





ANNUAL REPORT

1999-2000





MANAGE

ANNUAL REPORT 1999-2000



National Institute of Agricultural Extension Management Rajendranagar, Hyderabad - 500 030

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INTRODUCTION

The National Institute of Agricultural Extension Management (MANAGE), is an apex level autonomous body set up in 1987 under the Ministry of Agriculture, Government of India. MANAGE is the Indian response to the challenges of management in a rapidly growing and diverse agricultural sector. It has a mandate to assist the State Governments, the Government of India and other public sector and voluntary organizations in effective management of their agricultural extension systems.

In accordance with its mandate MANAGE offers its services in 5 streams. Viz. Consultancy; Management Training; Management Education; Research; and Information & Documentation services.

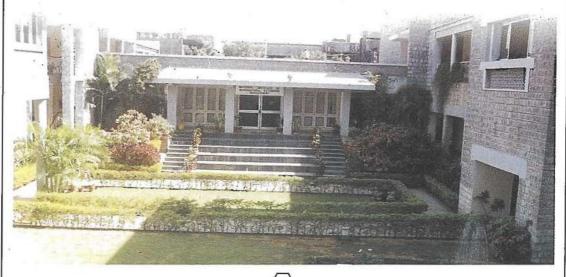
HIGHLIGHTS

- The National Agricultural Technology Project (NATP) is a dynamic instrument of introducing major changes in the agricultural research and extension systems of the country, besides developing their capabilities to meet future challenges. The project was initiated by Ministry of Agriculture, Govt. of India with the financial assistance of World Bank and is being implemented in 24 districts covering 6 states, viz. Andhra Pradesh, Bihar, Himachal Pradesh, Maharashtra, Orissa and Punjab over a period of 5 years (1998-2003). The basic objective of NATP is to make extension component of NATP demand driven, well integrated with Research and self- sustainable.
- MANAGE has taken up the responsibility of implementing the Participatory Adaptive Research (PAR) an IFAD assisted project of the Andhra Pradesh Tribal Welfare Department. The project is being implemented in three tribal areas viz., Bhadrachalam, Khammam District,

- Rampachodavaram East Godavari Dist. and Utnoor, Adilabad Dist. of Andhra Pradesh.
- MANAGE has taken up an action research project on watershed in Manchal mandal of Ranga Reddy Dist of Andhra Pradesh to generate first hand working experience in participatory management of watershed programme.
- An initiative is also taken to connect Manchal Watershed with MANAGE and DPAP office (Ranga Reddy) through a computer and communication network, using dial-up connectivity. This network is expected to enable farmers in the watershed area to know relevant information and generate their own data base reports.
- The MANAGE Information Centre has Established a Digital Library on the Web and also begun a programme of digitization to enable access to MANAGE training, research and consultancy outputs. The library is currently accessible on the Internet.

MISSION

Facilitating the Acquisition of Managerial and Technical skills by Extension Officers, Managers, Scientists and Administrators in all sectors of agricultural economy to enable them to provide most effective support and services to Farmers and Fishermen for practicing Sustainable Agriculture.





VISION

To be counted among the most *Pioneering, Innovative,*User Friendly and Self Supporting Agricultural

Management Institutes in the World.



CORE VALUES

- 1. User friendliness
- 2. Client-centered process consultancy
- 3. Farmer-focussed approach in all our professional services
- 4. Interactive and experiential learning methodology
- 5. Faculty Development and Networking with facilitators
- 6. Determination to achieve financial self-reliance



MANDATE

- Developing linkages between prominent state, regional, national and international institutions concerned with agricultural extension management
- Gaining insight into agricultural extension management systems and policies
- Forging collaborative linkages with national and international institutions for sharing faculty resource
- Developing and promoting application of modern management tools for improving the effectiveness of agricultural extension organizations
- Organizing need based training for senior and middle level agricultural extension functionaries
- Conducting problem oriented studies on agricultural extension management
- Functioning as an international documentation center for collecting, storing, processing and disseminating information on subjects related to agricultural management.

ACHIEVEMENTS 1999-2000

Professional services are rendered to our clientele in areas like Training, Consultancy, Research, Management Education, Information and Documentation. The progress made during this period for different facets of our activities are detailed hereunder.

1. TRAINING

During 1999-2000 MANAGE conducted 137 training programmes with 3402 participants which included govt. personnel, NGOs, farmers and international delegates. The objectives of the programmes are given here.

TRAINING PROGRAMMES DURING APRIL 1999 - MARCH 2000

SI. No.	Nature of the Programme	No. of Programmes	No. of Participants	No. of Training weeks
1	Seminar / Workshop Seminar on Vision 2020 A.P. Agriculture in collaboration with the Society of Scientists for Advancement of	1	52	0.5
	Agriculture, Hyderabad Other Workshops	8	183	4.5
2	General Programmes		100	3.0
	Management Development Programmes	20	621	20.0
	Banner Programmes	23	641	23.0
	Collaborative Programmes	5	144	4.5
3	Sponsored Programmes	16	338	22.0
4	International Training Programmes	2	31	3.0
5.	Consultancy-cum-Training Programmes	2- 0	-	4000
	National Agricultural Technology Project (NATP)	56	1246	47.0
IN	Participatory Adaptive Research Project under International Fund for Agriculture Development (IFAD)	5	136	5.0
i.	Development of Farmer- Participatory Extension Management Strategy and Mechanisms for Rubber Board		10	1,0
	TOTAL	137	3402	130.5



1.1 Seminars / Workshops

During 1999-2000 MANAGE conducted 9 Seminars/Workshops covering 235 participants in five training weeks.

1.2. General Programmes

National Institute of Agricultural Extension Management (MANAGE) has focussed its efforts in designing and conducting management development programmes, banner programmes and collaborative programmes for the officials of State Departments of Agriculture, State Agricultural Universities and other development departments. During 1999 – 2000, MANAGE conducted 20 management development programmes, 23 banner programmes and 5 collaborative programmes covering 1406 participants over 47 weeks of training. These programmes were on Participatory Agriculture Extension Management, Participatory Watershed Management, Institutional Capacity Building, Information Technology, Internet for Agricultural Information and Communication, Organisational Management Skills, Project Management Skills etc. The banner programme was focused specially on New Dimensions of Agricultural Extension Management conducted in different States for the extension functionaries of the State Agriculture Departments and State Agricultural Universities. 144 participants have attended the collaborative training programmes conducted in collaboration with Centre for International Agricultural Development Cooperation, C.S.Azad University of Agriculture & Technology, Kanpur and IIED, U.K.

1.3 Sponsored Training Programmes

Sixteen programmes were conducted covering 338 participants over 22 training weeks. Three training programmes were sponsored by

Department of Personnel and Training Govt. of India on "Participatory Watershed Management" and "Project Management Skills" and two training programmes for "Indian Grassland and Fodder Research Institute", Jhansi. MANAGE has conducted training programmes for Soil Conservation Department for Uttar Pradesh government, Watershed Management for officials of Govt. of Rajasthan and Karnataka. Four training programmes were conducted on Training of Master Trainers on "Participatory Extension Management", and two courses were sponsored by Department of Agriculture, Govt. of Andhra Pradesh on "Information Technology for Agricultural Extension Personnel". These programmes were conducted with an objective to expose the trainees towards the new approaches and methodology in training techniques as well as field realities and to update their knowledge in new information tools and communication technology with its application in agriculture and allied sectors.

1.4 International Training Programmes

Under this category the institute has conducted two training programmes, one for the delegates of Michigan State University, USA and an FAO sponsored study tour for an Iranian delegation.

The study visit for the participants of Michigan State University included a visit to Kurnool to



observe the functioning of thrift groups of women, Regional Agricultural Research Station, Krishi Vigyan Kendra and ICRISAT to learn more about the functioning of the Indian Agricultural Extension and Research System. Around 21 delegates attended the programme.

A ten member delegation from Iran visited MANAGE to learn more about the extension as well research activities at the institutional level and also at field level. The delegates visited Pune, Mumbai and Hyderabad and were exposed to rural lifestyle of Indian villages and sensitized to many indigenous agricultural practices both in the rainfed and irrigated areas.

1.5 Consultancy-cum-Training Programmes

MANAGE conducted 62 consultancy cum training programmes covering 1392 participants with 53 training weeks.



Under the National Agricultural Technology Project (NATP) 56 training programmes were conducted under different heads. Series of workshops on ITD component, preparation of Strategic Research Extension Plan (SREP), Orientation workshops for governing body members of ATMA, Organisation and Management workshops at various NATP districts, priority setting workshop, Annual Planning Workshops were conducted during

the year. The training programmes covered over 1246 participants.

MANAGE has been assigned a project on "Participatory Adaptive Research" by International Fund for Agricultural Development (IFAD) through the Department of Tribal Welfare, Government of Andhra Pradesh for Tribal areas. Major activities like training programmes and field exercises under this project have been taken up. Five training programmes were conducted for 136 participants. An orientation training programme on "Participatory Adaptive Research for the newly recruited Scientists of FRSF, practical training programme on Management of Participatory Watershed Programme was conducted for WDT members of watershed in tribal areas of Bhadrachalam and Rampachodavaram Districts of Andhra Pradesh. Apart from these, two farmer training programmes and an orientation training for community development coordinators were also conducted under ITDA component to increase working effectiveness of tribals.

MANAGE has conducted a training cum consultancy programme for the Rubber Board on "Farmer Participatory Extension Management: Strategy and Mechanism", for their staff members. Apart from regular training programmes, MANAGE has conducted workshops as well as seminars on various aspects of agricultural extension management.

2. CONSULTANCY AND RESEARCH PROJECTS

2.1 National Agricultural Technology Project (NATP)

The National Agricultural Technology Project (NATP) is a dynamic instrument of introducing major changes in the agricultural research and extension systems of the country, besides



developing their capabilities to meet future challenges. The project was initiated by Ministry of Agriculture, Govt. of India with the financial assistance of World Bank and is being implemented in 24 districts covering 6 states, viz. Andhra Pradesh, Bihar, Himachal Pradesh, Maharashtra, Orissa and Punjab over a period of 5 years (1998-2003). The basic objective of NATP is to make extension component of NATP demand driven, well integrated with research and self- sustainable.

