# ANNUAL REPORT

## April 2006 - March 2007

AME
Silver Jubilee Year
1982 - 2007

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## AME VISION

AME subscribes to a global, socio-political and economic system, which affords just and equitable opportunity for all, in the development process. AME recognizes that in the prevailing circumstances, the worst affected are a large number of disadvantaged families dependent on farming in rain fed areas, with a future rapidly going out of their control. AME believes that sustainable livelihoods for all are attainable through systematic ecological approach to the development process.

## AME MISSION

AME is committed to realizing its vision through a holistic perspective in all its endeavours. AME will work towards sustainable livelihoods through innovations in technology, harnessing indigenous and advanced knowledge systems. AME will promote sustainable agriculture and natural resource management systems that address issues of ecological degradation. These developments will be disseminated widely for empowering the resource-poor and disadvantaged farm families and communities. In generating these alternatives, AME will integrate the needs of gender and equity issues. These efforts will be complemented with the facilitation of collaborative and participatory processes for both effective dissemination and advocacy.

## BOARD OF TRUSTEES

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# ACKNOWLEDGEMENTS

It gives us immense pleasure to present the Annual Report 2006-07. It is an attempt to put together the perseverance and the fruits thereof, wrapped in an urge to prove agriculture in drylands can provide decent livelihoods to farm families, in pursuit of a strong resolve to learn and improve.

The year 2006-07 has been a watershed year for AME Foundation, in terms of developing convincing evidence of ecological agriculture in cluster villages, using this evidence as learning ground, as also in terms of adopting FFS methodology for the purpose, which is focused on the intricacies of dryland agriculture. All these efforts would not have been possible without the support of FAO, as well as ILEIA, DST and DBT. We acknowledge and appreciate their support.

It has been one of those typical years of uncertain monsoon. However, it has also been a year of building capacities of farmers and partner NGOs. While we thank the farmers and partner NGOs for their keen interest in sustainable agriculture, we appreciate the hard work of each and every staff member of AMEF who displayed tremendous spirit and energy in running season-long FFS, under adverse conditions.

We sincerely thank the extension staff of State Department of Agriculture and other line departments as also the scientists of Agriculture Universities in Andhra Pradesh, Karnataka and Tamil Nadu for their contribution and support.

We are grateful to the Chairman, the Treasurer and the Trustees for their valuable guidance.

**Arun Balamatti**
Executive Director

# PREFACE

The year 2006-07 will go down in our history as the year of capacity building. The farmers and the partner civil society organizations underwent season-long FFS training in association with the staff members of AMEF. It was the year in which AMEF brought in many innovations to develop FFS methodology focusing on improving livelihoods of farmers dependent on dry farming. AMEF conducted several training events for facilitators for this purpose, which is unique in the country.

With the intensive, season-long training events, the efforts of guiding farmers in natural resource conservation and utilization have received meticulous attention. As a result, the eco farming bases, the evidence of sustainable agriculture at each Area Unit, is being extensively utilized as a learning ground.

While the results are gratifying, it has not been easy achieving them under the uncertain rainfall conditions. The preparatory activities like staff recruitment, capacity building, planning and regular guidance in implementing the programmes also required considerable attention.

We are aware that the path chosen by us is a long one. But, it is reassuring when we look back at the distance we have covered.

Here is a detailed account of the activities and achievements of AMEF as it concludes the fifth year of its operation as a Foundation.

# ACRONYMS and ABBREVIATIONS

| | |
|---|---|
| AMEF | AME Foundation |
| AAO | Assistant Administrative Officer |
| ACTS | Action for Community Service |
| AESA | Agro Eco System Analysis |
| AIR | All India Radio |
| ANGRAU | Acharya N.G. Ranga Agricultural University |
| ANTWA | Andhra Pradesh Network for Training women in Agriculture |
| APCOT | Andhra Pradesh Cotton Network |
| APFaMGS | Andhra Pradesh Farmers' Managed Groundwater System |
| APO | Area Project Officer |
| APRLP | Andhra Pradesh Rural Livelihoods Programme |
| APRRM | Andhra Pradesh Rural Reconstruction Mission |
| AU | Area Unit |
| AUC | Area Unit Coordinator |
| BBE | Ballot Box Exercise |
| BEL | Bellary |
| BIRD-K | BAIF Institute of Rural Development – Karnataka |
| BIRDS | Bijapur Integrated Rural Development Society |
| BJP | Bijapur |
| CAD | Community Action For Development |
| CBO | Community Based Organizations |
| CCD | Centre for Community Development |
| CDW | Curriculum Development Workshop |
| CIPMC | Central Integrated Pest Management Centre |
| CMRC | Community Managed Resource Centre |
| CRIDA | Central Research Institute for Dryland Agriculture |
| CRP | Community Resource Person |
| CPO | Central Programme Officer |
| CSWCR&TI | Central Soil and Water Conservation Research and Training Institute |
| CU | Central Unit |
| DAATTC | District Agriculture And Technology Training Institute |
| DAS | Days After Sowing |
| DAP | Di-ammonium Phosphate |
| DDS | Deccan Development Society |
| DFID | Department For International Development |
| DFL | Disease Free Layings |
| DLH | Dry Land Horticulture |
| DMI | Society for Daughters of Marry Immaculate and Collaborators |
| DoA | Department of Agriculture |
| DPAP | Drought Prone Area Project |
| DPI | Dharmapuri |
| DPIP | District Poverty Initiatives Project |
| DRCSC | Development Research Communication and Service Centre |
| DSERT | Department of State Educational Research and Training |
| DST | Department of Science and Technology |
| ENP | Eco-Network Partner |
| ETV | Eenadu Tele Vision |
| FAG | Farmers' Affinity Group |

| | |
|---|---|
| FAO | Food and Agriculture Organization |
| FFS | Farmer Field School |
| FP | Farmer's Practice |
| FYM | Farm Yard Manure |
| GD | Group Dynamics |
| GDLP | Greening the Dryland Programme |
| GEC | Gender and Equity Concerns |
| GKVK | Gandhi Krishi Vigyana Kendra |
| GUARD | Group For Urban and Rural Development |
| GVS-T | Grameena Vikas Samithi, Tirupathi |
| HELP | Help for Education and Learning Project |
| IAT | Institute of Agriculture Technologists |
| IACT | International Academy for Creative Teaching |
| ICAR | Indian Council of Agricultural Research |
| ICCOA | International Competence Centre for Organic Agriculture |
| ICM | Integrated Crop Management |
| ICRISAT | International Crop Research Institute for Semi Arid Tropics |
| IEM | International Editors' Meeting |
| IFS | Integrated Farming Systems |
| IIHR | Indian Institute for Horticulture Research |
| ILEIA | Centre for Information on Low External Input and Sustainable Agriculture |
| INGRID | India's New Group for Raichur's Integrated Development |
| INM | Integrated Nutrient Management |
| INDO-TRUST | Indian Development Organization Trust |
| IPM | Integrated Pest Management |
| IPDM | Integrated Pest and Disease Management |
| IRDO | Integrated Rural Development Organization |
| ISEER | Indian Society For Environmental Education and Research |
| IWMI | International Water Management Institute |
| IZ | Insect Zoo |
| JSW | Jindal Steel Works |
| KAWAD | Karnataka Watershed Development Project |
| KSARDS | Karnataka Sustainable Agriculture And Rural Development Society |
| KVK | Krishi Vignana Kendra |
| KVIC | Khadi and Village Industries Corporation |
| LEISA | Low External Input Sustainable Agriculture |
| LTE | Long Term Experiments |
| MPL | Madanapalli |
| MHB | Mahabubnagar |
| MANAGE | National Institute for Agriculture Extension Management |
| MSSRF | M S Swaminathan Research Foundation |
| MToF | Modified Training of Facilitators |
| MYRADA | Mysore Resettlement And Development Agency |
| NAARM | National Academy of Agricultural Research Management |
| NABARD | National Bank for Agriculture and Rural Development |
| NAFARD | National Association for Agriculture and Rural Development |
| NFE | Non Formal Education |
| NGO | Non-Government Organization |
| NIRD | National Institute of Rural Development |
| NPRC | National Pulse Research Centre |

