual action plans that are prepared and submitted by the participating units. It will provide feedback and direction to the participating units, as needed about the various research and extension activities being carried-out in the district. It will facilitate the greater involvement of private sector, NGOs and farmers organizations in providing inputs, technical support, agro-processing and marketing services to farmers. ATMA Governing Board will meet once in two months.

**IV. The ATMA Management Committee (AMC) of ATMA** constitutes line departmental heads, ZRS, KVK, NGO and two representatives from farmers' organizations. It would be responsible for planning and reviewing of the day-to-day activities of ATMA. It will carryout periodic participatory rural appraisals (PRAs) to identify the problems and constraints faced by the different socio-economic groups of farmers. It will prepare an integrated strategic research and extension plan(SREP) for the district that would specify extension priorities reflecting the important farmer constraints identified and also short and medium term adaptive research for its validation and refinement. The district level line departments and research units would organize inservice training and support activities for the block and field level extension staff. The

Management Committee also prepare Block Action Plans (BAPs) that would be submitted to ATMA Governing Board for approval and coordinate the extension through line departments, ZRS, KVKs, NGOs, FOs and Private Sector firms. The MC shall meet every month under the Chairmanship of P.D., ATMA.

**V. Farm Information & Advisory Centre (FIAC):** It would be created at the block or mandal level. It would, in effect, manage key extension programmes within the block/mandal level, leaving other service and developmental activities to be managed by other units or personnel within the line departments. In effect, the FIAC would act as the extension planning and operational arm of ATMA. It would be the common meeting point for line departments to prepare detailed extension programmes and coordinate their implementation. It would also be the level where farmer input could be more effectively mobilized through a Farmer Advisory Committee (FAC). Such a mechanism, including representatives of all major stakeholders, would help set extension priorities across each program area and allocate resources.

The FIAC team would be responsible for operationalising the SREP in each block and moving toward a single window extension system. The FIAC team would prepare Block Action Plans (BAPs) that would detail extension activities to be undertaken. This plan should be approved by the FAC before it could be forwarded to the ATMA. The ATMA Management committee (AMC) would ensure that these plans were technically and administratively feasible, and consistent with the SREP, before being forwarded to the ATMA Governing Board (GB) for approval. The district – level line departments and research units would also prepare seasonal or annual WPs to (1) maintain diagnostic and support services (e.g. soil testing laboratories), (2) organize in service training and technical support activities for FIAC and field level extension staff, (3) carry out research programs and (4) periodically up-date the district SREP.

**VI. Farmer Advisory Committees (FACs)** will be constituted for providing a formal feedback mechanism. It would be constituted representing all major stakeholders and farmer representatives of FOs within the block. The FAC would help set block extension priorities and recommend resource allocation across program areas. These committees would review and provide advice to each implementation unit at block level. The

chairman of the FAC would be elected from the farmer representatives on rotation. FACs shall meet once in a month during the season and quarterly in lean season.

**VII. Farmers Organizations (FOs)** would be encouraged at village level and village level groups would, in turn, evolve into Commodity Associations (CAs), Marketing Cooperatives and other types of FOs at the block and district level. At village level Farmer Interest Groups (FIGs) and Farmer Associations (FAs) will be effectively involved in the preparation of block action plans. These organizations will coordinate in organizing demonstrations, on-farm and adaptive trails and give feedback to the extension and research. Their representatives would be directly involved in the block-level FACs and also at Governing Board of ATMA. The GB of ATMA would select and utilize project funds to support one or more NGOs to assist different types of farmers in becoming organized into different types of FOs within the district.

#### Funding Mechanism

ATMA will have operational flexibility in use of project funding. They will be expected to adapt plan activities at the district level in consultation with the participating entries as necessary in response to unfolding events. The ATMA Management Committee will be authorized to release project funds onwards to the public / private partners in the agreed activities included in the framework of the district extension plan and will maintain separate accounts / sub accounts partner-wise and activity-wise. The accounts (audited by Chartered Accountants) and reimbursement claims will then be routed through the Nodal Cell for onward transmission to the GOI.

#### Operational Modalities

Planning and Financial Procedures. The FIAC team would prepare block action plans (BAPs) and budgets that would outline extension and farmer training activities to be undertaken during the coming season. These coordinated plans must address key constraints and opportunities outlined within the SREP if they are to be funded by ATMA. In addition, the Officer-In-Charge (OIC) would be responsible for coordinating these proposed block-level extension activities and for submitting these proposals to the FAC for review. After the FAC has approved these proposals, then they would be submitted to the ATMA. The OIC and the FAC chair from each block would jointly present these extension plans to the ATMA Management Committee prior to their

submission to the ATMA GB for approval. In case of programmatic disagreements between the AMC and the FIAC, then these issues would be resolved by the GB.