The activities under NATP, during the period under review have been carried out depending upon the requirement of the situation in all the Project Implementing Agencies (PIAs) of the six pilot states. Accordingly, the following major aspects were undertaken as given below:

Activities in existing ATMA districts

In the 1st phase ATMA districts, activities have been undertaken successfully. During a review workshop held on 28th April, 2000, issues were identified on various activities to be undertaken by different Project Implementing Agencies (PIAs) during the current year. At Khurda, Orissa, focus was on improving Farmer Interest Groups (FIGs), and training of officials and farmers was undertaken. One of the initiatives taken by ATMA, Khurda is to promote FIGs through involvement of FAC members. This has resulted in promoting the number of FIGs in the district.



In Shimla district of Himachal Pradesh, the emphasis was on promoting FIGs and providing skill upgradation to its members. The integration of existing women groups as FIGs is also being undertaken. The results are found to be favourable.

In Gurdaspur district of Punjab, the emphasis has been on identification of export oriented technology for the farmers. Farmers have also been encouraged to form a large scale export oriented unit for Basamati rice and other products etc. The efforts are yet to be seen on the field. Other activities of the project are being implemented as per the action plans.

In Ahmednagar district of Maharashtra efforts are on in successful implementation of project activities. The involvement of NGOs to create Farmer Interest Groups (FIGs) and also dovetail produce with private processing industry is in progress. This marketing linkage is being worked out as per the suggestions of MANAGE.

In Kurnool district of Andhra Pradesh a technical programme is being implemented by various departments as per the Annual Action Plans approved by the Governing Board, ATMA. Capacity building of extension functionaries in participatory methodologies has been completed. On pilot basis, a computer is installed in Orwakal mandal and training programmes conducted for extension functionaries and progressive farmers in the use of Information Technology.

In Dumka district of Bihar, Farmers Advisory Committees (FACs) have been constituted at block level.

During phase II, the MANAGE team of consultants were actively involved in the 2nd phase districts for establishment of ATMAs and preparation of Strategic Research and

Extension Plans (SREPs), Block Action Plan (BAP), Organization and Management Plans (O & M) and also Investment Plans. Accordingly, the initiatives have resulted in finalization of SREPs in Amravathi, Koraput, Jalandhar, Prakasam, Hamirpur and Muzzafarpur. All the ATMAs are likely to be operational by the end of December, 2000.

MANAGE team of NATP has been actively involved in following up the activities of SREP preparation and training of officials of line departments in phase III and IV ATMA districts. As such, efforts are on in Aurangabad and Ratnagiri of Maharastra; Adilabad and Chittor of Andhra Pradesh; Ganjam and Sambalpur of Orissa; Sangrur and Faridkot of Punjab; Kangra and Bilaspur of Himachal Pradesh; and Madhubani and Munger in Bihar. All the activities are likely to be completed by March, 2001.

SAMETI

Efforts have been made towards establishment of SAMETIs in all the pilot states under NATP. In line with this, SAMETIs have been established in Himachal Pradesh, Andhra Pradesh and Orissa wherein autonomy has been provided and existing infrastructure and staff is being used in undertaking the NATP activities. However, in Maharastra with the intervention of MANAGE and Government of India, the State Government has taken a decision to make SAMETI as autonomous. In case of Punjab, SAMETI is being established at Punjab Agricultural University (PAU), Ludhiana with deputation of officials from university and is already functional.

Capacity building of SAMETI officials

MANAGE in collaboration with Michigan State University organized a workshop on Participatory Extension Management at Shimla, wherein all the key actors in implementation of the project were involved. However, capacity building of the Governing Board members of ATMAs and SAMETIS has been taken up by MANAGE as per the request of concerned States. The capacity building of SAMETI staff and ATMA staff in SREP preparation methodology is being done by MANAGE.

Collaboration with Government of India and World Bank

MANAGE is acting as a technical arm to the Ministry of Agriculture, Government of India and as such, it is fulfills its role in providing technical and conceptual guidance to both Government of India and World Bank as and when required. MANAGE has facilitated in the World Bank Review Mission, wherein identified issues were pointed out and action initiated on the same. MANAGE is assisting Government of India in promoting and getting this project implemented in all the six states.

Information Technology (IT) activities under NATP

Among the various interventions of the project, Information and Communication Technology is playing a vital role in successful implementation of the project. In order to develop competence in Information Technology applications. MANAGE has taken initiative to assist ATMAs, SAMETIs and other Project Implementation Agencies (PIAs) for a period of one year to ensure proper training backup and hand holding support at these places. Accordingly, IT Facilitators were placed at first set of six pilot districts for a period of one year and the experiences at these districts have been very encouraging and the district officials are now having constant interaction with MANAGE and Ministry of Agriculture via email / internet. To give impetus to ongoing IT skills upgradation



of all the officers and staff using information and communication technology equipment, an IT trainer has been placed at each pilot State Headquarters.

Training and Workshops

Orientation workshops were organized for the stakeholders in 2nd and 3rd phase pilot districts under NATP. Training programmes were organized for the Block Level Technology Teams (BTT) in 2nd and 3rd Phase districts of NATP on preparation of Strategic Research Extension Plan (SREP), O & M and Investment Plans. In each programme, participants from all the line departments participated. They have also taken up two-week field exercises for data collection under selected agro-ecological situations in their respective districts. The total number of programmes conducted by MANAGE for SAMETI and ATMA staff were 8 and 23 respectively till date.



Video Films produced on success stories

A video film was developed under NATP titled "Dreams Beyond Horizon" on Floriculture based on the attempt made by Mrs. Anusuya Mohanty, an enthusiastic lady entrepreneur on Floriculture.

A video film was produced based on success stories reflecting mushroom marketing

by a group of farm women of Lambodharpur village of Dhankanal district in Orissa. The film is titled "Visible Success of Invisible Half".

2.2 Participatory Adaptive Research Project

MANAGE has taken up the responsibility of implementing the Participatory Adaptive Research (PAR) Project - an IFAD assisted project of the Andhra Pradesh Tribal Welfare Department. The project is being implemented in three centres viz., Bhadrachalam, Rampachodavaram and Utnoor agency areas of A.P. In all the three centres a project office has been established and the field staff have been recruited. To start with the Kharif 2000-2001, 4 villages at each of the three centres were selected based on different agro-ecological situations, with eight farmers in each, four resource rich and four resource poor were selected by conducting gramsabhas. It is planned to select a total number of 24 villages in three centres by rabi 2000-2001.

The IFAD review mission in its mid term evaluation report recommended to focus on the following items:

- a) adaptive research should be on overall resource base available to farmers rather than on promotion of commodity or an input,
- to indicate a rational utilisation of natural resources which will enable the tribal communities to achieve local food security and to elevate their income level rather than to develop a package of practices for each of the crops grown in the project,
- c) the target of experimentation for adaptive research should not be a farm holding but a unit farm comprising of different land types eg. Irrigated, podu, rainfed, homestead supported by live stock, and



d) fine tuning the ITDA activities such as podu conversion into orchards etc.

Keeping this in view the project was implemented under three major components viz., Crop / commodity oriented research, farm and family system research and natural resource management with the following underlying principles:

- 1. Ensuring food security for resource poor farmers.
- Diversification of farming systems for resource rich farmers.
- Group actions in the areas of fodder production in community lands, social fencing and grazing in fallow lands.
- Eco-friendliness through organic farming, non-pesticide management etc.

Under the Crop/commodity Oriented Research adaptive trials on mandatory crops like Jowar, Paddy, Ragi, Bajra, Redgram, Green gram, Black gram, Niger and cotton were taken up. On these crops a total number of 210 varietal trials with varieties like MTU – 1001, 1006, 9993, Pushkala Krishna Hamsa, Tulsi etc in paddy, ICRISAT varieties like Asha and Maruti in redgram, NRCS varieties like CSH-9, CSV-15, CSH-16 and PSH-1 in Jowar and popular varieties of Bajra, Niger and cotton of ANGRAU

were tried. A total number of 170 fertilizer trials were also taken up in the above said crops at three centres in order to assess and refine the established technologies with the innovations of farmers in a given situation. At all the three centres the crops like Paddy, Jowar, Bajra, Cotton are in harvesting stage and the results are documented by conducting crop cutting experiments. The results received till date are very encouraging specially in Jowar, Paddy and Cotton.

Under the Farm and family system approach a number of activities like Horticulture, Poultry, Animal health care, Homestead gardening, Information technology etc., were taken up on 50% cost sharing basis. At Rampachodavaram centre 12 half acre block plantation of Mango with Benishan variety and one half acre with Cashew was taken up in Podu in four villages. This was a deliberate attempt to discourage podu cultivation and encourage converting into orchards. Inter cropping with jowar, bajra, ragi and vegetables were promoted in the existing gardens besides maintenance of the old gardens by taking up the activities like gap filling, pruning of dry branches, removal of dead leaves spraying with endosulphan to prevent fruit bores. 12 and 8 half acre block plantation with Mango grafts were taken up with Utnoor and Bhadrachalam centres respectively. To all the 32 selected farm families at each centre seven nutritional plants of their choice were given to promote consumption of fruits in Rampachodavaram and Utnor centres. With all the 96 selected beneficiaries at three centres vegetable cultivation in the back yard was promoted to encourage the tribals to add vegetables and green leafy vegetables in their daily diet.

Realizing the fact that sustainable development and utilization of natural resources



would not take place unless Natural Resource Management is integrated with social resource management and further integration with social resource management will not take place unless natural resource management is linked with the livelihood management, deliberate attempts were make to involve the women more and more by conducting focused group discussions. Women groups of selected farmers families were formed in each village and were encouraged to take up the community nurseries for vegetable cultivation (Brinjal) at D.N.Palem, (Tomato) at P.M.Kota villages in Rampachodavaram centre, tomato and chillies at Ginnera and Pipiri villages at three centres with the help of ANMs and Primary Health centre staff. This also helped in capacity building of the community health worker of the village. MANAGE strongly believes that exposure to communication media and information technology changes the life style of the tribals not only in their clothing and food habits but also in their thinking and visualisation. As such four television sets at Bhadrachalam centre and three television set at Rampachodavaram centre were given to some women of the selected farmers on 50% cost sharing basis. Further to develop a better communication linkage the selected beneficiaries are encouraged to take telephone lines on a 50% cost sharing basis.