| | |
|---|---|
| NRC | Natural Resource Conservation |
| NRM | Natural Resource Management |
| NRU | Natural Resource Utilization |
| NSKE | Neem Seed Kernel Extract |
| PACB | Primary Agriculture Co-operative Bank |
| PBND | Peanut Bud Necrosis Disease |
| POWER | People Organization for Wasteland and Environment Regeneration |
| PPDS | Poor People Development Society |
| PRA | Participatory Rural Appraisal |
| PSB | Phosphate Solubilising Bacteria |
| PSSS | Perambalur Social Service Society |
| PTD | Participatory Technology Development |
| RARS | Regional Agricultural Research Station |
| R&D | Research and Development |
| RDT | Rural Development Trust |
| RNE | Royal Netherlands Embassy |
| RSK | Raitha Samparka Kendra |
| RCH | Raichur |
| RSRS | Regional Sericulture Research Station |
| RUAF | Resource Centre on Urban Agriculture and Food Security |
| SA | Sustainable Agriculture |
| SAARC | South Asian Association for Regional Cooperation |
| SAN | Sustainable Agriculture Network |
| SDDPA | Society for Development of Drought Prone Area |
| SEEMA | Society for Empowerment in Environment Matters and Agriculture |
| SHG | Self Help Groups |
| SKDRDT | Shri Kshetra Dharmastala Rural Development Trust |
| SLTP | Season Long Training of Trainers Programme |
| SMGAS | Sarvodaya Mahila Gramina Abhivrudhi Society |
| SPPD | Society for Poor People Development |
| SRDS | Sankalpa Rural Developmental Society |
| SRI | System of Rice Intensification |
| SS | Short Study |
| SWARD | Society for Women Agriculture and Rural Development |
| TCRS | Tapioca and Castor Research Station |
| TIR | Tiruchi |
| TNAU | Tamil Nadu Agriculture University |
| ToF | Training of Facilitators |
| ToT | Training of Trainers |
| TSSCRT- TVSES | T. S. Srinivasan Centre for Rural Training, TVS Educational Society |
| UAS | University of Agricultural Sciences |
| WHC | Water Holding Capacity |
| WDS | Watershed Development Society |

# EXECUTIVE SUMMARY

The year 2006-07 is a watershed period for AME Foundation. Innovations in content development and delivery mechanism has been the hallmark of the year in our efforts in promoting sustainable agriculture (SA) in the dry lands of Deccan Plateau. The year will be remembered for the landmark achievements on two fronts. The first significant achievement is the integration of the five key operations encompassing on-farm natural resource conservation (NRC) and natural resource utilization (NRU) into the curriculum of Farmer Field School (FFS). The other achievement to cherish is the innovations attempted successfully in conducting training of facilitators (ToF) events in which a scaling up strategy built in to reach large number of farmers through practice-FFS, concurrently.

While the year 2005-06 was a 'preparatory year' in terms of staff recruitment, training, mobilizing groups of farmers and building partnerships with civil society organisations, the year 2006-07 is viewed as the year of 'capacity building'. Training and capacity building of staff members to build capacities of groups of farmers as well as the staff members of partner NGOs on SA has received special emphasis during the year.

The AMEF–FAO partnership project 'Promoting Livelihood Improvements in Dry land Farming on the Deccan Plateau' continues to be the major programme under implementation by AME Foundation. There are other important projects under implementation, which are supported by ILEIA (LEISA India Magazine), DST (Bio farm Project), IWMI (UPA Project), TRIAD Funds (SRI Promotion) and DBT (Biotechnology Project).

The thrust in SA promotion is on creating learning situations by working with willing groups of farmers in selected villages for promotion of sets of combinations of SA practices and effectively utilising such situations for training and capacity building. Thus, the local learning situations are used as training ground for building capacities of farmers and NGOs through participatory processes. The NGO capacity building is intended for scaling up SA promotion efforts to reach a larger numbers of farmers and other development agencies.

The coverage of farmers has exceeded 5000 farmers, including about 2000 women farmers, the largest number of farmers involved in our efforts of promoting ecological agriculture so far, and much above the targets committed to the donors. Apart from the 5000 farmers directly involved in SA promotion activities, over 55,000 farmers were worked with to sensitise them on SA by various means. The focus here has been on scaling up of SA practices, which would serve as a prelude to scaling up of SA systems. The number of partner NGOs has increased to 47 from 30 in the previous year.

The associated farmers and the staff of partner NGOs have undergone intensive capacity building processes, mainly through FFS approach. AMEF has conducted an unprecedented 191 season-long FFS events involving 3500 farmers, in 15 different crop-based farming systems. These events were instrumental in building capacities of farmers in NRC and NRU aimed at improving the livelihoods of farm families dependent on dry farming and farm ecology. In the process, as many as 135 staff members of ENPs are trained, in both FFS methodology and in alternative farming practices. AMEF was able to achieve this progress, with the effective support of the FAO.

The Modified Training of Facilitators (MToF) on groundnut based farming system in Dharmapuri conducted with the participation of MYRADA, will be remembered as the 'event of the year'. The event was a 'piece of history' in many ways. Starting from training the village youth volunteers as service providers on SA promotion for the CBOs like CMRCs, broad-basing the curriculum by widening the scope of FFS to go beyond IPM, to include dry land agriculture, running a season long ToF and simultaneously conducting practice FFS to cover nearly 1000 farmers, involving about 90 per cent women farmers by

way of involving SHGs in FFS, were the innovations successfully tried out in the MToF. As a result, 32 CRPs are trained. The success of MToF in Dharmapuri led to another successful ToF on sorghum based farming system in Bijapur producing 27 more ToF graduates who are the staff of ENPs covering 26 villages and 496 farmers. The third such ToF is in progress in Madanapalli involving 26 staff members from ENPs in Madanapalli and Mahabubnagar. With these ToFs, AMEF now has 20 FFS trained internal staff where there were none at the beginning of 2005.

The erratic monsoon and the mid-season drought, resulting in poor returns to farmers, however, keep reminding us of the daunting task ahead.

The second batch of Fellowship Course on Sustainable Agriculture was conducted during the year in which 14 Fellows have graduated. The internal capacity building events to meet with the demands of up scaling and the documentation and dissemination activities by bringing out successful case studies are being earnestly pursued.

While 4 issues of LEISA India magazine were produced, the team also brought out 4 AME Info quarterly newsletter, 12 issues of House Magazine and 7 Fact Sheets. The production of 7 case studies was notable during the year. The Area Units Bellary, Raichur and Dharmapuri are bringing out newsletters in local languages.

While support to LEISA India was continued for the next four years, AMEF has received support to start new projects during the year – Peri-urban agriculture and urban horticulture (UPA) supported by IWMI, SRI promotion programme by Triad Foundation and Biotechnology project supported by DBT.

The budget utilisation, as one of the indicators of programme implementation, is Rs. 4.62 crores, which is an improvement by 15 per cent over the previous year.

# 1. INTRODUCTION

Indian agriculture is often talked about in relation to the Green Revolution and its heterogeneous record of successes and failures. Yet the majority of Indian farmers practice rain fed agriculture, an entirely different farming system from that practiced in the irrigated areas. Overall, almost two-thirds of Indian farmers rely solely on rainfall to derive a livelihood from the land.

Challenges to feed and to fulfil the needs of a growing population in a sustainable way require a better and more comprehensive insight into ecologically sound crop production processes, especially in fragile environments of resource-poor areas of the Deccan Plateau. Today, we are left with depleted farmlands, degraded farm environment and demotivated farm population who have nowhere else to go. Farmlands, under cultivation for generations, are getting depleted of their finer soil fractions, fertility and water holding capacity. Further, the degradation of the farm environment is aggravating the situation. Farming in regions like Deccan Plateau of Southern India with low and uncertain rainfall conditions is increasingly becoming unviable with inappropriate land-use practices and depleted vegetation.

The poor conditions for agriculture on the Deccan Plateau in Southern India require the implementation of careful and complex farming strategies in order for farmers to produce enough food to sustain their families throughout the year. In such environments, biodiversity and food security are inextricably intertwined.