Once a block action plans (BAPs) have been approved by the GB, then the ATMA Project Director would forward a check to the OIC in each block to cover the budgeted cost of approved extension programs. The OIC would maintain a bank account and funds would be allocated to each FIAC member in implementing their approved program of extension activities. The OIC and chair of the FAC would sign all disbursement checks. The OIC would be responsible for maintaining complete financial records, including expenditure receipts, for approved extension activities. Also, the OIC would periodically submit detailed financial records to ATMA. The flow of funds to individual blocks would be suspended if financial and performance records are not submitted to ATMA in accordance with agreed upon procedures.

Operational Procedures. All FIAC team members would continue to be employed by their respective line departments, but they would function as a multi-disciplinary technology team or working group that would address the four main programmatic thrusts within the SREP in designing and implementing an integrated extension program. Village extension workers (VEWs) would have prime responsibility for day-to-day program implementation; with FIAC team members assisting with demonstration plots installation, teaching farmer-training courses, and conducting farm field days and other group activities. In large districts, agricultural officers (AOs) would supervise the day-to-day work of the VEWs, with technical supervision and support coming from the FIAC team. The goal of this proposed new arrangement is to create an integrated or *single window* extension system.

To the extent possible, developmental activities financed under central and state government schemes would be utilized to demonstrate and support extension and technology transfer activities within the district and block. In the long-term, the goal would be for more of these central, state, and district funds to be directly transferred to the ATMA in support of SREP and BAPs implementation. In the short run, however, the FIAC, in consultation with the FAC, would determine where these development activities (especially for agriculture and horticulture) could be most effectively utilized in support of on-going block-level extension programs.

The organogram on the preceding page outlines the proposed structure for implementing block and field extension activities under this new arrangement where ATMA would serve as a decentralized mechanism to finance extension activities in the district. The key to effective program implementation would rest with the establishment of a FIAC team that would *ground* or fine-tune the extension program for specific agro-ecological zones (AEZs) within the block. It is also at the block level that farmer participation can be most effectively mobilized in the development of block action plans. It is also at this level where representatives of Self Help Groups (SHGs), Farmer Interest Groups (FIGs), and block-level Farmer Associations (FAs) can be directly involved in the block-level FAC. To describe in more detail how this proposed organizational structure would be expected to operate, a set of job description and qualifications have been presented below:

### **Job Descriptions for Block and Village Level Extension Staff**

Title: Officer in Charge (OIC), Farm Information and Advisory Centre(FIAC)

#### Major Responsibilities:

1. Provide technical coordination and administrative supervision for all block-level extension programs carried out under the auspices of the FIAC and funded by the ATMA.
2. Prepare and submit block action plans (BAPs) to the ATMA. These BAPs would be compiled from proposals submitted by Block Technology Center team. Then this combined BAPs would be reviewed and approved by a Farmer Advisory Committee (FAC) before it was forwarded to the ATMA for approval and financing.
3. Maintain a bank account in which ATMA funds would be deposited. These funds would then disbursed to FIAC staff so that they can carry out those extension activities that were approved and funded by the ATMA.
4. Maintain complete and accurate financial accounts indicating how ATMA funds were spent; these financial records would be submitted periodically to the ATMA.
5. Establish and maintain an active Farmer Advisory Committee (FAC) to help set extension priorities, to review and approve block action plans, and to evaluate extension programs within the block or mandal. The composition of the FAC should reflect the major groups of stakeholders within the block.

If the OIC were from the DOA, then he/she would be expected to provide administrative supervision over other DOA staff within the block. These DOA staff would include the Agricultural Extension Officers (AEOs), Agricultural Officers (AOs) who supervise Village Extension Workers (VEWs), or in the case of small blocks the OIC may directly supervise the VEWs.

### **Education, Experience, and Training Requirements**

Whenever possible, the OIC should hold a post-graduate degree and have extensive field experience implementing extension programs. In addition, the OIC should demonstrate leadership skills and the ability to work effectively with colleagues and stakeholders. Finally, the OIC should receive training in PRA, farmer organizations, and farming systems research and extension methods.

### **Supervisor:**

The OIC would be under the administrative supervision of his/her respective line department head. In addition, the OIC would receive technical and programmatic guidance from the ATMA Project Director and the district Management Committee. In many cases, the OIC would probably be a staff member of the DOA. However, to ensure that a dynamic and effective person is selected for this position, the NATP workshop recommended that the OIC be selected by the District Collector after consulting with the ATMA Governing Board.