MANAGE Role

MANAGE will offer overall guidance and monitor the implementation of the project and provide major training inputs to the Research Scientists of FRSF teams, project personnel, Community leaders, NGOs and other important functionaries involved in implementing the project. The major focus of the training input is on developing confidence and capacity building among project staff in the areas of participatory rural appraisal methods, farming systems approach, innovation in farming

systems (success stories) and principles and practices of participatory adaptive research and their application at the field level.

MANAGE and the Farm and Rural Science Foundation will follow participatory Adaptive Research to identify, refine and generate suitable agricultural technologies and their transfer to the farmers. The FRSF in collaboration with respective ITDA Project staff will undertake the participatory Adaptive Research and fine tuning of the recommendations with intensified extension activities in tribal areas. The results of the research activities will be got validated by the Acharya N.G.Ranga Agricultural University.

2.3 Development Oriented Action Research in Manchal Watershed Project

MANAGE is one of the Project Implementation Agencies (PIA) with DPAP in Ranga Reddy district of Andhra Pradesh to promote a participatory approach in watershed programme. The project operates in a cluster of 9 watersheds located in Manchal mandal and covers an area of about 6225 ha. In the project guidelines, a number of mechanisms have been provided to facilitate people's participation. Besides this, additional mechanisms were evolved and intimated later on by DPAP, the Project Management Agency (DPAP) as well as by MANAGE, the host institution. Some of the important mechanisms used under the project for promoting a participatory approach are indicated below.

A. Social mechanisms:

- * Commitment from community before finalization of village.
- Timely orientation of various stake holders regarding participatory approach.

- Organization of community into a new institutional set up at the village level.
- * Social auditing and transparency in different transactions.
- * Capacity building of stake holders on technological aspects, managerial as well as social aspects.

B. Technological mechanisms:

- * Building upon indigenous innovations, initiatives and ideas.
- Replication of success stories irrespective of source of innovation.



C. Financial mechanisms:

- * Direct funding of development component to the community.
- Contributory approach for developmental works.

D. Managerial mechanisms:

- * Demand driven approach for preparation of action plan.
- * Application of PRA tools and techniques in the context of watershed programme.
- * Decentralization regarding technical sanction of action plan at watershed level.
- Elimination of contractorship for implementation of works.

* Concurrent evaluation of the programme for modification of action plan during implementation phase.

Objectives

MANAGE has considered this project as a development oriented action research to generate first hand working experience in participatory management of watershed programme. The specific objectives of the action research are as follows.

- To test feasibility of various mechanisms and modalities provided in the project guidelines for facilitation of participatory approach in watershed programme.
- To identify community-led success stories on various components under watershed programme so that these could be considered while preparing detailed action plan.
- To identify opportunities regarding equity for resource poor families and empowerment of women in the context of watershed programme.
- To build capacity of the host institution (MANAGE) in promoting participatory approach.
- To suggest specific areas of improvement in functioning of various stakeholders associated with watershed programme.
- To identify policy issues for making further improvement in the project guidelines.
- To achieve sustainable development of natural resources in the watershed, as well as to create a sustainable institutional set up in the village.



Progress of work from inception of project

Under the project a major thrust has been given to develop natural resources namely, private rainfed land, common land and water. In case of private land resource, emphasis has been given to develop cultivated land, fallow land and drainage course. Highlights about progress of works are discussed below.

- In case of private land resource, a total of 2263.2 ha of rainfed cultivated land and 426.8 ha of fallow land have been developed through soil, moisture and manure conservation measures. Besides this 185 loose boulder checks and 10 diversion drains have been constructed in drainage course for harvesting of soil and for diverting of surplus run off, respectively. Besides this new plantation of horticultural crops was done over an area of 12.8 ha.
- In case of water resource, a total of 123 water harvesting structures have been constructed by using 11 technological options. These include 9 options belonging to indigenous knowledge system and two options belonging to exogenous knowledge system.
- In one of the watersheds (P.C.Tanda) there was a big block of privately owned waste land consisting of 280 ha. In this block social fencing was facilitated through community participation and then three types of treatments were implemented; namely: only natural regeneration of existing plants, natural regeneration plus staggered contour trenching, and plantation of new seedling plus staggered contour trenching in 40 ha, 80 ha and 160 ha respectively (table-3). At present the plantations are only one year old in this block as well as in other common land developed through IWDP funds.

Under the project 3 units of community hall and 3.2 km of approach roads were developed (as entry point activities).

- A revolving fund of Rs.6.3 lakh was released to 6 watersheds out of which only 2.9 lakhs could be used so far. The remaining amount could not yet be used due to lack of availability of mature UG organized through credit and thrift activity; as the recovery and rotation of revolving fund has been found to be satisfactory only in such groups.
- Under the project a new institutional set up has been created at the village level for participatory management of watershed programme. This includes four types of groups namely Self Help Groups (SHG), User Groups (UG) Watershed Association (WA) and Watershed Committee (WC). These groups have been formed specifically for implementation of watershed programme and hence these may continue only as long as project continues. Experience, elsewhere, has however shown that sustainable groups can be organized if credit and thrift is used as an agenda and membership is restricted to those persons who are socially and economically homogenous.

Development of natural resources under the project is nearly completed particularly in the first set of six watersheds. Hence, now onwards the following specific aspects would be pursued for achieving post-project sustainability.

- Reorganization of SHG and UG around credit and thrift activity.
- Utilization of available revolving fund for promoting non-land based livelihoods and land based enterprises through mature credit and thrift groups.

- Utilization of watershed development fund (collected as contribution from participants) as a revolving fund through mature credit and thrift groups.
- Convergence of schemes from different developmental departments through WA/WC.
- Assessment of impact of various interventions, as well as sustainability of social structures and physical structures created under the project.

Suggestions for future consideration by different stake holders

The above development oriented action research has brought out a number of useful lessons for future consideration. Based upon above experience, specific suggestions have been made for various stake holders who are associated with participatory management of watershed programme.

Suggestions for project implementation agency

- Need for preparation of a detailed annual plan for organization of community as well as for building capacity of different stake holders, so that its implementation could be focussed (as being done in case of usual developmental activities).
- Organization of SHG through conventional credit and thrift activity so that revolving fund could be used in a sustainable manner for non-land based livelihoods.
- Organization of UG through modified credit and thrift activity (in which group members may meet regularly for only saving of amount but not necessarily for circulating it among themselves at least in the initial few months); so that watershed development fund and revolving fund could be

- used sustainably for maintenance of structures and for improving productivity of land based enterprises, respectively.
- Organization of separate SHG of agricultural labourers for proper implementation of works without contractors.
- Use of experienced office bearers of WC as trainers so that capacity building of other office bearers at village level could be done in a cost effective manner.
- Greater involvement of social service oriented persons from the community (in formal capacity in the WC/WA or in any informal manner) for participatory management of watershed programme.
- Use of entry point activities for orientation of community about operational modalities regarding participatory planning as well as implementation of programme.
- Integration of social resource management with natural resource management so that it may lead to sustainable development of both resources.
- Thorough orientation of community and office bearers of WC/WA about mechanisms and operational modalities for collection of genuine contribution from actual users of the resource.





- Preparation of a need-based strategic plan separately for each watershed.
- Preparation of design and estimate of costly structures through qualified professionals on assignment basis.
- Converting technical estimates into user friendly estimates in case of costly structures.
- Development of privately owned wasted land on priority basis.
- Higher rate of contribution for investment on selected indigenous technologies about which farmers are fully convinced but WDT members had no experience so far.
- Focus on a wide range of technological options (including indigenous as well as exogenous measures) rather than a limited number of standardized solutions so that inherent diversity and complexity in rainfed areas could be addressed properly.
- Thorough orientation of community and office bearers of WC/WA about operational modality for implementation of works without using contractors.
- Preference to contributory approach over ridge to valley approach (even if it leads to scattered development in initial stages).
- Construction of earthen bund and stone waste-weir in the same instalment.
- Training of local labourers and masons about technical aspects of watershed works.
- Training of office bearers of WC/WA and user group membership on supervision of quality parameters of various structures.

- Utilization of revolving fund only through mature credit and thrift groups.
- Replacement of WDT by President WA for signing of bank cheque.
- Formulation of operational modality for sustainable utilization of watershed development fund.

Suggestions for project management agency

- Facilitating preparation of detailed annual plan for the whole district as a unit regarding training of all PIA, WDT, office bearers of WC/WA, representatives of SHG, UG, etc., so that is could be reviewed and monitored in a proper manner (as being done in case of usual developmental works).
- Facilitating down-ward accountability even in formal review and monitoring system.
- Hiring of experienced community organizer as a MDT member at district level.
- Provision of separate fund for preparation of design and estimate of costly structures.
- Sufficient allocation of resources for organization of community through credit and thrift activity.
- Upscaling of watershed programme through intensive approach in which, size of programme is expanded by giving it to the same PIA and in the same / adjoining area so that quality of people's participation is further improved without much difficulty.
- Designing of operational modalities for each mechanism of participation so that process review could be carried out in a proper manner.

- Facilitating the use of revolving fund through mature credit and thrift group.
- Involvement of panchayat raj institutions for governance of project at field level.
- Flexibility in transferring of fund from poor performing watersheds (which are not able to promote participatory approach) to other watersheds (which are able to do so).
- Encouraging experienced office bearers of watershed committee to become Watershed Development Team members with other PIAs
- Provision of computer facilities at village level for establishing direct communication between Project Management Agency and WC/WA.
- Designing of operational modalities which are specifically in favour of resource poor families.

Suggestions for office bearers of watershed committee and watershed association

- Thorough orientation of community about operational modalities for participatory approach.
- Convergence of schemes of other development departments.
- · Balanced empowerment of WC and WA.
- Improving organizational management system of watershed committee office.

Suggestions for training and research organizations

- Long term association between trainers and trainees.
- Training on quality parameters to WDT members and office bearers of WC for different works under watershed.

- Adoption of one watershed as PIA for carrying out development oriented action research.
- Use of experienced practitioners (who are directly associated with watershed programme) as potential trainers.
- Promoting a range of technological options rather than a limited number of standardized solutions.
- Building upon indigenous technical knowledge for development of natural resources.