AME Foundation (AMEF), over the years, with its deep-rooted interest in sustainable agriculture (SA), has been seeking ways to fulfil its mission of empowering the dry land farmers in degraded ecological situations on the Deccan Plateau, in improving their own livelihoods, along with gender and social equity concerns. Born as a training agency in 1982, in a temperate climate in The Netherlands, AME has moved into a tropical region in 1986. Going beyond the training of agricultural environmentalists, AMEF has entered into field situations to forge innovative farming practices combining the traditional and the modern methods.

Presently, AMEF is working as a development-oriented, non-government organization, devoted to promoting ecological farming alternatives among small and marginal farmers engaged in dry land farming. The twin objectives of AMEF are improving the livelihoods of the farm families in dry lands and addressing the environmental concerns. The focus, thus, include improvement and promotion of alternative farming practices to bolster food security, strengthen livelihoods, address environment issues and promote more sustainable agricultural practices. It adopts participatory approaches that recognise local knowledge systems and involves local farmers' groups, community-based organizations (CBOs), non-government organizations (NGOs), government departments and other biomass actors in the development process. Promoting Integrated Farming Systems (IFS) and Integrated Crop Management (ICM) with sensitivity to gender and equity concerns are the major features of the organization.

The focal activities of the organization are given below:

1. **Generating alternative farming practices:** Beginning with on-farm crop improvements by means of Farmer Field School (FFS) and Participatory Technology Development (PTD) processes, technologies related to natural resource conservation and utilisation (NRC and NRU) get generated leading to alternative land use practices. This, in turn, helps to conserve and develop the farm resources and rebuild the environmental support to farming. In the process, the farmers' innovating capacities get enhanced.
2. **Forging gender equity social processes:** AMEF seeks to mitigate and ameliorate the inequality based on gender, caste and economic status. Thus, AMEF addresses these issues while planning and implementing its activities.
3. **Capacity building of stakeholders:** The CBOs, SHGs, Panchayat Raj bodies and local staff of development agencies who can play a facilitative role in making use of this knowledge will be sensitised and trained on the knowledge generated in the sphere of alternative agriculture/land use practices.
4. **Building NGO network:** For scaling up of eco-friendly initiatives, AMEF interacts and strengthens the NGO networks involved in the land-based activities. By using training situations

created in the cluster villages, capacity building of partner NGOs forms the major portion of AMEF's work.

5. **Developing institutional linkages:** AMEF seeks to build linkages with state, national, international research and development organizations to harness the technologies and methodologies for accessing information and involve such agencies to move towards participatory research and development approaches.
6. **Information sharing strategies:** Documentation and dissemination on technology and methodology of ecological agriculture form an important responsibility of AMEF. It brings out manuals, guidelines, workshop proceedings, working papers, case studies etc.
7. **LEISA India publication:** AMEF intends to develop LEISA as a preferred platform for promoting eco-farming alternatives and reach more persons and institutions interested in sustainable agriculture. AMEF in collaboration with ILEIA works to enhance the capacities of NGOs and others in documenting and disseminating experiences on sustainable agriculture.
8. **Preparing professionals in LEISA technologies:** AMEF is making innovative efforts to institute fellowships for fresh graduates in agriculture to be oriented and practically trained in eco friendly farming systems, natural resource management as well as rebuilding environmental support to agriculture.

In attaining the twin objectives of improving livelihoods and addressing environmental concerns, AMEF builds its operational strategies based on the fact that the farmer is the primary user of the land resources. Therefore, AMEF begins working with the farm families, farm resources and farming systems. A start is made in village clusters with groups of farmers, using LEISA technologies. This is used as a springboard for scaling up LEISA practices and as a training base for development agencies and practicing farmers.

The major tasks pursued by the Area Units are the following:

**Creating and using eco farming base** – Working in clusters of villages, with groups of farmers, develop ecologically sound farming systems, which will serve in preparing the staff in practical work experience and in providing effective learning situations for the NGO and others in their training. Further, it will serve as a springboard for scaling up of LEISA activities.

**Working with NGO network partners for scaling up of SA** – Preparing and working with like-minded NGOs as partners to scale up sustainable agricultural concepts and practices. The partner NGOs are called Eco Network Partners (ENP).

**Fostering LEISA initiatives, promoting SA** – Beyond the clusters of villages and operational areas of NGO partners, we promote and foster interest and initiatives on the part of individuals, groups and organizations in sustainable agricultural operations.

**Building linkages with key biomass players, creating synergic impact** – Establishing working relationships with other agencies interested in eco farming like SAUs, government departments and private organizations to share useful knowledge related to sustainable agriculture.

**Documentation and dissemination for wider sharing**– Since there are many lessons to be learnt and shared in relation to sustainable agriculture, making systematic efforts to document and share useful knowledge with those interested.

So far, AMEF had been using combination of methodologies in implementing the focal activities. However, efforts are now being made to pursue many of these activities in FFS methodology, since May 2006, while PTD process is also being used when appropriate. While the primary objective remains promoting SA in the dry lands of Deccan Plateau, AMEF is making earnest efforts to broad base the FFS in order to meet the demands of improving livelihoods in the drylands. With this, effectively, the present strategy focuses on 'operationalising SA' with 'modified FFS methodology' in order to extend the farmer outreach.

A comprehensive working strategy is formulated, which is aimed at 'on-farm natural resource management', and is being adopted as a step towards working with partner NGO networks. In the context of promoting SA, the following terminologies are adopted to create an identity for the participants and the components in this innovative process:

***Eco-farmers:*** Refers to the members of the farmers' groups, associated with AMEF, in cluster villages, which adopt a minimum of three activities related to on-farm rainwater management, soil productivity enhancement and improved cropping practices.

***Eco-farming group:*** Refers to the group of Eco-farmers in a village, where AMEF works.

***Eco-farming base:*** Refers to a set of farms in a locality where a combination of alternative farming practices is put to use by Eco-farmers.

***Eco-farming forum:*** Refers to an alliance of all the Eco-farming groups in the cluster of villages.

***Eco-network partners (ENP):*** Refers to the partners with whom AMEF is working. In promoting eco farming, the focus of AMEF, beyond establishing the eco-farming base, is on working with network of partner NGOs and CBOs, for scaling up the alternative farming practices.

# 2. AREAS OF OPERATION

AME Foundation is mainly operating through seven Area Units (AU) located at Madanapalli and Mahabubnagar in Andhra Pradesh; Raichur, Bellary and Bijapur in Karnataka and Tiruchi and Dharmapuri in Tamil Nadu. The AUs are set up with the objective of achieving the organizational goals by working with farmer groups in clusters of villages directly and also in collaboration with NGOs. The Central Unit in Bangalore is responsible for all programmatic, financial and administrative matters and coordinates the activities across the AUs.

# 3. WORK PROFILE

To attain its set of objectives, AMEF has carried out various activities at different levels in the year 2006-2007. It continued working with farmers across its Area Units (AU) in three states directly as well as through partner NGOs. In all, AMEF was associated with 47 partners during the reporting period (Table1) reaching to 4189 farmers organized in to 219 groups (Table 2). Eighteen new partners were added in the year. At the same time, the AUs have worked with 790 farmers organized in to 44 groups in 41 villages. A total of 4979 participating farmers were reached out of which 36% were woman farmers.

