Vol. 6 Issue: 5/6 Dec. 2000

MANAGE Bulletin

From the National Institute of Agricultural Extension Management

(L to R) Dr. (Mrs.) Rita Sharma, Joint Secretary and Extension Commissioner, Shri A.K. Goel, Director General, MANAGE and Dr. V.P. Sharma, Head, IT, MANAGE

MULTIMEDIA CDs ON WATERSHED MANAGEMENT RELEASED

A Self Paced learning Multimedia Software on Watershed Management was released by Dr. (Mrs.) Rita Sharma, Joint Secretary and Extension Commissioner, Ministry of Agriculture, Govt of India on December 19, 2000. The software consists of five modules on Introduction To Watershed Management, Planning Of Watersheds, Treatment Of Drainage Lines, Arable Land Development and Non-Arable Land Development, packaged on two CDs. The software explains the concepts to the learner with the help of audio, video, text and graphics. There is a test at the end of each module and the learner can take the test even before going through the software. The Learner can also take the print of any module/lesson for future reference. Releasing the CDs, Mrs. Rita Sharma, appreciated the efforts of MANAGE in bringing out this truly interactive learning software. She also highlighted the need of using the Watershed Management Approach as a convergence point of developmental programmes.

Dr. V.P. Sharma, Head IT and Consultant IT, NATP, explained the process of development of this first Multimedia learning Software in Asia, packaging over 95 hours of class-room learning. The main purposes of this software, besides meeting the learning objectives on Watershed Management, were: to a)

Continued on Page 4

REACHING THE LAST MILE: Taking IT to Farm Families

Mrs. Deepkala making presentation to Ms. Mamata Banerjee, Union Minister for Railways

Two months ago MANAGE had taken up an innovative project of installing computer systems along with Internet connectivity at 10 villages in the Rangareddy district of Andhra Pradesh. The systems were installed at the office of the Sneha MACTCS (Mutually Aided Credit and Thrift Cooperative Society) managed by Women's Groups at Medchal, Maheshwaram, Ghatkesar, Keesara, Sameerpet, Godhumkunta, Ibrahimpatnam, Hayathnagar, Parvathapur and Chevella.

A group of four women volunteers was trained by the IT facilitator from MANAGE for 2 weeks in operation of MS-Office and Internet at each of the 10 villages. One tailor-made banking system software was also developed and loaded at these sites. The women groups are very enthusiastic in accepting the technology. They are browsing the net to read Telugu newspapers – Vaartha, Eenadu and also to see the weather information, agriculture related information and information on market prices. They also visit other websites to know more about health, sanitation, child care and nutrition. They also browse the district and state web sites (which are maintained in Telugu) to have better knowledge about government programmes and schemes. At one of the villages the women have enrolled their children for IT awareness course, on payment basis. The IT facilitators of MANAGE who are deployed at the project sites for initial hand holding for six months period are flooded with the requests for training. Ms. Deepikala and Mrs. Vara Lakshmi of Sneha MACTCS Medchal made PowerPoint presentations to Mr. James D. Wolfensohn, President, World Bank on November 9, 2000. They also made a presentation to the President of India Mr. K.R. Narayanan and Union Railway Minister Mrs. Mamatha Banerjee.

On January 04, 2001, Mrs. Sandhya Rani of Ghatkesar made a powerpoint presentation to Chief Minister of Andhra Pradesh Mr. N. Chandrababu Naidu and Home Minister Mr. T. Devendar Goud. The Chief Minister of Andhra Pradesh was pleasantly surprised at the silent IT revolution taking place at these village. "Wow it is already happening here" were his comments when he saw a group of women learning pickle making through a CD.

The project has been highly successful in creating IT awareness at the village level. The maintenance issues have been well taken care of with the help of the telephone support. The deployment of IT Facilitators (fully conversant with the local language) is highly appreciated by the farmers and farm families to help them make use of IT at the village level. On the request of these women groups MANAGE has also developed software for hosting Rythu Bazar prices on its web sites. The prices are collected at two Rythu Bazars in Hyderabad and updated on a daily basis. The project is conceptualized by Director General, MANAGE and is being implemented by IT Division of MANAGE Mrs. Renuka Rani, Research Associate is coordinating the field activities.