Policy Issues and Considerations

Based upon learning under the project, following specific policy issues have been identified for making relevant improvement in the project guidelines.

- Separation of project period into three phases to deal with three distinct components, namely (i) organization of community into a new institutional set up; (ii) development of natural resources and (iii) diversification and intensification of existing farming systems. This may help in giving due emphasis to each component and also in hiring of need based WDT members in respective phases.
- Additional financial provision under administrative head particularly where government organization is the PIA.
- Higher rate of contribution from farmers for developmental works.
- Use of matching revolving fund only through mature credit and thrift groups.
- Decentralization in governance of project through Panchayat Raj Institutions.
- Further decentralization in implementation of programme from watershed committee



- to mature user groups (after organizing them through credit and thrift activity).
- Replacement of WDT by President, Watershed Association, for signing of bank cheque

2.4 Cyber Power: A New Dimension to Natural Resource Management

MANAGE has initiated a project for Cyber management of Natural Resources which connects the Manchal watershed with MANAGE and DPAP office through a computer and communication network, using dial-up connectivity. This network is expected to empower farmers who are part of watershed management and facilitate them to do their own data analysis and generate reports to be furnished to the DPAP office. Farmers can contact the officials or send queries to the DPAP or PIA officials to solve their problem in the village itself.

The objectives are to:

- establish a three way connectivity between Manchal Watershed, MANAGE and DPAP office.
- enable efficient communication of reports viz. Watershed committee reports and PIA reports, required by DPAP from MANAGE and Manchal Watershed, using dial-up network connectivity.
- empower farmers working in watershed management (Watershed Committee members) in collecting farmers' data, preparing action plan and generating monthly/quarterly reports.
- implement an electronic mail system from Manchal to MANAGE/DPAP for solving

- problems at the field level or for any advice required by the farmers.
- implement on-line textual conferencing between farmers of Manchal with MANAGE NRM staff to discuss issues and problems.
- add value-added services to the village computer service through Internet.

Activities

Software for watershed management

Software has been developed in visual basic using Access database for automating the reporting system. The software captures the work / head wise expenditure details, which are basic input information, required to generate the monthly and quarterly reports. It helps capture structure-wise estimations, user group contributions and master database of private land, horticulture details of farmers. It also captures the PIA expenditure details. The software produces monthly / quarterly progress reports, structure-wise expenditure, cash book, ledger and proposals of private land and horticulture etc.



Location of booth and Infrastructure

The Sarpanch and the Gram Panchayat committee has agreed to give one room in the Gram Panchayat Bhavan at Arutla Village for installing the systems.

A Pentium III computer, and a printer have been installed in the village booth along with a TV with converters which converts the computer screen on to the TV for displaying information available on CDs.

Communication Technology

Dial-up modem technology has been used to implement this project. Using dial-up network connectivity all three places are interconnected using file transfer terminal software. This software enables in sending or receiving the files by establishing point-to-point connectivity with remote computers.

The software also provides an on-line textual chatting facility to communicate or discuss any issues on-line. E-mail connectivity is provided to send or receive mails from the village booth. Internet facility is also provided at the village.

Training

Four women have been selected from the village and have been trained to operate the computers and watershed management software and to send and receive the reports to and from DPAP office. One person from each watershed has been given orientation training on computers. They have also undergone training to send e-mails and browse the internet.

The trained women are operating computers in the village booth during the morning shift from 9 am to 2 pm. They are interacting with farmers and helping them to get information from the internet, and displaying information on CDs through television. They will soon be imparting training to school children during the summer vacations.

The trained watershed secretaries (farmers) are performing the job of preparing reports, action plans and budget estimates on computers

for different water harvesting structures. These reports will be sent through dial-up modem facility to DPAP office and MANAGE every month. The DPAP and MANAGE are also interacting with Manchal watershed through computer network to send any information.

Current status

Cyber power in watershed management has brought transparency to watershed activities. The direct involvement of farmers in preparing budget estimates and reports has given them strength, which has resulted in smooth implementation of watersheds in the village. The village booth is also enabling the farmers to obtain information from the net. Computer literacy among farmers is increasing and farmers are demanding useful crop based information. Farmer based sites on the Net are increasing day by day and these will provide the need-based information to farmers soon, right at their doorstep.

3. MANAGEMENT EDUCATION

3.1 Post Graduate Programme in Agri-Business Management (PGPABM)

There is a surge of demand in the agribusiness sector for managers with high level of techno-managerial competence. Our two year Post Graduate Programme in Agri-Business Management launched in 1996 seeks to answer this need. This programme has proved to be a satisfactory pilot experiment in creating a model of management education focused on the specific context of agri-business. A number of universities and other institutions in the country have subsequently realized its value and are in various stages of starting similar programmes. We admit only 24 graduates in agriculture and allied subjects with excellent academic record,



strictly on merit. In addition to the graduation marks, the students are screened through written tests on managerial aptitude, language and communication ability and agricultural technology, group discussions and individual interviews. The curriculum is designed to help students to learn the practical aspects of management of agri-business rather than becoming mere general managers.

3.2 Extension of recognition by AICTE

The AICTE Review Team visited MANAGE on July 25, 1999 for on the spot inspection and review discussions. A presentation was made highlighting the progress and achievements of the programme. The visiting team appreciated the programme and was highly impressed with the facilities available in the institute. Subsequent to their visit, AICTE has informed grant of extension of recognition for two years, till 2002. Previously the extension was being granted annually.

3.3 Restructuring of the PGPABM Curriculum

The growing interest of the agri-business companies in the PGPABM and the widening awareness of the student community has put additional responsibility of significant qualitative upgradation of the programme curriculum.



In pursuance of this commitment to excellence, intensive review of all the courses is being taken up in phases. The courses relating to the marketing segment were reviewed first. As a result of the review, 3 new courses have been added, besides redesigning the existing 5 courses. Likewise, the Finance and Accounts segment has also been reviewed and the courses restructured. Review process for the rest of the courses are also being taken up.

3.4 Summer Placements - PGPABM 1998-2000

The students of this batch underwent summer placement training from May 10 to July 09, 1999. They have also secured interesting and challenging summer placement assignments from reputed agri-business companies. While in the previous two years the summer projects have been mostly in the area of Marketing of agri-inputs, this year, companies like Novartis, Agricultural Finance Corporation and Mahyco have given challenging assignments in areas of Finance, Project Appraisal and HRD. The list of companies who have taken our students for summer project this year is given below.

S.No.	Name of the Company (Sector)	No. of placements
1.	Monsanto	4
2.	Bayer	1
3.	EID-Parry	3
4.	SPIC-PHI	3
5.	Dabur	2
6.	Mahyco	2
7.	Wockhardt	2
8.	Novartis	3
9.	JK Seeds	. 1
10.	Clause International	1
11.	AFC	1
12.	New Holland Tractors	, 1

3.5 PGPABM 1998-2000

Courses are offered on Financial Management, Macro Economics of Agri-Business, Quality Management, Cooperative Management, Strategic Management, Communication Skills, Sales and Distribution Management, Management of Agro-Chemicals, Management of Seed Industry, Management of Agri Export Marketing, Human Resource Management, Management of Food Processing Industry, Business Ethics, ERP, SIM, Environment and Legal Aspects for Agri-Business, Commodity Trading and Futures, Rural Advertising Communication, Networking Essentials, Supply Chain Management, Entrepreneurial and Intrapreneurial Skills.

In addition to the courses mentioned above, the students went on a two-week study visit to agri-business organizations in different parts of the country and visited Chennai, Bangalore, Cochin, Coimbatore, Pune, Mumbai, Ahmedabad, Calcutta, New Delhi, Chandigarh and Shimla. The visits were very useful both in terms of helping the students understand the different companies and their management processes and also helping the companies to appreciate the relevance of PGPABM and understand the importance of MANAGE as an institute.

3.6 Placements PGPABM 1998

The profile of companies as well as the average package of compensation this year has been substantially better than that of last year. As many as 11 companies have recruited MANAGE students. The details of the number of students taken by different companies are given below:

PGPABM - 1998: Final Placements

S.No.	Name of the Company	No. of students placed
1.	Dabur	1
2.	DSCL	1
3.	EID Parry	2
4.	Indofil	2
5.	ITC Bhadrachalam	2
6.	ITC-IBD	1
7.	Mahyco	1
8.	Rallis	4
9.	SPIC-PHI	3
10.	UPL	3
11.	Wockhardt	3
		23/23

3.7 Admission Process for PGPABM-1999-2001

Commensurate with the growing interest of the agri-business sector in this programme, attempts are constantly being made to ensure that the best of the candidates from across the country are selected. To this end, the admissions procedure was made more stringent for the fourth batch for which selection process was conducted between May 17-21, 1999. The minimum eligibility for application has been raised from 60% marks at B.Sc(Ag) level to 70% (65% for SC/ST candidates). The selection procedure has also been revised with a view to ensure that candidates with the required





capability and potential for excellence are selected. A combination of objective written tests, test of Written and Verbal Communication Ability and Assessment of interactional skills and personal qualities by a panel of experts, besides weightages for Post-Graduate qualifications, work experience and extraordinary extra curricular achievements, are to be used to evaluate the candidates. The system is made almost entirely objective to eliminate any possible chance of bias.

3.8 PGPABM 1999-2001 Batch

The newly admitted students of 1999-2001 batch went through a one-week induction period. During this period they were acquainted with the working of the institute, its various facilities, the norms of discipline and use of different facilities etc. They were also taken on a visit to different agri-business companies for an initial first hand understanding of the world of agri-business. The students presented group reports on their visits highlighting salient observations made by them.

3.9 Courses offered

Courses are offered on Basic Communication Skills; Basic Mathematics; Marketing Management Basics; Evolution of Management Thought; Economic Potential of Indian Agriculture; Agri-Input Marketing; Basic Financial Accounting; Business statistics; Self Management; Presentation Skills; Production Management; Micro Economic Theory; Procurement Management; Farm Production Management; Project Planning and Management; Information Systems and Technology Management; Participatory Extension Management; Managing People; Marketing Research; Marketing Strategies and Techniques; Quantitative Aids for Agri-Business.