***Table 1. Eco-network partners, districts and major programmes in 2006-07***

| State | Unit | Eco-Network Partners (NGOs) | District/s | Crops/programme |
|---|---|---|---|---|
| **Andhra Pradesh** | Madanapalli | ACTS, GVS-T, CHAITANYA, SPANDANA, APRRM and MYRADA | Chittoor, Anantapur | Groundnut |
| | Mahabubnagar | SDDPA, WDS, Eco-Club and IRDO | Mahabubnagar | Castor, cotton, paddy, chilli, tomato. Greening the Dry Land programme |
| **Karnataka** | Raichur | INGRID, SWARD, SMGAS, SRDS, PRERANA | Raichur | Groundnut, cotton, sorghum, sunflower and Greening the Dry Land programme |
| | Bellary | GUARD Chitradurga, GUARD Bellary, MYRADA, OUTREACH | Bellary, Chitradurga | Groundnut, onion, sericulture, paddy and chickpea |
| | Bijapur | BIRDS, ISEER, POWER | Bijapur | Sorghum, groundnut, tomato, sunflower, pomegranate |
| | Bangalore | SEEMA | Kolar | Ragi, groundnut and tomato |
| **Tamil Nadu** | Tiruchi | CAD, PSSS, INDO - TRUST, SPPD, DMI | Tiruchi, and Perambalur | Groundnut, maize and vegetables |

| | | | | |
|---|---|---|---|---|
| | Dharmapuri | 16 CMRCs (Dharmapuri, B. Agraharam, Palacode, Pennagaram, Chinnampalli, Papparapatty, Kadathur, Kambainallur, Odasalpatty, Bettamugilalam, Salivaram, Soolagiri, Kelamangalam, Kamandoddi, Thally, Denkanikottai), HELP, TSSCRT TVSES, OUTREACH | Dharmapuri and Krishnagiri | Groundnut, ragi, tapioca and tomato |

***Table 2. Number of farm families (farmers) reached***

| State | No. of NGOs associated | No. of farmers reached with NGOs | | No. of Farmers reached on our own | | Total No. of farmers reached |
|---|---|---|---|---|---|---|
| | | Farmers | Groups | Farmers | Groups | |
| **Andhra Pradesh** | | | | | | |
| Madanapalli | 6 | 564 | 35 | 98 | 6 | 662 |
| Mahabubnagar | 4 | 685 | 35 | 73 | 4 | 758 |
| | **10** | **1249** | **70** | **171** | **10** | **1420** |
| **Karnataka** | | | | | | |
| Raichur | 5 | 523 | 27 | 107 | 6 | 630 |
| Bellary | 4 | 300 | 15 | 201 | 11 | 501 |
| Bijapur | 3 | 352 | 19 | 119 | 6 | 471 |
| Kolar | 1 | 320 | 16 | 0 | | 320 |
| | **13** | **1495** | **77** | **427** | **23** | **1922** |
| **Tamil Nadu** | | | | | | |
| Tiruchi | 5 | 554 | 27 | 152 | 9 | 706 |
| Dharmapuri | 19 | 891 | 45 | 40 | 2 | 931 |
| | **24** | **1445** | **72** | **192** | **11** | **1637** |
| **Total** | **47** | **4189** | **219** | **790** | **44** | **4979** |

The distribution of farmers across states was1922 (38.60%) in Karnataka, 1637 (32.88%) in Tamil Nadu and 1420 (28.52%) in Andhra Pradesh. The maximum number of farmers (931) was covered in the Dharmapuri Area Unit, which was possible on account of the Modified Training of Facilitators (MToF). The MToF provided an opportunity to reach large number of farmers by conducting practice FFSs. Realizing the subsequent advantages of conducting such FFSs, more MToFs were planned, one was conducted in Bijapur Area Unit of Karnataka and another is initiated in Madanapalli.

The participation of women in SA promotion activities was 36 per cent in the reporting year. While the farmers are involved in SA promotion activities as a family, deliberate efforts are being made to encourage participation of more women by involving women SHGs promoted by the ENPs in training events, as done in Dharmapuri (Table-3).

***Table 3. Gender segregation of participating farmers***

| State | Area Unit | AMEF | | | ENP | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| **Andhra Pradesh** | Madanapalli | 79 | 19 | 98 | 372 | 192 | 564 | 451 | 211 | 662 |
| | Mahabubnagar | 70 | 3 | 73 | 584 | 101 | 685 | 654 | 104 | 758 |
| **Karnataka** | Raichur | 88 | 19 | 107 | 404 | 119 | 523 | 492 | 138 | 630 |
| | Bellary | 173 | 28 | 201 | 264 | 36 | 300 | 437 | 64 | 501 |
| | Bijapur | 71 | 48 | 119 | 263 | 89 | 352 | 334 | 137 | 471 |
| | Kolar | - | - | - | 296 | 24 | 320 | 296 | 24 | 320 |
| **Tamil Nadu** | Tiruchi | 61 | 91 | 152 | 315 | 239 | 554 | 376 | 330 | 706 |
| | Dharmapuri | 34 | 6 | 40 | 92 | 799 | 891 | 126 | 805 | 931 |
| **Total** | | **576** | **214** | **790** | **2590** | **1599** | **4189** | **3166** | **1813** | **4979** |
| **%** | | **72.91** | **27.09** | | **61.83** | **38.17** | | **63.59** | **36.41** | |

# 4. GENERATION AND ADOPTION OF ECO-FRIENDLY TECHNOLOGIES

AMEF's main thrust is on improving the livelihoods of poor, dry land farmers. For this purpose, AMEF enables them to adopt simple, affordable technologies for increasing biomass and land productivity, while protecting the environment.

This year, the rainfall in the AMEF operational areas began on an encouraging note (Annexure 1). The farmers could get early showers of rains as the monsoon started early, helping farmers to take up necessary preseason activities on time. The rains also helped farmers to raise biomass seedlings in plenty and to plant them on field bunds with the onset of monsoon. However, the initial promise did not last throughout the season. In the end, it was an year of erratic and independent rains with long mid season dry spells.

Of all the Area Units, the Dharmapuri AU had received the maximum rainfall in the year (1011 mm against the annual average of 650 mm). However, major part of the rain was received much after the normal groundnut-sowing season was over. In the MToF learning plot in Dharmapuri, there was nearly two-month delay in groundnut sowing operation. Farmers in the practice FFS villages faced problems, as they were not able to sow groundnut and were being forced to take up alternative crops like ragi. The agricultural operations in many other AUs was not too different due to the delayed onset of monsoon followed by a long dry spell ranging between 30-50 days severely affecting the grand growth stage. This was the common problem in Madanapalli, Mahabubnagar, Raichur, Bellary and Kolar.

Tiruchi suffered the most because of inadequate rains (205 mm as against 840 mm, which was less than a quarter of the normal average annual rainfall) followed by Raichur (401 mm as against 620 mm, two-third the normal rainfall).

Only Mahabubnagar (kharif predominant season) and Bijapur AUs (rabi predominant season) have had good rainfall as well as distribution.

The various NRC and NRU technology options relating to five key operations, namely on-farm rainwater conservation, upgrading soil fertility, crops and cropping systems, generation of additional plant biomass and supporting income generation activities, leading to improvement of dry land agriculture and hence livelihoods of resource poor farmers, were promoted. Initially, the options were promoted through a series of modular training and capacity building events including FFS, which were then integrated in to the FFS curriculum.

The progress on field operations being promoted with groups of farmers is given below.

## a. AMEF cluster villages

The purpose of working with limited number of groups of farmers in cluster villages is to create effective learning situations. This involves enabling farmers in operationalising SA practices and developing local evidences, which could be used as training ground for building capacities of more farmers and ENPs.

The early start of the monsoon in all the AUs, except in Tiruchi, helped farmers to take up preseason **in situ soil and rainwater management activities**. Apart from the common practices like fall/early ploughing, cultivation across the slope and repairing field bunds, which were adopted by majority of farmers (Annexure 2, Table 1), few farmers continued practicing interception bunds (54), compartment bunding (50), graded furrows (50) and dead furrows (54). While more than 85 per cent of farmers in Karnataka practiced inter-cultivation to conserve moisture, some farmers (68) adopted mulching to save moisture loss from soil surface at critical crop stages. Few farmers (57) dug trenches along the border to conserve run off water and topsoil during heavy rains.

The adoption of activities related to **soil fertility enhancement** by the farmers was very encouraging. The farmers, as in the previous year, continued to adopt practices like use of bio fertilizers, composting, vermicomposting, application of enriched FYM, growing legumes as inter/mixed crops, etc. On the other hand, many farmers (431) who were not applying FYM to their dry lands, either because of non-availability or lack of awareness, started applying manure this year. Similarly, 148 farmers across AUs have practiced in-situ green manuring, and 71 farmers followed sheep penning. (Annexure 2, Table 2).