**Title: Agriculture, Horticulture and Livestock Extension Officer (AEO, HEO and LEO)**

### **Major Responsibilities:**

Using participatory rural appraisal (PRA) methods, the AEO, HEO and/or LEO would identify and prioritize important technical, management, and resource constraints faced by different socio-economic groups of farmers within their block or mandal. Particular attention would be given to the needs of resource poor farmers and other disadvantaged groups, including those from scheduled castes and tribal groups. In addition, the AEO, HEO and LEO would identify important natural resource management problems that pose a threat to the different cropping systems and the natural resource base within the block.

Working with the OIC and district-level research and extension specialists, this technology team would develop a annual action plan for the block, including attention to farming system innovations, farmer organizations, technology gaps within important crop and livestock production systems, and serious natural resource management problems within the block or mandal.

Working in collaboration with village extension workers (VEWs), and with the technical guidance of subject matter specialists (SMSs) and researchers, this technology team would implement their respective block action plans (BAPs). This BAPs would include an appropriate mix of farmer exposure visits to see farming system innovations or *success stories*, demonstrations, farmer training, and, possibly, the use of the mass media. In addition, where farmer interest groups (FIGs) and farmer associations (FAs) exist, technology team members would utilize these groups in disseminating technology and providing training to key target groups within the block or mandal.

Working with both NGOs and VEWs, this technology team would help establish and then provide technical support to different types of FIGs and FAs—farmers who are producing different types of high value crops or livestock enterprises.

**Educational and Training Requirements:**

The minimum educational requirement for an AEO position would be a B.Sc. in agriculture or plant protection. Likewise, if there were a HEO assigned to the technology team, then they should have a B.Sc. in horticulture. If there were two or more AEOs within a block, then these team members would need to reflect an appropriate skill mix for the major farming systems within the block or mandal. For example, one might specialize in field crops, another in horticultural crops and possibly another in plant protection, with an emphasis on integrated pest management (IPM). The minimum educational requirement for the LEO would be a B.V. Sex and animal husbandry .

In addition to these basic educational requirements, the FIACmembers would need training in (a) participatory rural appraisal, (b) extension methodology and farmer training procedures, and (c) developing and working with farmer organizations. Finally, the FIAC members should receive periodic short-term technical trainings organized by district-level SMSs, in collaboration with ZRS researchers and KVK trainers. These monthly training sessions would be carried out at the district (or sub-divisional)

headquarters, with the content being tailored to reflect the major crops, livestock, and farming systems within the different agro-ecological zones of the district.

Supervisor:

The FIAC members would be under the administrative control of their respective line department heads. However, technical and programmatic supervision would be provided by the OIC for the FIAC.

Title: Village Extension Worker

Major Responsibilities

Using PRA methods, the VEW would inventory the predominant crop, livestock, and farming systems in his/her service area (circle) and then determine the primary technology gaps that limit the productivity of field crop, horticultural, and livestock production systems. Included in this analysis would be attention to identifying those more homogeneous socio-economic groups of farmers (e.g. scheduled caste, tribal and women farmers) who carry out particular farming systems. These similar groups of socio-economic farm households could be targeted for specific farming system innovations (success stories within the district or block) and for organization into FIGs.

Working with under the technical and operational guidance of the OIC and the FIAC, the VEW would carry out a combination of on-farm visits, meetings, demonstrations, farmer field days, and by encouraging farmers to participate in training activities being offered at the mandal or nyaya panchayat level. Emphasis would be given to assisting resource poor farmers and other disadvantaged groups, including women farmers.

In addition, the VEW would encourage and help farmers gain access to other technical services, such as soil testing and artificial insemination (AI), and resources (credit).

Working in collaboration with NGOs, the VEW would work with similar socio-economic farm households in each village who have expressed an interest in producing a particular high value commodity (dairy, chilies, etc.) and who might be organized into an *informal* farmer interest group (FIG). Once these groups are established, then the VEW would assist these groups of farmers by making available the necessary information, technology, and training that would enable them to successfully produce these commodities, and by helping them gain access to inputs, credit and marketing services.

Finally, working with the FIAC team, the VEW would encourage newly established FIGs to join similar types of FIGs within the block, nyaya panchayat, or mandal to form a FA that could begin to provide a broader range of commodity specific services to its members.

#### Education and Training Requirements

The educational level of VEWs differs widely across the country. In some states, most VEWs have only secondary level education, with very limited agricultural training. In other states, such as the Punjab, nearly all VEWs are agricultural graduates. To up-grade the extension system, all newly recruited front line extension staff should have a minimum of a B.Sc. degree in some field of agricultural science.