3.10 Summer Placements - PGPABM -1999-2001 batch

The students have received interesting and challenging summer placement assignments from reputed agri-business companies. These students are to under go summer placement training from May 15 to July 14, 2000.

4. INFORMATION TECHNOLOGY

MANAGE recognizes the role of information technology in improving the efficiency and efficacy of the agricultural extension service in India. Information Technology systems have been installed primarily to address the needs of MANAGE faculty, staff and PGPABM students and also to train the officers from agricultural sector in Information Technology (IT). The main aims of the information system are:

- a. To design and develop innovative training programmes for extension managers and researchers on latest techniques of information and communication.
- To develop models of expert systems and multimedia software packages for training of extension functionaries.
- c. To provide information technology support to MANAGE faculty on software packages and national and international communication for their research consultancy and training efforts.



d. To provide on-line updated information to all faculty and administration on the mailing list, administrative decisions of General Council (GC), Executive council (EC), Training Calendar and resource persons allocation and availability.

4.1 MANAGE LAN Network

A 140 node structured cabling Local Area Network (LAN) has been established in MANAGE to cater the needs of all the officers, staff and students in the administrative building with an internal as well as external Messaging system and INTERNET facility under 6 KBPS Leased line connection.

4.2 Messaging System

It is providing mailing and messaging system for every faculty, staff and students to enable them to get mails individually and group wise from within and outside MANAGE. This provides an on-line linkage for every individual member of MANAGE irrespective of their location through INTERNET. This provides the WEB based linkage with various individuals as well as institutions.

4.3 INTERNET Facility

MANAGE through 64 KBPS leased line connection from DOT is connected to uninterrupted INTERNET for all 140 Network nodes. This facility provides 24 Hrs. connectivity to the external world any time. This is not only building knowledge flow but also providing linkages with different institutions and individuals with MANAGE.

4.4 Computer Lab

MANAGE built a 31 units based Flexible design computer lab to cater to the needs of the PGPABM students as well as trainees

who come for different technology based training programmes. It is a modern lab at par with International standards in technology and design used in high technology IT institutes world wide. The core design can be modified when ever the need to change is needed without extra cost. The maintenance of the lab is very easy and flexible.

4.5 Interactive Multimedia Based Training Project

Our institute uses interactive multimedia as a stand-alone training tool to train extension officers. Several innovative programmes have been taken up to strengthen its information processing and networking services and relate them directly to extension management and training needs at State Agricultural Universities. There are Interactive Multimedia Based Training Projects.

Interactive Multimedia based Training enables the learner to control the flow and pace of the content, and have access to Audio, Text, Graphics, Animation, all integrated to present the technical content in a lively manner.

In 1991, Government of India sanctioned a pilot project for MANAGE to develop ICVT hardware and software capability to develop multimedia software based training programmes. The project had an outlay of Rs.1.56 crores and was funded by World Bank.

The training software on "Watershed Management for Rainfed Areas" is the first indigenously designed and developed multimedia training software in Agriculture in India. This was tried on a test group and later launched as a regular training programme. The new Multimedia training Package on Rice Cultivation in Rainfed Areas (seed to seed) is also ready for training.



The software on "Watershed Management for rainfed Areas" has been put on CD-ROM, for wider dissemination.

4.6 Multimedia Network for CD-ROM based applications development and usage:

A window-NT based Network has been established for CD-ROM based application development and Usage. The software available on the network includes Authorware Interactive Software 3.5/Win; Freehand Graphics Studio 7.0; Visual C++ 4.0; MS Visual Studio v5.0; Project 4.1; SPSS v10.0; SAS; R5 Domino Lotus Notes; MacFee Antivirus and Multilingual e-mail software I-Leap V2.0.

5. INFORMATION RESOURCE CENTRE

The MANAGE Information Resource centre offers information support services to meet the information needs of teaching, training, research and consultancy programmes at MANAGE. This support is being provided through documentation services, and publications. Activities at this centre revolve around access, analyses and dissemination of information on subjects related to agricultural management, in order to meet the information needs of farmers through extension organisations, research organisations and agribusiness enterprises.



The centre makes available a wide range of facilities using the latest information technology for access to and use of information in the conduct of professional work.

The mission is to emerge as a national resource centre for documentation and dissemination of information relating to various aspects of agricultural extension.

5.1 Information Resources

We have a fast growing collection of valuable titles aimed at building up a functionally complete collection for meeting the substantial and varied information requirements of our Training and Education Programmes. We also subscribe to a large number of carefully selected periodicals, both Indian and foreign.

The Library has also developed a rich collection of over 300 videos, relating to agriculture and allied aspects and management.

Besides books, journals and videos the library has also been subscribing to a number of databases and multimedia management packages on CD-ROMs. We have a collection of about 250 CD-ROMs on various aspects of agriculture and management. Databases received on a regular basis include AGRIS from FAO, AGRICOLA of the US national Agriculture Library, TROPAG & RURAL from Royal Tropical institute, Netherlands, CABSAC, the Compact International Agricultural Research Library, EXIM and PROWESS and India Trades. Several interactive CD-ROMs have also been procured, some from the Harvard Business school, on management education which include packages on communication, negotiation, team building etc.

5.2 Library Automation

The Library has been computerised using LIBSYS and access to the library database is available on LAN making it possible for faculty to search the on-line Public Access Catalogue of the Library's Computerized cataloguing system. The catalogue offers access to books, reports, journals, videos, CD-ROMs available and journal articles along with abstracts for most. These can be retrieved by author, title, subject, keywords, publishers, and through use of Boolean operators. Development of a database of books and articles scanned from current literature is an on-going activity of this centre. Articles, of interest to research and training activities at MANAGE, are abstracted and made available to Faculty through the OPAC. Attempts are on to make it accessible over the Internet.

5.3 Services

Information services include literature search services, bibliographic services, based on in-house and CD-ROM databases and the Internet; Documentation: Disseminating information through products and services like MANAGE Bulletin, Extension Digest, Fountain among policy makers, scientists and extension managers; Current Awareness Service; Selective Dissemination of Information (SDI); and Inter-Library Loan Service. Attempts are on to map information resources on the Web to make it easier for Faculty to log on to sites of interest to them.

Documentation of extension literature is a core activity the objective being, to develop a consolidated/summary information system on management of extension, through information collection, processing and analysis and to develop suitable information products and services to meet the information requirements

of research scientists, extension functionaries and MANAGE Faculty for their research, consultancy and training efforts.

5.4 Information Dissemination Channels

An information needs survey was conducted with participants of MANAGE training programmes to identify information needs of extension managers and the thrust of future activities in the field of documentation and publications. The twin objectives of the survey were to design suitable information products to support training, research and extension activities of MANAGE as well as increase awareness and interest amongst policy makers, research scientists, administrators, extension workers, training institutes and NGOs and farmers about the latest thought and developments in the field of agricultural extension, technology and management. In order to meet the above objectives MANAGE is bringing out publications like the MANAGE Bulletin, Extension Digest, MANAGE-ODI Natural Resource Perspectives Series and Fountain. These publications are circulated among policy makers, senior administrators, scientists of central and state governments, district, state, national and international organizations connected with agriculture and extension management.

MANAGE Bulletin

Published since 1992, MANAGE Bulletin is a Bi-monthly newsletter in English and Hindi. This is intended to give a glimpse of the agricultural scene in India and other countries and current developments in agriculture and also cover MANAGE training programmes and results of research and consultancy projects.

Extension Digest

The purpose of the Extension Digest is to



disseminate information relating to extension systems and practices, research on extension methods and current concerns in the area of agriculture. Each issue of the Digest is on a specific theme and the topics chosen mirror current concerns. Information is culled from current literature including books, journals, conference proceedings, and other reports, and abstracted. Over 32 issues have been published since 1992 and distributed among policy makers, research scientists and extension managers in India and other countries.

Themes covered over the years include Management of Agricultural Extension; Extension Approaches; Research-Extensionfarmer Linkages, Trends in Agricultural Extension; Watershed Management, Participatory Approaches; Natural Farming; Women in Agriculture; Indigenous Knowledge; Training for Agricultural Development; Managing Common Property resources; Integrated Pest Management; Farmers' Organisations; Agricultural Education beyond 2000; Technology management in Agriculture; Information Technology in Agriculture, Agricultural Education, Common Property Resource Management, Gender, Sustainable Agriculture, Cyber Extension, and Joint Forest Management.

MANAGE-ODI Natural Resource Perspectives Series

Starting from November 1996, MANAGE has entered into a co-publishing arrangement with Overseas Development Institute (ODI), U.K. for bringing out the Indian edition of the Natural Resource Perspectives series. Each of these issues presents information on current development issues. These papers are being distributed among policy makers, research and extension organisations in the country.

5.5 Digital Library Initiatives

The MANAGE Information Centre has recently begun a programme of digitization to enable access to MANAGE's training, research and consultancy outputs. The library is currently accessible on the Internet.

The digital library site gives access to the information resource base at MANAGE in terms of its research, consultancy projects, publications and is also intended to be a gateway to agricultural information on the Net. Our Library has full connectivity with Internet with multiuser capability, which enables us to access information globally on any specific subject and make it available for our faculty and participants.



5.6 Training

Training programmes are organised for library managers, and information scientists on new technology applications for information management.

6. DEVELOPMENT OF PHYSICAL INFRASTRUCTURE

6.1 New Drinking Water Pipe Line from the Municipal Water Supply Source:

The MANAGE Campus is presently depending upon a few bore wells for its water

requirement. These sources could suddenly deteriorate as the water table level gradually depletes. Therefore, a permanent drinking water source is extremely found essential to solve the problem. In this context, the local municipal authorities were approached for a daily supply of approximately 1.0 lakh liters to MANAGE campus. They agreed the proposal to lay 150 mm dia C.I. pipeline from Municipal over head reservoir to MANAGE Campus through ANGRAU land. The work was completed during December 1999 and MANAGE gets Drinking Water from Rajendranagar Municipality.