The initial capacity building efforts by AMEF staff across AUs to convince farmers about the advantages of **crop combinations and sequences**, use of good quality seeds and maintaining adequate plant population, use of biological and locally available materials for crop protection and the convincing results in 2005 made farmers to continue to adopt many of these activities in 2006 again. Many farmers rotated their crops (210 farmers), practiced mixed cropping (282 farmers), and took up catch crops like pulses to harness the early showers (88 farmers). Some farmers (130 farmers) started varietal seed multiplication for own use and to spread the good varieties. In Raichur and Bellary, 68 farmers filled the gaps created in groundnut fields with vegetables like lady's finger, cluster beans, etc., and got additional income. Cycle weeders were introduced this year in Bellary AU based on the experiences in Bijapur AU. Farmers found it as a useful implement for small landholdings. (Annexure 2, Table 3)

Efforts were continued to **generate plant biomass** in and around the farms by farmers in 2006. Long dry spells in the middle of the season affected the efforts considerably and reduced the survival rate of the seedlings planted after first monsoon showers. In all, 431 farmers took up planting of biomass species like Glyricidia, Cassia, Pongemia, Sesbania, Erythrina, Jatropha, and few other multipurpose forest species (Acasia, Teak, Cissoo, Neem, Almond, etc). One hundred and twelve farmers dibbled the seeds of Pongemia, Erythrina, Neem with some pre-treatment methods discussed during FFS. Some farmers (116 farmers) raised sunnhemp and horse gram and incorporated them into the soil before the main crop. Across the AUs, 196 farmers took up fodder (especially Napier grass) production activities. The farmers in the working area have learnt the utility of azolla as animal feed supplement. Totally, 158 farmers are growing and using azolla in AMEF cluster villages. (Annexure 2, Table 4)

The farmers were guided to take up **income generation** (IG) activities as a support and contingency plan to crop failure during the season. Ericulture is emerging as an alternative option for dryland farmers. It is low cost, easy to rear and an activity with assure income. The experience in Bellary is that with half acre of castor, 75 DFLs could be reared incurring Rs. 500/- expenditure and 40-50 kg of cocoon yield per crop could be obtained with an average

**Increasing biomass availability**

Promoting ecological agriculture requires improving soil health through increasing soil organic matter. This requires continuous application of organic manure to the soils in adequate quantities, which calls for good supply of plant biomass. Efforts towards increasing plant biomass therefore become essential to maintain soil health. AMEF AUs educate farmers on the importance of plant biomass in SA and motivate them to take up activities to enhance the biomass availability both on farm and in common lands. Across Units 295 farmers have raised their own nurseries. In Mahabubnagar, few women farmers were trained exclusively in nursery techniques and their services were utilised to raise group nurseries. Many species, which are known for their carbon content, were raised. Apart from plants providing biomass to improve soil organic matter, few species of horticultural importance, timber value, were also raised and planted. The combination of species also includes plants for bio-fuel purpose.

**Plant species raised for biomass promotion across AUs**

| *Manurial species* | *Dryland Horticultural species* |
|---|---|
| *Cassia siamia* | Drumstick |
| *Sesbania sesban* | Tamarind |
| *Sesbania grandiflora* | Amla |
| Subabul | Custard apple |
| *Erythrina indica* | Guava |
| Glyricidia | Soap nut |
| | |
| *Bio-fuel species* | *Timber value species* |
| Jatropha | *Acacia auriculiformis* |
| Pongamia | Casurina |
| | Eucalyptus |
| | Teak |
| | Bamboo |

**Extent of biomass promotion activity in 2006**

| Area Units | Total no. of seedlings raised | No of species raised |
|---|---|---|
| Madanapalli | 64,500 | 4 |
| Mahabubnagar | 3,18,714 | 9 |
| Raichur | 1,84,000 | 7 |
| Bellary | 38,766 | 13 |
| Bijapur | 56,419 | 13 |
| | 6,62,399 | |

The combination of species is as per the farmers' preference for ensuring food, fodder, fuel and income security in drylands. Nearly 7-lakh seedlings raised by individual farmers and groups of farmers apart, many seedlings are being mobilised from the government agencies like Department of Agriculture, Horticulture and Forestry.

income of Rs. 2000 per crop. The goat/sheep rearing (93 farmers), poultry (44 farmers), kitchen gardening (354 farmers) and pisciculture (17 farmers) were taken up by the farmers. Ten farmers in Tiruchi adopted Ericulture. Eight farmers built smokeless chullahs in their kitchens to save cost on fuel. (Annexure 2, Table 5)

## b. Eco-Network Partner (ENP) villages

The adoption of many activities of **on-farm soil conservation and rainwater management** in ENP villages has improved over 2005 (Annexure 2, Table 6). With the improvement in knowledge and skills of the ENP staff on SA practices, through their involvement in FFS sessions, the farmers are getting benefited by their continued association with AMEF. The ENP staffs are promoting these practices to the newly added farmers in the network effectively. Adoption of practices like fall ploughing (2722 farmers), land preparation across the slope (2869 farmers), bunding and bund repair (1173 farmers), intercultivation (994 farmers), interception bunds (479 farmers), has increased. At the same time, many farmers adopted practices like compartment bunding, dead furrows and border trenches in their fields in 2006.

The farmers are convinced about the **soil fertility enhancement** activities promoted by AMEF and the adoption level is on a continuous rise. Large number of farmers have started applying FYM (1459 farmers) to dry land crops; using bio fertilizers (1803 farmers); composting (1345 farmers) and vermicomposting (827 farmers), enriching the FYM before application (1041 farmers) with Rock phosphate, Trichoderma, PSB, etc; growing legumes as inter/mixed crops (2147 farmers) and have understood the importance of balanced nutrient application (821 farmers). Many farmers across the states in ENP areas have practiced in-situ green manuring (404 farmers), sheep penning (250 farmers) and crop residue incorporation (251 farmers) (Annexure 2, Table 7).

The farmers adopted many practices of **crop combinations and sequences** like, use of good quality seeds and maintaining plant population, use of biologicals and locally available materials for crop protection (IPM) across AUs. Similarly, many farmers practiced crop rotation (473 farmers) and strip cropping (140 farmers). Some farmers grew improved varieties (729 farmers) and started seed multiplication (452 farmers) (Annexure 2, Table 8).

Efforts were continued to encourage farmers for **generating plant biomass** on and around their farms through various capacity building efforts, especially FFS and study tours. As a result 177 farmers raised nurseries of biomass plants for their use and to sell to others. Bund plantation (1686 farmers) with these seedlings was taken up with the onset of monsoon. Species like Glyricidia, Cassia, Pongemia, Sesbania, Erythrina, Jatropha, and few other multipurpose forest species like Acacia, Teak, Cissoo, Neem, Almond, etc, were planted by the farmers. Farmers (213) have raised fodder crops for their animals on marginal lands. Importance of Azolla is spreading and 805 farmers have started growing and using Azolla as fodder supplement (Annexure 2, Table 9).

**Income generation** activities were included in the FFS sessions to make farmers understand the importance of such agriculture support and subsidiary activities. After the training, few farmers started adopting goat/sheep rearing (195 farmers), poultry (35 farmers), kitchen gardening (974 farmers) and pisciculture (44 farmers). A total of 47 farmers have started Ericulture this year. Fifteen farmers in Raichur were guided to take up cultivation of medicinal plants (Amruth balli, Ashvagandha, Alalekai, Adusoge, Nagadali, Karibevu, Kirunelli, Kamakasthuri, Chakramuni, Doddapatre, Tulasi, Baje, Bugari, Mungaravalli, Lavancha, Adumuttada balli, Goranti), which can be used for home remedies. (Annexure 2, Table 10).

It is becoming evident that the farmers are moving towards adopting sets of combination of NRC and NRU practices leading towards SA.

# 5. CAPACITY BUILDING

AMEF believes that training of farmers, ENPs and internal staff, is essential in its endeavour to influence the minds and practices of more farmers and in its effort to address the issues of livelihood improvement and ecological concerns. AMEF staff members conduct training programmes to eco-farmers in cluster villages. In ENP villages**,** staff members of ENP conduct capacity building activities to farmers with the support from AMEF staff members to promote alternative technologies. In the beginning, AMEF staff members arrange training events in few villages and for few groups involving ENP staff to make them understand the process, content and skills of particular SA concept. The ENP staff acquire the knowledge and spread them in many more villages and groups under their jurisdiction. AMEF staff members provide further field support and guide the ENP staff in all aspects.