World Bank President Mr. James D. Wolfensohn, visiting MANAGE IT Village at Medchal

NATIONAL AGRICULTURAL TECHNOLOGY PROJECT

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 initiated by the Ministry of Agriculture, Govt. of India with the financial assistance of World Bank 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 the extension component of NATP, demand driven, well integrated with research and self-sustainable.

Activities under NATP : an update

Agricultural Technology Management Agency (ATMA) Districts

In Phase-I ATMA districts, activities have been undertaken successfully. 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, 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 second 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 Investment Plans. The initiatives have resulted in finalization of SREPs in Amarvathi, Koraput, Jalandhar, Prakasam, Hamirpur and Muzzafarpur. MANAGE NATP team 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 Maharashtra; Adilabad and Chittoor 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.

State Agricultural Management Extension Training Institutes (SAMETI)

Efforts have been made towards establishment of SAMETIs in all the pilot states under NATP. 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 Maharashtra 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 Agriculture University (PAU), Ludhaina with deputation of officials from university, and is already functional.

Information Technology (IT) initiative 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 e-mail/ 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.

Continued from Page 1

Test the adaptability of Interactive Computer Video Technology (ICVT) for in-service training of Agriculture Extension Personnel; b) Develop know-how of the Courseware development process, learning equipment management and development of local support services required for use of ICVT in future; c) Compare cost effectiveness of the ICVT vis-à-vis conventional training methods and d) Initiate activities for the creation of Multimedia Software in house.

The software was first developed on laser disc players (LDPs) in 1995 and has now been converted into CD-ROMs for wider dissemination. The software has been updated to include the data till 1999 and it is proposed to update it regularly. The first revision of the CD-ROM version is proposed to be brought out in 2001.

Speaking on the occasion, Shri A.K. Goel, Director General, MANAGE expressed satisfaction over completion of this important project. He desired that more and more technical content should be made available on CDs and Videocassettes to the field functionaries for ready reference. Computers have reached the District level and IT will reach the block level soon. Considering this vast network of connectivity, the training should become travel-less and the field level functionaries should have access to all technical advise right at their desktops. He informed that this set of two CDs would be sent to all the District Collectors for use by DRDAs and other Project Implementation Agencies (PIAs). He thanked all the technical subject matter specialists from the research and academic institutions, who had contributed to this project. He highlighted the contributions of Dr. N.K. Sanghi, Director (Natural Resource Management), MANAGE and Dr. J. Venkateshwarlu, Former Director, Central Arid-Zone Research Institute (CAZRI), Jodhpur, for preparing the technical content. He also thanked CMC Ltd., who were associated with the project at the initial stages.

PARTICIPATORY ADAPTIVE RESEARCH PROJECT

The Participatory Adaptive Research (PAR) Project - an IFAD assisted project of the Andhra Pradesh Tribal Welfare Department, is being implemented by MANAGE in three centres viz., Bhadrachalam, Rampachodavaram and Utnoor agency areas. The role of MANAGE is to 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.

The project is being implemented under three major components viz., Crop/ commodity oriented research, farm and family system research and natural resource management.