Campus Maintenance

The campus consisting of Academic Building, Hostel, Health center, Green houses and residential quarters has been maintained in very good condition as per standards laid down. All supporting services and recreational facilities have also been kept in very good condition for optimum use. The electrical and water supply systems have provided uninterrupted supply. The lawns and plants have been developed with very healthy growth and lush greenery. Prompt transport arrangement is ensured for day to day function of MANAGE. All the rain water-harvesting structures made last year have been properly trimmed and maintained well in order to ensure that the benefit from last year in maintaining the water table, is not reduced.

As a part of conservation programme initiated by MANAGE, it has started solid waste management creating vermicompost structure of 20 cubic meter capacity for disposal of waste material consisting of organic waste generated in residential area and hostel.

6.2 Institutional Greening through water harvesting

MANAGE is the premier institute for Agricultural Extension Management in India under the wings of Ministry of Agriculture and Cooperation. Its 42 acres campus is located in Hyderabad having 750 mm annual rainfall. Topography is undulating with light red soils.

The area is ridden with mini-hillocks coupled with deep gullies indicating heavy runoff during uncertain season with a few rainy days. Building blocks have come up along with a few garden patches here and there during last 4 years. But for these green spots, the remaining landscape presents a barren picture for major part of the year.

The institute is also blessed with a faculty steeped in multi-disciplinary philosophy. One of such proud disciplines is 'watershed management'. In fact, guidelines to operationalize Hanumantha Rao Committee report on Watershed Development were crafted in MANAGE.

An idea struck us sometime in January, 1999 as to why the same watershed concept should not be applied to our own campus itself? Why each and every drop of water should not be conserved whenever it fell in our campus premises? 42 acres of land with 750 mm rainfall





amounts to 12.6 hectare meter volume of water or 1.26 lakh cubic meter of water being received perennially. If every drop is conserved, perhaps MANAGE campus could be converted into a lush green garden with trees, creepers, flowers and water bodies with microfauna over a period of 5 years.

The very idea was infectious. Very soon, everyone was talking about it to each other. That was the time when Mr. Hanumantha Rao - the author of 'Four waters concept' took a brainstorming session in February, 1999, with faculty members. After a week or so, he came back again and perambulated the length and breadth of the campus. The visit was a reeducation to almost all of us. We discovered the hitherto unknown features in our campus like an ancient aqueduct, an old archbridge, an old well and the like. We sat around the contour map once again. By now all of us shared a common experience of an hour long padayatra and the dream of conserving every drop of water flashed vividly in our inward eyes. Though tired - All of us were inspired by now.

In the month of March, 1999, all the water harvesting structures were put on map and located on land as well. A contour trench around mini hillocks, a series of sunken ponds along rills interspersed with mini-percolation tanks around ridge, a series of stone dams along gully to harvest soil, water trapping structures along road ribbon and redirecting it to avenue trees through graded trenches were some of the things to be done before arrival of rains. All these works were estimated to cost around Rs.3/lakhs in March, 1999. Though civil engineering wing was responsible for executing the works, the watershed faculty was made responsible for covering the entire developmental process. Both the wings rose to the occasion.

This line of thinking in MANAGE gives rise to the concept of 'Water Budget'. An institute with X Acres of land with Y millimeters of annual rainfall receives a quantity of X-Y units of water perennially. Major portions of it goes waste as on today. But with proper planning, it can be conserved within the campus with minimal expenditure on appropriate soil water harvesting structures. Once water stops, wealth sprouts and over a period of time, it multiplies not in a linear manner but exponentially like compound interest—year after year. That wealth rightly belongs to the institution eternally.

In our country, total number of such institutes runs into a few thousands. There are 29 State Agricultural Universities - each with a few thousand acres of land. Then we have regular universities, Institutes of Technologies, Engineering and Management, Post-Graduate Centers and Degree Colleges, Central Public Sector undertakings with huge extents of land around them, Agricultural Research, Extension and training outfits, Animal Husbandry, Horticulture, Sericulture and Agriculture Institutes, Secretariat Buildings, Commissionerate, Collectorate and subordinate office outfits, residential bungalows, state public sector outfits, etc. All this adds upto 2000 to 3000 units with around 2 lakh acre of land. Responsibility to account for this



'water receipt' on an annual basis would rest with the CEO of the institute/office. They have adequate funds, authority and manpower. What is perhaps needed is just a spark to set their imagination on fire. They, after all are professionals. With the click of a button, they can communicate with any part of the globe through satellites. They would love to communicate now with mother earth - through the five forces of nature - also called Panchabhutalu - i.e. soil, water, sunshine, sky and biomass.

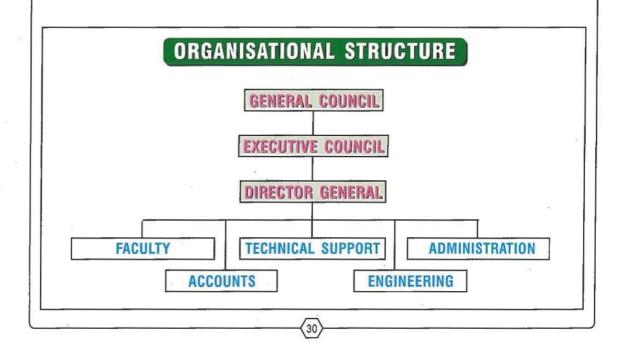
7. ADMINISTRATION

The general supervision of MANAGE vests with the President, General Council, presided over by the Hon'ble Union Minister for Agriculture, Government of India. There are two Vice Presidents in the General Council; namely the Hon'ble Minister of State for Agriculture and the Secretary (Agri. & Coop), Ministry of Agriculture, Government of India. In the absence of the President, one of the two

Vice Presidents, is nominated by the President, to preside over the General Council Meeting. The General Council is expected to meet at least twice every year.

The General Council exercises overall control and issues directions for the efficient management and administration of the affairs of MANAGE, besides nomination of members to the Executive Council; approval of annual budget and annual report and amendment of the Rules and Regulations of MANAGE, with prior approval of Government of India. The detailed organisational structure is as follows:

The General Council consists of 46 members drawn from different walks of life viz., Hon'ble Union Ministers, Secretaries from Agriculture Department, Planning Commission, Rural Development, Department of Personnel and Training, Agriculture Commissioners / Directors of State Agriculture Departments, Vice Chancellors from three Universities and





other non-official members including MLAs and MPs and members nominated from Institutes in India working in agriculture development and allied fields, besides eminent persons who have made noteworthy contributions in the field of agricultural development and allied subjects. The Members are nominated by the Ministry of Agriculture, Government of India on rotation basis, representing four zones of the country for a period of three years. The composition of the Members of the General Council report may be seen at Annexure - I (a).

Subject to the overall control and directions by the General Council, the Executive Council is responsible for the actual implementation of policy matters, in accordance with the Rules and Bye Laws.

The Executive Council consists of 12 members with the Secretary (Agri. & Coop), Ministry of Agriculture, Government of India as its Chairman. The composition of the Executive Council may be seen at Annexure-I (b).

The day-to-day administrative functions are looked after by the Director General, who is the head of the Institute. He is appointed by the Government of India as the Principal Executive Officer and is responsible for smooth and proper functioning of administrative affairs. He exercises powers under the direction and guidance of the Executive Council. The Director General is assisted by Faculty, Administration, Accounts and Engineering Wings.

7.1 Faculty

Five Directors, six Deputy Directors, six Asst. Directors and eight Research Associates were working during the period under report. Some of the faculty and technical support staff have been taken on deputation basis from various Government Departments / Institutes etc. A list of the faculty and officers along with the detailed background may be seen at Annexure-II.

7.2 Administrative Support

The Director General is supported by an Administrative Officer on general administrative matters and a Programme Officer for conduct of various training programmes. As on 31.3.2000, 46 administrative and technical support staff were working at MANAGE.

7.3 Accounts Support

An Accounts Officer with six other staff assist the Director General in processing, maintenance and auditing of accounts,

7.4 Engineering Support

The team of Engineering Staff includes one Consulting Engineer, Maintenance Engineer (Elect.) three Junior Engineers (Civil) and one Accountant for construction and maintenance of buildings of MANAGE.

7.5 Funds

MANAGE is included in the regular 9th Five Year Plan Project of the Ministry of Agriculture, Government of India and provisions are made for funding under the Plan. MANAGE is committed to attain self-sufficiency and to achieve this objective; proposals are also under consideration for the creation of a Corpus / Endowment Fund.

8. MISCELLANEOUS

8.1 Meetings

8.1.1 General Council

The 24th General Council Meeting was held on 16.6.2000.

8.1.2 Executive Council

Two meetings (34th and 35th) of the Executive Council were held on 20.8.1999 and 17.12.99 respectively.

8.2 Financial Position

The Annual Accounts which indicate the financial position of MANAGE for the year 1999-2000 are put up separately. The accounts have been audited by the Accountant General, A.P., Hyderabad.

8.3 Class Rooms

We have state of the art class-room infrastructure. Class rooms are currently air-conditioned along with multimedia projection systems etc.

8.4 Faculty Rooms

The faculty and the management staff is provided with sophisticated office infrastructure and systems.

8.5 Recreation Facilities

Facilities for recreation available include table tennis, billiards, caroms, chess, volleyball, cricket, flood-lit tennis and badminton courts with synthetic-turf surface, a squash court and a small swimming pool.

8.6 Hostel

We have a modern, well equipped hostel with capacity to accommodate 94 students and participants. The rooms are centrally air-cooled with solar heated water supply, telephone and multi-channel TV. Educational cassettes are played in the evenings on one of the channels.

In addition to normal rooms for the students, we have 6 VIP Guest rooms.

8.7 Health Care

We have a health center equipped with out-patient treatment facilities for the staff, participants and students. A Medical Officer looks after the medical attendance needs. Regular arrangements exist with prominent advanced centers of treatment in case of need for advanced or in-patient treatment. One homeopathic expert visits MANAGE every Sunday to provide consultation for staff, faculty, and students.