AMEF has been adopting different participatory processes like PRA, FFS and PTD to promote SA practices across AUs in specific crops. Participatory processes bear a framework of methodology cantered on the principle that participation is a moral right, in which multiple perspectives are sought through a process of group inquiry, developed for the specific context, and thus using systematic methods to help people organize to bring about changes in problem situations that they see as improvements. Farmers are guided to analyse the problems through PRA techniques and work out the possible options. They are also involved in the process of developing suitable strategies to combat the adverse situations.

Though problems were identified and analysed through PRA, while executing programmes intensive involvement was ensured to accommodate all farmers in one or the other processes, either in problem solving PTD or discovery learning FFS, both in cluster and ENP groups.

## 5.1 Capacity Building of ENP staff

### 5.1.1 Train NGOs in participatory methodologies like PTD and FFS

***Modified Training of Facilitators (MToF)***

**Genesis of MToF**

A mission was fielded by FAO to explore means of expanding the outreach of the partnership project. Dr. V. Ragunathan, former Advisor to Government of India (Plant Protection) visited five Area Units from 27.3.06 to 17.4.06 and recommended a modified training of facilitators (MToF) for training facilitators and simultaneously reaching large number of farmers.

AMEF had initiated SA promotion activities in partnership with Community Managed Resource Centres (CMRCs) of MYRADA in 2005. AMEF worked with four CMRCs out of the 18 CMRCs, to start with. In order to scale up Sustainable Agriculture (SA) promotion activities to all the CMRCs, FFS methodology was considered to be a suitable approach. Considering the fact that AMEF had limited number of trained trainers on FFS, it was suggested that Modified Training of Facilitators might be useful in training staff of AMEF and partner NGOs, simultaneously reaching large number of farmers. The partnership of AMEF, Dharmapuri Unit with MYRADA CMRCs provided a favourable and readymade institutional structure, making it a natural choice for initiating the MToF programme.

The Modified Training of Facilitators (MToF) Programme is the first of its kind in the country for training facilitators in FFS methodology. It was inaugurated on the 07 June 2006 at the MYRADA Training Centre at Achettipalli, Hosur. Being unique, both in terms of methodology as well as the content, the programme generated ample field based experiences to enrich the existing FFS knowledge base.

**Special features of MToF**

The MToF has three distinct areas of action. First is the MToF, where Community Resource Persons (CRPs) get first hand knowledge and skills in FFS methodology. The second part is the practice FFS, where CRPs work in pairs, to practice their learning in 'practice FFS' sessions held in 54 villages of the two districts. The last part is the adoption of farmers by collaborating farmers for spreading FFS. The first two aspects have been initiated and the third aspect will be a follow up, to be taken up after the MToF. The special features of MToF are:

- The operations under MToF include presowing on-farm NRM to post-harvest operations, unlike from seed to seed as in regular ToTs.
- Participants belong to local area with 2-3 years of farming experience. No formal education in agriculture is required.
- It is a season-long process with 3 days residential training and 3 days of practice FFS.
- Participants in pairs conduct practice FFS.
- Pairs of practicing farmers adopt few more farmers for spreading FFS.

**Focus on dryland farming**

In line with AMEF's emphasis on the livelihood improvement of resource-poor farmers in the drylands, it was decided to work on dryland groundnut as the core crop in the MToF. Also, it was planned to expand the scope of the curriculum beyond IPM, to focus on the livelihood improvement. Major aspects of dryland farming such as *in situ* rain water management, soil fertility improvement, crops and cropping systems, generating environmental support to farming through biomass promotion, along with other aspects like post harvest operations and income generation activities, were included.

**a. MToF - Dharmapuri**

Three agencies were involved in the whole process. AMEF, as a resource organisation, coordinated the process with lead roles in providing technical content and logistics support. Six of its staff members participated in the process supporting the monitoring system and documentation efforts.

MYRADA and its CMRCs played a lead role in developing human resources on operationalising Sustainable Agriculture in dry farming and its scaling up. MYRADA identified the CRPs and villages for practice FFS. MYRADA's training centre was used for the programme. CMRCs played a major role in follow up activities in the identified villages. Self-help Affinity Groups (SAG) were involved in identifying the collaborating and scaling up farmers.

The **MToF in Dharmapuri** is historical in many ways. For the first time, members of CBOs were trained in a ToF; the focus of FFS was extended to dry farming to widen the scope of FFS beyond IPM; participants learnt the skills of facilitation and tried, hands-on, to apply the facilitation skills by running practice FFS, in pairs, every week. About 900 women were reached in a single ToF, by way of involving SHGs in practice FFS.

FAO, as the partner agency, helped to organise resource persons on the methodology part. A team of five facilitators was deputed from State Agricultural Departments of Karnataka and Tamil Nadu, through FAO's efforts.

Extension agencies like the State Department of Agriculture and Krishi Vigyan Kendras, Research Institutions like Tamil Nadu Agricultural University and its stations, other NGOs and farmer groups participated by playing a role in enriching the process, by sharing experience in the programme.

A preliminary Curriculum Development Workshop (CDW) was held during 1-3 June 06 to prepare a broad curriculum for the MToF. This was followed by another workshop to broaden the curriculum by including dry farming aspects, based on the needs of the farming community in Dharmapuri and Krishnagiri districts.

**Methodology and area coverage**

The MToF sessions were conducted for about 20 weeks. The participants were involved in residential training for 3 days in a week, throughout the season. The rest of the 3 days, the participants conducted 3 practice FFS, in pairs. It was planned to train 36 CRPs from 18 CMRCs. Each pair of CRPs, during the MToF, conducted 3 practice FFS in 3 villages under each CMRC, thus covering 54 villages in the two districts, Dharmapuri and Krishnagiri, reaching about 1080 farmers. In the practice FFS, the participating group of farmers, in pairs, were to adopt and influence another 3 farmers in the field activity during non-FFS days. In total, 540 pairs of farmers under the CMRCs are expected to reach another 1620 farmers. At the end of the season, the total farmer outreach was expected to be around 2700. Against this plan, 891 farmers were involved in 45 groups in the practice FFS while farmer adoption is being pursued.

**A new entry point activity**

A small mound was made of soil depicting ridge and valley. Water was poured through a sieve simulating a rainfall situation. The participants observed that the fine top soil got eroded and settled in the lower reaches. The participants also observed that the water infiltration at various points on the mound was 'different', progressively increasing towards the valley.

Another similar mound was made and participants were asked to 'identify options' for managing the soil erosion problems. They came up with soil erosion control structures like contour bunds and vegetative barriers. The rainfall situation was simulated again. Participants observed that the moisture retention was possible *in situ* and the silt movement was minimum within the bunded areas.

Participants used this exercise in all practice villages and it did work well.

**Facilitators**

The facilitator team included Mr. N. Selvam and Mr. N. Palani Murugesan from Department of Agriculture, Tamil Nadu; Mr. I.S. Hiremath and Mr. R.B. Bommigatti from Department of Agriculture,

Karnataka and Mr. B.V.R. Moorthy from Andhra Pradesh. They are the experienced Master Facilitators in previous FAO supported and State Government run ToFs. Mr. G. Ravi Kumar from AMEF coordinated the programme.

**Participants**

A total of 33 CRPs, (of the 36 planned), including 17 women, were trained in the programme. The CRPs are the educated local youth employed by the CMRCs for conducting specific trainings to SAGs and anchor development programmes of CMRCs in the villages. Five AMEF staff (two of them women) of Dharmapuri Area Unit also participated, to gain experience as FFS facilitators. They supported the CRP teams in group-works and the facilitators in monitoring practice FFS sessions.
Nearly 900 farmers (90% women) were simultaneously trained through practice FFS and another 1335 farmers were adopted by the practice FFS.

**Valedictory programme**

The season-long MToF on Livelihood Improvement in the Drylands was concluded on 30 September 2006. The four months of intensive training programme brought out many useful lessons to AMEF, too. It gave us lot of insights into training the participants drawn from CBOs on FFS methodologies. As many as 32 volunteers (Community Resource Persons, CRPs) were trained on groundnut FFS with focus on critical issues in dryland agriculture, like on-farm rainwater management, soil fertility improvement, dealing with crops and cropping systems, the need for increased generation of biomass and to supplement their income with allied income generation activities.