Under the Crop/commodity Oriented Research adaptive trials on mandatory crops like Jower, Paddy, Ragi, Bajra, Redgram, Green gram, Black gram, Niger and cotton were taken up. On these crops a total number of 210 varietal trials were tried. A total number of 170 fertilizer trials were also taken up in the above 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 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 Farming System Approach a number of activities like Horticulture, Poultry, Animal Health care, Homestead gardening, women and child health camps, Information technology etc., were taken up on 50% cost sharing basis. At Rampachodavaram centre a 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 the 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 activities like gap filling, pruning of dry branches, removal of dead leaves spraying with endosulphan to prevent fruit bores. To all the 32 selected farm families at each centre seven nutritional plants of their choice were given to

Continued on Page 6

HIGH-TECH AGRICULTURAL PROJECTS : STUDY VISIT TO ISRAEL

A study visit to High - Tech Agricultural projects in Israel was organised by Bankers Institute of Rural Development (BIRD), an autonomous institute promoted by NABARD at Lucknow, in collaboration with the Weitz Centre for Development Studies, Rehovot, Israel during November 2-12, 2000. Four faculty members from MANAGE, viz. Dr. J.P. Singh, Dr. P. Chandrasekhar, Deputy Director, Mrs. Lakshmi Murthy and Dr. T.D.S. Kumar, Assistant Directors, participated in the visit. The study visit focussed on achievements in agriculture in Israel through innovations and technology, which has helped Israel, and have an important position in the world agricultural exports. Israel, a country with more than half of its area covered by deserts has today achieved the status of a role model in agricultural development, particularly in high-tech projects viz. Floriculture, fruits and vegetables. Focus was on exposure to irrigation systems, green house complex, Tissue culture projects, and the rural sector including moshav and kibbutzim.

Continued from Page 5

promote consumption of fruits in Rampachodavaram and Utnoor 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. Health awareness camps were organised to educate tribal farmers on maintenance of health and hygiene. 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 livelihood, deliberate attempts were made to involve the women more and more by conducting focused group discussions. Women groups of selected farmer families were formed in each village and were encouraged to take up community nurseries for vegetable cultivation with the help of ANMs and Primary Health centre staff. This also helped in capacity building of the community health workers of the village. MANAGE strongly believes that exposure to communication media and information technology changes the life style of the tribals not only their clothing and food habits but also in their thinking and visualisation. To promote accessibility of tribals to information technology, television sets were provided to women of selected farmers on 50% cost sharing basis. Further to develop a better communication linkage the selected beneficiaries are encouraged to take telephone lines on 50% cost sharing basis.

FERTIGATION: GREEN ENERGY STATIONS FOR MAKING THE CAMPUS GREENER

Conservation of biomass, water, power, solid waste material and finally drain water has become not only a manadate of the Institute but also a part of the Institute's function. The emphasis is on drain water conservation since availability of water and its demand is becoming critical day by day.

MANAGE has developed a rich landscape which requires a good amount of water for maintenance and growth. About 80,000 litres of groundwater used to be pumped up by running borewell pumps 8 hours a day. The drain water going down the drain earlier was 55,000 litres from residential quarters, Hostel and Academic block. MANAGE has taken an initiative to establish sewage treatment plants whihc are being called Green Energy Stations, befittingly, for the purpose for which they are being utilized, viz. for conserving drain water. First, a unit having a capacity to handle 10,000 litres was installed and commissioned in April 2000, to cover a lawn area of 2450 sq. m. Subsequently, after its success, a bold step was taken to establish another plant for the Hostel for handling a capacity of 50,000 litres a day. This plant is covering a lawn area of 7550 sq. m. with sprinkler system.

The concept adopted in converting sewage water fit to use for biomass is simple and economical. Other than utilizing electrical energy for running the blower motor and pumping installations, the cost is not considerable when compared with normal maintenance expenditure which is otherwise invested on lawn maintenance. The sewage effluent collected after passing through Anaerobic media in Anaerobic tank and treated in Aeratino tank is based on Extended Aeration Activated Sludge Process followed by chlorination for disinfection and filtration. The treated water is having a good dose of NPK thus dispensing with necessity of providing fertilizers separately while irrigating biomass. Thus the lawns get water and nutrition simultaneously. The Director General, MANAGE, Shri A.K. Goel, has rightly coined the process as Fertigation. Efforts are on to have a third Green Energy Station for the Academic block with updated technology at a low cost. The gains can be easily felt and include relief from disposal of sewage, groundwater conservation, pollution free and a greener environment.