ANNEXURES



Annexure -I (a)

Composition of General Council of "MANAGE"

Cate- Gory	Composition of General Council	SI. No.	Name & Address of the Member (Chairman, Officials & Non-official Members)
I	Ex-Officio Members; President of MANAGE: The Minister Incharge of the Ministry / Department, Government of India dealing with MANAGE.	I	Hon'ble Union Agriculture Minister Ministry of Agriculture Krishi Bhawan NEW DELHI - 110 001
	Two Vice-Presidents of MANAGE: The Minister of State (A&C) and Secretary, Department of A&C Ministry of Agriculture.	2	Hon'ble Union Minister of State for Agriculture Ministry of Agriculture Krishi Bhawan NEW DELHI - 110 001
		3.	Shri Bhaskar Barua, IAS Secretary (Agriculture) Dept. Of Agriculture & Coop., Ministry of Agriculture Krishi Bhawan NEW DELHI - 110 001
II	Non Official Members: Four persons from non-official Institutions in India working in Agricultural Development and Allied fields - To be nominated by the President of the MANAGE as	4.	Dr Subir Chowdhary 50-U, Garcha Road Calcutta - 700 019 West Bengal
	members	5.	Dr Vijay S. Vyas Former Director, IIM (Ahmd) Institute of Development Studies S-B, Jhalana Institutional Area Jaipur - 302 004
		6.	Swami Shashankananda Secretary Ramakrishna Mission Ashram Divyayan Krishi Gyan Kendra Swami Vishuddhananda Road Morabade, Ranchi - 834 008 Bihar

Cate-	Composition of	SI.	Name & Address of the Member
Gory	General Council	No.	(Chairman, Officials & Non-official Members)
		7.	Dr M.R. Rao Director Indian Institute of Management Bannerghat Road Bangalore - 560 076
	Nine eminent persons who have made noteworthy contributions in the field of agricultural development and allied subjects	8.	Dr S.K. Rau "Sarvani" West Park Road Gandhi Nagar Kakinada - 533 004
		9.	Dr T.L. Sankar Principal, Administrative Staff College of India Bellavista, Raj Bhavan Road Khairatabad, Hyderabad - 500 082
		10.	Dr R. Dwarakinath 143, V Main, IV Block Jayanagar, Bangalore – 560 011
		11.	Dr P.V. Shenoi Director Institute for Social & Economic Change Nagarbhavi Bangalore – 560 072 (Karnataka)
		12.	Prof. C.H. Hanumantha Rao 240/A, Road No. 18 Jubilee Hills Hyderabad
		13.	Dr K. N. Sardana Principal, Delhi Public School Mathura Road New Delhi
		14.	Dr S.R. Barooah IC, Sagar Apartments, 6 Tilak Marg, New Delhi - 110 001



ate-	Composition of General Council	SI.	Name & Address of the Member
ory	General Council	No.	(Chairman, Officials & Non-official Members
		15.	Prof. Udai Pareek
			Prof. Emeritus
			Indian Institute of Health
			Management Research (IIHMR)
			I, Prabhu Dayal Marg Sangener Airport
			Jaipur - 302 011
		540°-520°	
		16.	Dr Atul Kumar Anjan
			A-265 Pandara Road Flats
			New Delhi - 110 003
			New Deini - 110 003
	Director General, NIRD	17.	Shri R.C. Choudhary, IAS
			Director General
			National Institute of Rural Development
			Rajendranagar
			Hyderabad - 500 030
	Director General, ICAR	18.	Dr R.S. Paroda
			Director General
			Indian Council of Agricultural Research
		0	Krishi Bhawan
			New Delhi - 110 011
	Additional Secretary and Joint	19.	Mrs Sathi Nair, IAS
	Secretary incharge of Extension		Additional Secretary
	and Financial Adviser in the		Dept. Of Agri. & Coop.,
	Ministry / Department of Govt.		Ministry of Agriculture
	of India dealing with		Krishi Bhawan
	MANAGE and the Secretary of		NEW DELHI
	the Ministry / Department dealing with Rural Development	20.	Mrs Rita Sharma, IAS
	Turu Dovolopmoni	20.	Joint Secretary (Agri. Extn.)
			Dept. Of Agri. & Coop.,
			Ministry of Agriculture
			Krishi Bhawan, NEW DELHI
		21.	Shri T.K.Das, IA & AS
		1704	Financial Adviser
6			Dept. Of Agri. & Coop.,
			Ministry of Agriculture
			Krishi Bhawan, NEW DELHI

Cate- Gory	Composition of General Council	SI. No.	Name & Address of the Member (Chairman, Officials & Non-official Members)
		22.	Shri Arun Bhatnagar Secretary (Rural Development) Ministry of Rural Areas & Employment Dept. Of Rural Development Nirman Bhawan Room No. 247, A Wing NEW DELHI - 110 011
	Agriculture Commissioner, Govt. Of India, Department of A&C, New Delhi	23.	Shri C.R. Hazra Agri. Commissioner Department of Agri. & Coop. Ministry of Agriculture Krishi Bhawan, NEW DELHI
	Secretaries in the Ministries of Education, Department of Personnel and Training and of the Planning Commission or their nominees not below the rank of Joint Secretary to the Govt. of India.	24.	Secretary (Education) Department of Education Ministry of Human Resources Development Shastri Bhawan NEW DELHI - 110 001
		25.	Special Secretary to Planning Commission, Govt. Of India Planning Commission Yojana Bhavan, New Delhi - 110 001
	Five Secretaries to the State Governments / Union Territories Incharge of Agril. Production (in rotation) or their nominees not below the rank of Deputy Secretary to the State Govt.	26.	Secretary (Agri. & Horti.) Govt. of Karnataka Vidhana Soudha Bangalore - 560 001 Karnataka
	.*0	27.	Secretary (Agri.) Govt. of Mizoram Aizwal, Mizoram(North East)
			Secretary (Agri.) Agri. and Cooperation Govt. Of Gujarat, 5/11 Sardar Bhawan Sachivalaya Gandhinagar, Gujarat
			Contd



late- lory	Composition of General Council	Sl. No.	Name & Address of the Member (Chairman, Officials & Non-official Members)
j	Coloria Coulon	29.	Secretary Agri. & Coop., Govt. of Orissa, Secretariat Bhubaneshwar - 751 001, Orissa
		30.	Project Coordinator Agri. Production Dept., J & K Govt. Civil Secretariat JAMMU & KASHMIR
	Seven Members of the Union / State and Union Territory Legislatures: 2 from Lok Sabha, I from Rajya Sabha, 4 from State and Union Territories	31.	Shri Gaya Singh Member of Parliament (RS) 14-A, Ferojshah Road New Delhi - 110 001
	(To represent four Zonal Councils by rotation)	32.	Shri R.K. Yadav Member of Parliament (LS) 3, Ferozshah Road New Delhi - 110 001
		33.	Shri Hardev Arshi M.L.A (Punjab) Gali No. 8, Partap Nagar Bathinda (Punjab)
		34.	Shri A. Thangamani M.L.A. (Tamil Nadu) C/o. Secretary Legislative Assembly Govt. of Tamil Nadu Chennai (Tamil Nadu)
		35.	Shri Rajinder Rajan MLA (Bihar) Chanakya Nagar Bisanpur, P.O. Mirzapur Bandawar - 851 129 Begusarai (Bihar)
		36.	Shri Rohidas Patil M.L.A 6, Purna Complex, Sir Pochkhanwala Road, Worli, Mumbai - 400 025

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Cate- Gory	Composition of General Council	Sl. No.	Name & Address of the Member (Chairman, Officials & Non-official Members)
	Four Directors of Agriculture of States / Unions Territories (to represent their regions of the country by rotation); or their nominees not below the rank of Additional Director of Agri. or	37.	Director of Agriculture Directorate of Agriculture Govt. of Maharashtra Central Building Pune - 411 001, Maharashtra
	an officer of equivalent rank	38.	Director of Agriculture Directorate of Agriculture Govt of Haryana SCO 45-47, Sector 17 Haryana - 160 017
		39.	Director of Agriculture Dept. of Agriculture Government of Assam Khanapara Guwahati - 781 002, Assam
		40.	Director of Agriculture Directorate of Agriculture Govt. of Tamil Nadu Chepauk Chennai - 600 005, Tamil Nadu
	The Director General of MANAGE who shall be appointed by the Government of India, Ministry of Agriculture	41.	Shri A.K. Goel, IAS Director General National Institute of Agril. Extn. Management (MANAGE) Rajendranagar, Hyderabad -500 030 (AP)
	Two Vice-Chancellors of Agril. Universities and one Vice-Chancellor of General University (by rotation) or their nominee not below the rank of Director	42.	Vice Chancellor Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur - 482 004 (MP)
		43.	Vice Chancellor University of Agril. Sciences G.K.V.K. Campus Bangalore - 560 065 (Karnataka)
ti		44.	Vice Chancellor University of Mumbai Mantralaya Mumbai - 400 032



Annexure -I (b)

Composition of Executive Council of "MANAGE"

Cate-	Con	iposition of	SI.	Name & Address of the Member
Gory	Exe	cutive Council	No.	(Chairman, Officials & Non-official Members)
I	Ex-	Officio Members;		
	a)	Secretary (A & C) as Vice President of the MANAGE shall be chairman of the Executive Council	Î.	Shri Bhaskar Barua, IAS Secretary (Agriculture) Dept. Of Agriculture & Coop., Ministry of Agriculture Krishi Bhawan NEW DELHI - 110 001
	b)	Additional Secretary incharge of Extension in the Ministry Department, Government of India dealing with the MANAGE shall be the Vice-Chairman of the Executive Council	2.	Mrs Sathi Nair, IAS Addl. Secretary (Extn.) Dept. Of Agriculture & Coop., Ministry of Agriculture Krishi Bhawan NEW DELHI - 110 001
	c)	The Director General of MANAGE	3.	Shri A.K. Goel, IAS Director General National Institute of Agricultural Extension Management (MANAGE) Rajendranagar Hyderabad - 500 030
	d)	Joint Secretary incharge of Extension and Financial Adviser in the Ministry / Department, Government of India dealing with MANAGE	4.	Mrs Rita Sharma, IAS Joint Secretary (Agri. Extn) Dept. Of Agriculture & Coop., Ministry of Agriculture Krishi Bhawan NEW DELHI - 110 001
			5.	Shri T.K. Das, IA & AS Financial Adviser Dept. Of Agriculture & Coop., Ministry of Agriculture Krishi Bhawan NEW DELHI - 110 001

on-official Members ive eminent persons who have made ote-worthy contributions in the fields f agricultural development / and lied subjects; to be nominated by e Government of India from among e members of the General Council	6.7.8.	Dr S.K. Rau, IAS (Retd.,) "Sarvani" West Park Road Gandhi Nagar Kakinada - 533 004 Shri Atul Kumar Anjan A-265 Pandara Road New Delhi - 110 003 Prof. Udai Pareek Prof. Emeritus Indian Institute of Health Management Research 1, Prabhu Dayal Marg
c monitors of the Golden Council		A-265 Pandara Road New Delhi - 110 003 Prof. Udai Pareek Prof. Emeritus Indian Institute of Health Management Research 1, Prabhu Dayal Marg
	8.	Prof. Emeritus Indian Institute of Health Management Research 1, Prabhu Dayal Marg
		Sanganer Air Port Jaipur - 302 011
	9.	Shri T.L. Sankar Principal Administrative Staff College of India Bella Vista Raj Bhavan Road, Khairathabad Hyderabad
wo members to be nominated by e General Council from among the n-official members of the eneral Council	10.	Shri Rajinder Rajan MLA Chanakya Nagar Bisanpur P.O. Mirzapur Bandawar - 851 129 Begusarai (Bihar)
I	General Council from among the a-official members of the	General Council from among the a-official members of the