On the valedictory day, the Chief Guest Dr. C. Ramasamy, Vice Chancellor of Tamil Nadu Agricultural University, appreciated the programme, distributed the certificates to the participants and released the draft report. A fortnightly newsletter was produced which evoked good response including requests from organizations like Jamshetji Tata National Virtual Academy of MSSRF, for field support in conducting FFS. Copies of the newsletter are available on AMEF's website (www.amefound.org).

Dr. Palanisamy Pachagounder, former Country Director, FAO – EU Cotton IPM Programme and Dr. Daniel Gustafson, FAO Representative in India and Bhutan, visited the MToF and interacted with the participants and facilitators.

As many as 41 field days were conducted in the practice FFS villages of MToF and a total of 3448 farmers participated.

**b. MToF - Bijapur**

With the MToF experience in Dharmapuri, the second Modified Training of Facilitators (MToF) by AMEF on Farmer Field School methodology was started in **Bijapur** from 18 September 2006. Many issues related to dry land agriculture taking rabi sorghum as the main crop were incorporated in the curriculum developed in CDW involving farmers, trained facilitators and participants. In all, 29 participants (4 women) from 6 NGOs were trained along with two AMEF staff. The programme was facilitated by six trained facilitators (two form AMEF and four from DoA, Karnataka). Totally, 26 villages were covered and 496 farmers were involved in the process. As many as 20 field days were conducted in the practice FFS villages and over 2500 farmers were sensitised on SA.

The programme was concluded on 17 February 2007. The Vice Chancellor, UAS, Dharwad, and Director of Instructions (Agri), College of Agriculture, Bijapur, attended the valedictory programme as Chief Guests and interacted with the participants (Annexure-3).

**Mini FFS for adopted farmers**

In order to share and disseminate the learning by the FFS farmers to the other farmers in the village, mini FFS programme was established in Bijapur. In the process, MToF participants in pairs planned the mini FFS with farmer groups in practice FFS villages. Later on, the same was planned with respective farmers groups and were organized by assigning the responsibility of facilitation to the FFS farmers. Eight events were implemented in eight different villages from 1 January to 13 January 2007.Totally, 537 farmers participated out of which 100 were woman farmers. The adopted farmers' participation for the event across villages ranged from 45 to 90. The sessions focussed on some main activities such as Azolla production, nutrient mining, composting and vermicomposting, followed by group dynamics exercise. These events were well planned and organized and hence, it was successful as it encouraged FFS farmers and MToF participants in initiating other similar events.

**c. ToF – Madanapalli**

The Area Unit Madanapalli had begun the third ToF programme (FFS - Integrated Farming Systems for Livelihood Improvement) on the lines of MToF conducted in Dharmapuri and Bijapur. This time, however, the facilitators are the internal AMEF staff unlike the trainers from the State Department of Agriculture in the previous two ToFs. The event is organised to prepare 34 ToF graduates including 15 staff of ENPs in Madanapalli and 11 from Mahabubnagar, 2 from SEEMA - the ENP in Kolar, 2 from CWS - an NGO in Andhra Pradesh and 6 AMEF staff. The ToF on IFS commenced on 19 January at the OUTREACH training centre. Practice FFS are being conducted in 15 villages involving 300 farmers.

In the **Tiruchi** AU, totally, 35 FFS sessions (10 FFS in groundnut and 15 FFS in maize) were completed by the end of March 2007.

**Refresher Training of Facilitators (R-ToF)**

The ENP staffs, who underwent season long FFS training in 2006, were oriented in R-ToF emphasizing FFS methodology and involving them in development of curriculum aimed at consolidation of NRC and NRU with the addition of support activities. This has enabled the ENP staff to run FFS under AMEF's guidance in 2007. In Raichur, R-ToF was carried out in March where 15 ENP staffs and 7 lead farmers participated. The 19 ToF graduates participated in the Bijapur R-ToF programme. In Dharmapuri, the RToF was carried out in three different phases.

**Short term Training of Facilitators (S-ToF)**

As part of capacity building of ENPs, AMEF has worked with many NGOs in the past few years. Based on the keen interest shown by some of the middle level NGOs, AMEF has planned S-ToF for the ENP staff. The purpose is to prepare a pool of ENP staff trained in FFS methodology in a given NGO to run FFS with groups of farmers/SHGs to enrich other programmes of the NGOs, like watershed development, non-pesticidal management (NPM) programmes, etc. The ultimate aim is to internalise FFS methodology among interested ENPs to enrich their programmes in terms of promoting SA. In the year 2006-07, several S-ToFs are being carried out in Raichur, where CDW was done, in Bellary where 81 staff of ENPs are trained out of which 30 are PRI members. Curriculum Development Workshop for SToF programme was held at Madanapalli, which was jointly organized for Bellary and Mahabubnagar AUs. In Mahabubnagar, 30 ENP staffs from IRDO were oriented on the activities of AMEF and SToF programme, from 26-27 March 2007 at RARS, Palem.

### 5.1.2 Greening the Dry Lands (GDL) Programme – Tree-based farming system

'Greening the Dry Lands' Programme (GDLP) is a novel attempt to promote SA through working together of two resource agencies (AMEF and BIRD-K) and is expected to result in a path breaking effort in reviving dry land agriculture by promoting trees on agricultural lands. In the pursuit of bringing about improvement in dry land farming, while AMEF pursues soil fertility improvements through generation of plant biomass on and around the farm, BIRD-K believes in bringing back trees into agriculture. It is an attempt to establish the firm belief that dry land agriculture is as profitable as irrigated agriculture. The efforts are directed towards establishing local experiences through this collaboration.

Sustainable Agriculture integrates three major goals- economic profitability, environmental health and social and economic equity. Sustainability rests on the principle that we must meet the needs of the present without compromising the ability of future generations to meet their own needs. Keeping these in view, AMEF is collaborating and working with BIRD-K for achieving sustainability in agriculture through tree-based farming system by sharing the available knowledge, exploring the new opportunities in capacity building and facilitation of local NGOs for establishing sustainable agriculture model, integrating three major goals of Sustainable Agriculture- Environmental health, Economic profitability and Social equity.

GDLP was initiated in three villages in the districts of Raichur and Mahabubnagar in July 2005 with ENPs SMGAS and SWARD in Raichur and SDDPA in Mahabubnagar.

***Green festival***

The Festivals in India are cultural and social events, which motivate people to integrate, unite and have social brotherhood among the community in a village. In the present context, the mother Earth and God Indra (Rainfall) are symbolically offered plantation with biomass seedlings in GDLP villages. The festival starts with decorating the important places of the village with Taliru Torana (Tying mango

and neem branches/leaves in the houses and village entrance) symbolizing auspicious welcome to the village. All the men and women including children wear new clothes. The women wear green sarees and green bangles. The people exhibit the same enthusiasm of Yugadi, the festival marking arrival of New Year. Water is obtained from the well and carried by 5 Mutthaide (The holy women) in a procession. The school children chant verses spreading the Green messages through Jatha. The Street play troupes sing the message of Greening and Sustainable Agriculture. Planting of seedlings with pooja is performed by Mutthaides at the premises of local temples and mass tree planting is carried out in the entire area and saplings are also distributed to villagers from surrounding area.

The purpose of the festivity is to ritualize tree planting by the community, as a regular annual activity.

***Area Unit, Raichur***

The Area Unit Raichur initiated GDL programme in July 2005 at two villages, Maratha and Sagamakunta with ENPs - SMGAS and SWARD, respectively. The ENP SWARD was not able to continue the programme due to staff problem and the activities in the village Sagamakunta had to be discontinued. The progress reported pertains to the village Maratha.

The programme covers 96 farmers (56 women and 40 men) in 5 FAGs covering 60 hectares of land treatment. An innovative FFS curriculum focusing on tree-based farming system has been developed for the programme and FFS events have been started with 3 groups in the year. With other farmers, the activities continued as per the earlier plans. Three farmers sowed around 10 types of vegetable in the kitchen garden and earned income ranging between Rs.1200 to 2000 in 2 to 3 month period. Three farmers have set up bio-digestive units to get a mixture of different plant parts after decomposition. The extract was diluted ten times and sprayed to red gram and sunflower and it has resulted in better growth and reduced pest incidence.