#### Supervisor

VEWs would work under the administrative control of the block-level AEO or OIC, and under the technical direction of FIAC team. In the case of large blocks, two or three Agricultural Officers (AOs) may be needed to provide adequate supervision of VEWs within the block.

#### Title: Project Director (ATMA)

##### Major Responsibilities:

The Project Director (PD) for the Agricultural Technology Management Agency (ATMA) will be expected to perform the following duties:

Provide overall leadership for agricultural extension and related technology transfer activities within the district.

Work closely with the ATMA Governing Board (GB); serve as Member Secretary of the GB; schedule GB meetings; and forward meeting notices, agenda and necessary reports to GB members in advance of scheduled meetings.

Prepare and submit Annual Action Plans to the ATMA Governing Board (GB) for their review, possible modification, and approval. The Project Director, ATMA would then forward action plans approved by the GB to the NATP Technology Dissemination Unit (TDU) for review and subsequent approval by the Technology Dissemination Management Committee (TDMC).

Prepare and submit other types of proposals, as authorized by the GB that will enhance the work and financial sustainability of the ATMA and its programs.

Develop and maintain a close working relationship with those line departments that participate in ATMA activities, as well as with other government offices in the district.

Develop and maintain a positive working relationship with NGOs, cooperatives, and private sector firms, including input supply, agro-processing, and marketing.

Promote the development of farmer organizations throughout the district.

Promote and help establish new marketing and agro-processing opportunities for farmers within the district.

Establish, equip, and maintain a suitable office for the ATMA to carry out its assigned functions, activities and tasks.

Hire and supervise ATMA staff in carrying out ATMA business.

Establish and maintain ATMA bank accounts; receive and disburse funds as directed by the GB.

Maintain accurate and up-to-date financial accounts that are periodically audited by Chartered Accountant. Submit financial reports to the TDU as required by under Government of India and World Bank agreements.

Collect project performance data and compile information needed to monitor project progress; submit performance reports to the TDU as specified in project agreements.

Carry out other duties and tasks necessary to ensure an active program of agricultural technology dissemination within the district.

#### Education and Training:

The PD should have at least a B.Sc. degree in some field of agricultural science, including animal husbandry. In addition he/she needs to have broad knowledge and experience in the areas of agricultural science, technology and development. Also, he/she should have considerable administrative experience, preferably in directing extension programs. Most important, however, the PD should be a dynamic leader who can communicate effectively with the District Collector, the ATMA Governing Board, the Management Committee, and all types of stakeholders within the district. The PD should be trained in or have exposure to participatory management and should participate in exposure visits to other project districts and study tours to other Asian countries that have successfully implemented extension programs to intensify and diversify their farming systems.

### Supervision:

The PD reports directly to the District Collector as the Chairman of the ATMA Governing Board.

### Title: Subject Matter Specialists (optional)

At the district or sub-division level, there are a limited number of subject matter specialists (SMSs). For the country as a whole, only about 5 % of the agricultural extension staff are classified as SMS, therefore these numbers are inadequate to provide the necessary technical training and support needed by the field extension staff. In developing countries, about 13-15% of the extension staff are SMSs, while the number in industrially developed countries exceeds 20 %. In addition, some of the other line departments, such as the Departments of Animal Husbandry (DAH) and Horticulture (DOH) have technical specialists assigned at the district level who could provide technical support to the FIAC team. Therefore, much of the technical training and support for the FIAC staff will need to be provided by the KVK trainers and ZRS researchers.

### Major Responsibilities

Working in collaboration with the KVK trainers and ZRS research staff, the district and/or division-level subject matter specialists (SMSs) would:

Plan, coordinate, and help provide specialized technical training and support to the block and field level extension staff.

Assist the FIAC team in planning their seasonal or annual work plans. Then, help the field staff to implement specialized extension activities, including demonstrations, farming training, and farmer field days.

Monitor and carry out periodic assessments of soil fertility levels, water management practices, pesticide use, and other factors that may effect the sustainability of different farming systems within different agro-ecological zones of the district.

### Educational and Training Requirements

SMSs require a minimum of a M.Sc. degree in their particular area of expertise. SMS categories might include agronomy or crop systems, plant protection (IPM), natural resource management (NRM), including watershed management, horticulture (vegetable crops or fruit) and animal husbandry. In addition, SMSs require training in extension and farmer training methodologies, the use of the mass media in technology dissemination,

and they may require additional technical training for their specific area of assignment, such as farming systems or IPM.

Supervisor

Technical specialists would be administratively responsible to the district or sub-division heads of their respective line department. In addition, they would coordinate their technical program activities with ZRS researchers and KVK trainers.