Annexure-II

PROFILE OF MANAGE FACULTY AND OFFICERS

Faculty

SI. No.	Name of the Faculty	Designation	Qualification	Experience	Publications
1.	Shri A.K. Goel IAS	Director General	B.Tech (Electronics & Electrical Communications) IIT Kharagpur M.Tech. (Computer Sciences), IIT, Kanpur	 Collector Commissioner of Rural Development Commissioner Higher Education Commissioner Social welfare and Rehabilitation Secretary B.C. Welfare Director General MANAGE 	
2.	Dr N.K. Sanghi	Director	M.Sc (Agril.) Ph.D Besides Trg. Progms in India & abroad	 Scientist in Plant Breeding in ICAR Zonal Coordinator for transfer of tech. Projects 	Book - 1 Reports - 22 Research Papers/ Articles - 41
3.	Dr G.R. Desai	Director & PCTL (NATP)	M.Sc (Agril.Extn) Ph.D Attended progms in India & abroad including Coverdale of UK	Overall 22 yrs of experience - Past experience Dy Director, ETOT, NIRD - Programme Coordinator for the Agri. Extn. Mgmt. Trg. Prgms under the aegis of Coverdale	Book - 1 Research papers Articles - 30 Study Reports 8 Trg. Manuals 1
1.	Dr M.N. Reddy	Director & Consultant (NATP)	M.Sc (Agri.) Ph.D (Agril. Extn.)	2 1/2 years as Agril. Extn. Officer, Dept. of Agril., Govt. of A.P. - 7 years as Farm Radio Officer AI& CC, APAU	Books - 2 Papers - 60 Reports - 5

SI. No.	Name of the Faculty	Designation	Qualification	Experience	Publications
				 6 months as Asst. Director (Extn.) Directorate of Extension, APAU 6 months as Extension Specialist, Regional Agricultural Research Stn., Nandyal, A.P. 9 years as Associate Professor (Communication) EEI, Hyd. 1 year as Consultant & Project Manager for Tribal Development Project, MANAGE 1 Year as Associate Prof. (Communication) EEI. 2 years as Consultant, NATP Director & Consultant (NATP) in MANAGE 	
	Dr J.P. Singh	Director	M.Sc. (Agril.) Ph.D (Agril.Econ.)	- Asst. Professor (Agril. Eco) in Dept. of Agril. Eco - 29 yrs - Univ. Head of the Dept. (Agril. Eco) in Dept. of Agril. Eco -3 years - Director (Agril. Eco.) in MANAGE from Sept. 1999.	Publications 105
•	Dr V.P. Sharma	Consultant (Computers & Communication) NATP	M.Sc. (Statistics) M.A. (Economics) MBA Ph.D	Systems and Developing	Papers Intl. 2 National 1 Developed Course material on Multimedia & Computers
	Dr Vikram Singh	Dy Director (Orgn. Behaviour)	M.A. (Psychology) M.Phil - do- Ph.D - do - Attended trg. Progms in India & abroad including Coverdale Orgn. UK.	그러워 이 아이들의 아이들의 아이들의 아이들이다.	Publications 12 Research Reports



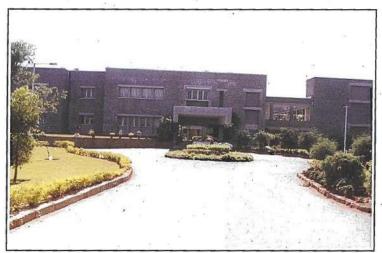
SI. No.	Name of the Faculty	Designation	Qualification	Experience	Publications
8.	Shri V.K. Reddy	Dy Director	M.A. Sociology PG Dip. in Lab. Laws & Personnel Mgmt. Attended Trg. Progs in India and abroad including IDS, Sussex and Coverdale Orgn. U.K.	- Asst. Director in NIRD Faculty of HRD	Research reports 1
9.	Dr B.D. Tripathi	Dy Director	M.Tech (Chemical Tech.) M.B.A. Trg. in India & abroad, Coverdale Orgn. U.K. PISIE, JESI, Italy, Proficiency Certificate in Italian Language	 8 yrs Asst. Tech. Adviser in Dept. of Food, GOI, 9 years Planning & Coordination of trng. Progms. & Training in-service personnel 	Research Papers 2 Article 1
10.	Dr P. Chandra Sekhara	Dy Director (Agri., Extn.)	Ph.D (Agril.Extn.)	 10 years as Jr. Liaison Officer in Coffee Board 1 year as Dy Director (Agri.Extn.) in MANAGE 	Res.Papers -22 Sem. Papers -6 Reports 2 Books 2
11.	Dr K.H. Vedini	Programme Officer	M.Sc. (Agril.) Ph.D PDF (Netherlands)	 4 years experience as Consultant for Development Projects 2 years as Academician 	Books - 3 Res. Article -10
12.	Shri J. Pandu Ranga Rao	Asst. Director (Computers)	M.Sc. (Statistics) M.A. (Eco.) Diploma in Computer Science Attended Trg. Progs in India & abroad	18 years as Research Officer in NIRD.	Research papers 5
13.	Mrs. Lakshmi Murthy	Asst. Director (Doc.)	M.A. (Eco) M.LI.Sc Advanced Diploma in French	17 years in Documentation and Information Management	Papers 4
14.	Dr T.D.S. Kumar	Asst. Director & Coordinator (PGDABM)	M.Sc (Ag.Eco.) Ph.D (Ag.Eco)	10 years in trg. Research & Consultancy Trained as facilitator	Articles 4 Research Papers 16
					Contd

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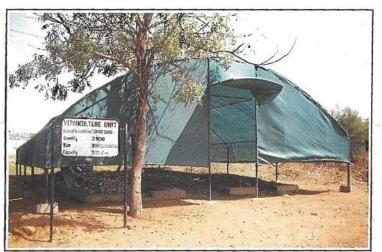
Sl. No.	Name of the Faculty	Designation	Qualification	Experience	Publications
15.	Mrs. G. Jaya	Asst. Director-	M.Sc. (Home Science) Adv. Dip. in Management Dip. in HRD	11 years in trg. Trained as facilitator	
16.	Mrs. K. Uma Rani	Asst. Director	M.Sc. (Home Science) M.Phil (Ext. Edu) Trained as facilitator in Coverdale-Orgn., U.K.	17 years in training and research	Research Articles 7
17.	Dr M.A. Kareem	Asst. Director	M.Sc. (Agri. Extn.) Ph.D	7 years experience in training and research	
18.	Shri K.V. Rao	Programmer	M.Tech. (CSE) M.Sc (Physics) PGDCA	Research Asst. (Phy) in CW & FRS, Pune, Ministry of Water Resources, GOI.	Paper 1
19.	Shri A. Srinivasa Charyulu	Research Associate (Doc)	M.A (Phil) M.L.I.Sc	6 years experience in documentation and information management	Article 2
20.	Smt. B. Renuka Rani	Research Associate (Res.Studies)	M.S.W PGDPR	3 years teaching (MLTC Instructor) 4 years in Watershed Activities	Paper 5
21.	Smt. P. Lakshmi Manohari	Research Associate	M.Sc (Agril.)	5 years experience in Extn.	Paper 1
22.	Shri G. Bhaskar	Research Associate	M.A. (Personal Management), PGDCP, Dip. in RDBMS & OPPs	8 years experience in Software Development	
23.	Dr. K. Maheshwaramma	Research Associate	M.Sc., Ph.D	4 years	
24	Shri B. Venkat Rao	Research Associate	M.B.A (Mktg.)	3 years as R.A	Article -1
25.	Dr P. Kanaka Durga	Research Associate	Ph.D (Agri. Eco)	2 years as Lecturer 2 years as RA	Articles - 4



OFFICERS					
SI. No.	Name of the Officer	Designation	Qualification	Experience	Publications
1.	Prof. A. Thaha	Admn. Officer	B.E D.T.C.P (URP) Hons.	Worked as faculty at NIRD, IOA, Hyderabad and KILA Tirchur Retd., as Chief Town Planner to Govt. of Kerala	Books - 4 Res. Papers -30
2.	Dr Shanth Kumar Goel	FA & Accounts Officer	M.V.Sc., L.L.M MBA	8 years as Accounts Officer in ICAR institutes FA & AO, MANAGE	Res. Articles 2
3.	Dr Rajeev Arab	Medical Officer	M.B.B.S DNB (Primary)	 Worked as Medical Officer in Akkalkot for 3 years Worked as General Practitioner in Ministry of Health & Medical Education, Govt. of Iran for 4 years Worked as Jr. Resident in NIMS for 3 years Worked as Registrar in Healing Touch Hospital for 7 years Medical Officer, MANAGE 	
4.	Shri B. Mahidhar	Hostel Manager	B.Com Dip. in Hostel Management, Catering Tech. & Applied Nutrition	Asst. Manager (Accommodation & Catering, A.P). Travel and Tourism Development Corpn., Asst. Hostel Manager, NIRD	



Academic Block



Vermiculture



Drainage Water Treatment



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