VERMICULTURE

The significance of earthworms on soil fertility is widely accepted. Earthworms can be very effectively used to compost organic residue, crop residue, household organic waste, grasses and other waste material. The organic material so obtained is called Vermicompost.

Vermicomposting or vermiculture is simply the way earthworms transform decaying organic matter into castings. The castings are full of nutrients for plants and that is what makes them so interesting for gardeners and farmers. Worm composting is convenient, because is does not require much space. According to a study made the soil with worm castings in comparison to soil without these has five times more nitrogen, seven times more phosphorus, and eleven times more potassium. Considering the potential of vermiculture in enriching soils and in turn in the increase of crop yields, the practice needs more and more support.

In this regard MANAGE has taken a small step. A structure of size 12.00 x 7.50 metres was erected and Agro net in double layer was used to cover it (the size of the structure depends on the amount of compost to be made) to prevent excess sunlight, heat and loss of moisture. The waste is separated at the generation level and the organic waste is bought to the site mixed with cow dung water to avoid foul smell. It is layed layer by layer upto a height of 3 feet on the surface of the ground, and after the garbage reaches the desired height a layer of cow dung is spread over it and then the earthworms are released into it. It usually takes 6-8 weeks for the garbage to get converted into manure. The desired temperature (22-26^{O}c) of the area is maintained by sprinkling water over the garbage.

When the vermicompost is ready watering is stopped for 3-4 days, the earthworms due to the heat on the top tend to settle down. The compost from the top is removed then it is strained, dried and sieved. The compost is ready to be used. It is simple yet a very effective process not only to obtain manure but also to keep surroundings clean.

MANAGE BULLETIN
Subscription 2001

Individual	Rs. 60.00 US $ 5.00
Institutions	Rs. 120.00 US $ 10.00

COLOPHON

MANAGE BULLETIN is printed and published by

Shri A.K. Goel,
Director General,
National Institute of Agricultural Extension Management (MANAGE)
(An Organisation of Ministry of Agriculture, Government of India), Rajendranagar,
Hyderabad - 500 030.
A.P. India.
Tel. : + 90 (040) 4016702 to 706
Fax : 040-4015388
Email :
dgmanage@hd1.vsnl.net.in
website :
www.manage.gov.in

Editor-in-Chief :
Shri A.K. Goel

Editor :
Lakshmi Murthy

Press Assistant :
T. Nagaraju

Produced by :
Cores Communications
Hyderabad - 500 013.

FORTHCOMING

National Workshop on "Cyber Extension: Application of Informatin & Communication Technology in Agriculture",
February 21-22, 2001.

This Workshop is planned to provide a platform for information-sharing for extension managers, information scientists, research scientists and other government and non-government officials with an interest in information technologies and agricultural extension in the context of use of IT for improving the rural economy.

Focus would be on themes like Networking Agricultural Research, Extension and Marketing; Capacity Building in Information and Communication Technology; and Content Creation for Serving the Rural Communities.

For further details please contact :

Dr. V.P. Sharma, Head, Information Technology, Computers and Communications Specialist, NATP, National Institute of Agricultural Extension Management, MANAGE, Rajendranagar, Hyderabad - 500 030. Tel. : 040-4016693 (Direct), 040-4016702-706 (Extn. 418), Fax : 040-4014526, 040-4015388.
Email : itmanage@rediff.com, sharmavp2000@123india.com.

INFORMATION RESOURCE CORNER

MANAGE Extension Research Review July - December 2000

The second in the series, MANAGE Extension Research Review covers issues relating to WTO and its implications on India's Agricultural Exports, Gender issues, constraints in the adoption of technology, approach on sustainable agriculture and explores new ideas on further strengthening of the agricultural extension system in India.

JUST PUBLISHED!

Socio Economic Dynamics and Development Strategy for Participatory Adaptive Research Project: Bhadrachalam, Utnoor and Rampachodavaram

One of the most challenging tasks facing agriculture research and extension efforts in developing countries is that of developing appropriate technologies based on the experience of farmers. Participatory Adaptive Research (PAR), a project of Andhra Pradesh Tribal Welfare Department with financial assistance from International Fund for Agricultural Development (IFAD) is one in such direction. The overall objective of this project is to find out ways and means to develop appropriate technologies for the complex and diversified systems for the agriculture in the tribal areas of Andhra Pradesh.

The expected outcome of the adaptive research programme would be development of modified recommendations suited to the specific circumstances of the tribal areas.

The project is being implemented through active participation of local people and institutions. As per the terms of reference, it is mandatory on the part of MANAGE to conduct an in-depth study on the present status, problems and future prospects on various aspects in all the three ITDA areas (Utnoor, Bhadrachalam and Rampachodavaram).

The present document deals with the socio-economic status of tribal households in all the three centres, which will serve as baseline information of the project area at the time of impact evaluation. Various performance indicators identified for the purpose have been included in the report. In this report, an attempt is made to focus on the possible interventions that can be made in the available period which can give some benefit to the tribal community in the short term. Also gives scope for long-term planning in the next few years the programme is reasonably promising in its outcome for the administration.

Conservation of biomass, water, power, solid waste material and finally drain water has become not only a manadate of the Institute but also a part of the Institute's function. The emphasis is on drain water conservation since availability of water and its demand is becoming critical day by day.

MANAGE has developed a rich landscape which requires a good amount of water for maintenance and growth. About 80,000 litres of groundwater used to be pumped up by running borewell pumps 8 hours a day. The drain water going down the drain earlier was 55,000 litres from residential quarters, Hostel and Academic block. MANAGE has taken an initiative to establish sewage treatment plants whihc are being called Green Energy Stations, befittingly, for the purpose for which they are being utilized, viz. for conserving drain water. First, a unit having a capacity to handle 10,000 litres was installed and commissioned in April 2000, to cover a lawn area of 2450 sq. m. Subsequently, after its success, a bold step was taken to establish another plant for the Hostel for handling a capacity of 50,000 litres a day. This plant is covering a lawn area of 7550 sq. m. with sprinkler system.

The concept adopted in converting sewage water fit to use for biomass is simple and economical. Other than utilizing electrical energy for running the blower motor and pumping installations, the cost is not considerable when compared with normal maintenance expenditure which is otherwise invested on lawn maintenance. The sewage effluent collected after passing through Anaerobic media in Anaerobic tank and treated in Aeratino tank is based on Extended Aeration Activated Sludge Process followed by chlorination for disinfection and filtration. The treated water is having a good dose of NPK thus dispensing with necessity of providing fertilizers separately while irrigating biomass. Thus the lawns get water and nutrition simultaneously. The Director General, MANAGE, Shri A.K. Goel, has rightly coined the process as Fertigation. Efforts are on to have a third Green Energy Station for the Academic block with updated technology at a low cost. The gains can be easily felt and include relief from disposal of sewage, groundwater conservation, pollution free and a greener environment.

Forthcoming

National Workshop on "Cyber Extension: Application of Informatin & Communication Technology in Agriculture", February 21-22, 2001.

This Workshop is planned to provide a platform for information-sharing for extension managers, information scientists, research scientists and other government and non-government officials with an interest in information technologies and agricultural extension in the context of use of IT for improving the rural economy.

Focus would be on themes like Networking Agricultural Research, Extension and Marketing; Capacity Building in Information and Communication Technology; and Content Creation for Serving the Rural Communities.

For further details please contact : Dr. V.P. Sharma, Head Information Technology, Computers and Communications Specialist, NATP, National Institute of Agricultural Extension Management, MANAGE, Rajendranagar, Hyderabad - 500 030. Tel. : 040-4016693 (Direct), 040-4016702-706 (Extn. 418), Fax : 040-4014526, 040-4015388. Email : itmanage@rediff.com, sharmavp2000@123india.com.