At the end of the FFS, still few training needs were felt by the ENP staff and the farmers in the village and will be addressed in the follow up in 2007. They are group management including accounts, fund management aspects; plantation techniques, post plantation management of tree plants, federation concept; withdrawal strategy, post project management issues and other livelihood activities.

***Area Unit, Mahabubnagar***

The GDL programme is being implemented in Rajanagram and Ramagudem of Wanaparthy Mandal of Mahabubnagar District through SDDPA, an ENP. The programme covers 120 farmers in six groups covering 100 hectares. Each group is conducting 2 meetings/month. Group saving, on an average, works out to Rs.4500.

Season long FFS (3 events, 60 farmers) in tree-based farming system with castor as the base crop was initiated in 2006. In all, 35 GDLP farmers have taken up castor seed production during rabi season. In kitchen garden, farmers have taken up bhendi, cluster bean and tomato. Fifteen farmers started Ericulture, but faced problem with hatching of the eggs, that will be addressed in the next year. Farmers have treated groundnut with Pseudomonas and sown in 30 hectares during rabi season.

Five Yuvachethana (Youth training programme) trained youth are actively participating in all the activities (FFS, green festival, meetings, book keeping, etc.) and motivating farmers. The follow up activities will cover the aspects of sheep, rabbit and poultry rearing; vegetable cultivation; medicinal plants; post plantation care; Ericulture; vermicompost; feed mixture, enrichment; seed treatment, etc.

### 5.1.3 Specific capacity building activities for ENP staff

The focal activity of AMEF is to develop ENPs by upgrading the knowledge and skills of their staff and to enable them in spreading the concept and practices of SA to farmers in their areas of operation. This is done through training programmes, study tours and periodic review meetings and workshops.

AMEF organizes specialized training programmes, workshops, ToTs, etc., to ENP staff on concepts, principles and processes of SA as well as participatory methodologies. Some of the training events organised during the reporting period are given in Table 4.

The **Bellary** AU organised study tour to ENP staff to SKDRDP- Dharmasthala and Karkala, fields of progressive farmers like Mr.Prapullachandra, Shimoga and Sree Purushotham Rao Agriculture Research Station (Krishi Prayog Parivar), at Thirthahalli, Shimoga. The Raichur Unit took its ENP staff to different research institutes and progressive farmers' fields of Karnataka and Tamil Nadu and to AMEF cluster villages in Madanapalli. 16 ENP staffs of Mahabubnagar AU were taken on a study tour

to the cluster villages of Madanapalli AU, Mr. Ramesh's farm and Mr. A.P. Chandrasekhar's farm to learn about IFS and Natural farming.

Training events were organised by AMEF to train ENP staff to utilize the participatory tools effectively. With FFS being a major capacity building tool across AUs this season, emphasis was given more on the concepts and usage of FFS for promoting SA effectively with the farmers. Apart from making the ENP staff to get involved in the season long FFS conducted by AMEF staff actively, they are given special orientation on the methodology of FFS as and when required during the season.

In **Raichur**, one-day training event was conducted for ENP staff in December on different IPM technologies with special emphasis on cotton, groundnut, sorghum and sunflower. A 3-day training to farmwomen under WYTEP on Agro-entrepreneurship was organised. About 30 participants benefited from the event. The staff shared AMEF's work with the participants (59) in the District Technical Meet under WYTEP. Orientation on SA was conducted for 50 college students from 8 villages involved in the NSS programme in Sankanur village in January. One-day training on SA concept for NGO network in Raichur was conducted, 7 staff from 4 NGOs in the district attended.

A practical training on bio-fertilizer production to a batch of six NGO staff was conducted in the bio fertilizer laboratory of the **Tiruchi** AU. The participants were involved from initial inoculation to final packing of the bio fertilizers. About 100 kg each of Phosphobacteria and Rhizobium and 25 kg of *Trichoderma viridae* were produced in the bio input lab of the Unit. These bio agents were distributed to farmers in Fellowship programme villages and cluster villages. Further, production of a similar quantity is in process.

A three-days residential training was conducted in **Bijapur** for ENPs and new NGO field level staff on Gender in Sustainable Agriculture from 13 March to 15 March 2007 in Inchageri village. The workshop was attended by 18 participants out of which there were two female participants. NGOs like KSARDS, NAFARD, RDS, CHETANA, CRDS, PRDS, ARDS, Navachetana and Jothi Mahila Mandal participated in the workshop. (Annexure-4)

Dr. Francesca, FAO, visited the **Dharmapuri** AU and facilitated the FFS follow up workshop from 14 March to 17 March 2007. She also facilitated the Sustainable Livelihood Analysis (SLA) study in order to assess the impact of MToF and FFS on SHG women.

***Table 4. Training events for the staff of Eco-Network Partners***

| Sl. No. | Activities (events) | MPL | MHB | RCH | BEL | BJP | TIR | DPI | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Concepts and applications of FFS and PTD | 3 | 2 | 9 | 8 | 1 | 9 | | **32** |
| 2 | Training on SA and on-farm crop development, Refresher training on SA | | 2 | 2 | 4 | 1 | | | **9** |
| 3 | Study tours | 1 | 2 | 2 | 1 | 1 | | 1 | **8** |
| 4 | Gender in SA (Gender matrix and Workload analysis) | | | 1 | 1 | 1 | | | **3** |
| 5 | Strengthening of groups, Revolving Fund management and input mobilization | | | 5 | 2 | | 1 | | **8** |
| 6 | Review meetings | 10 | 12 | 12 | 12 | 12 | 6 | 3 | **67** |
| | **Total** | **14** | **18** | **31** | **28** | **16** | **16** | **4** | **127** |

## 5.2 Capacity Building of Farmers

### 5.2.1 Season Long Farmer Field School

AMEF is known as much for its pursuit of promoting LEISA as for its major approaches like PTD and FFS to empower farmers in its AUs. Season long FFS event was the major capacity building tool used in 2006 in all the AUs both in AMEF and ENP villages, as desired by FAO. FFS sessions (weekly/fortnightly) were initiated from May – June with few exceptions, which began from July onwards. The FFS events covered 15 different crops, the major crops in each Area Unit, and the farmers were guided to understand the concept and methodology of FFS (Table 7), and thereby improve the knowledge and adoption levels of different SA activities.

In **Dharmapuri**, season long FFS in Tomato was conducted at Kotur, during the cropping season for a duration of 20 weeks beginning from January 2006. In all, 23 farmers from 3 villages and 6 CMRC staff participated in the programme. A significant outcome from the FFS was that the production cost was reduced by Rs. 13,000 per acre owing to reduced use of certain external inputs. Tomato growers

from other villages and a group of NGO representatives from 5 districts visited the FFS to observe and learn (Annexure-5).

The season long FFS on tomato, which started in the second week of February 2006 at Parvathapur, **Mahabubnagar** one of the ENP villages, with 28 farmers (including 8 non-group farmers), concluded after 15 sessions. SA plot yielded 50 percent more (7.44 tons/acre) than the farmers practice plot (4.96 tons/acre). The cost of cultivation in SA plot was Rs.17, 040/- per acre against Rs.19, 120/- in farmer's practice (10 per cent less). The net returns from the SA plot was Rs. 52,080 as against farmers' practice plot, which was Rs.34, 720/- (33 percent more). A Field Day was conducted on 20 May 2006 in which 187 farmers from surrounding villages and ENP staff of other ENPs participated (Annexure-6).

A season long FFS was conducted by **Tiruchi** unit in Brinjal at Nochium village of Perambalur district with 20 farmers in February. Fourteen sessions were conducted. No chemical pesticides were used in the SA plot as against three sprays in the farmers' practice plot. FFS was concluded with a Field Day on 27 October 2006 (CAD ENP area).

The three FFS events initiated in the early part of the year apart, 191 season-long FFS events were organized in Kharif and Rabi season (Table-5).

***Table 5: An overview of season long Farmer Field School in 2006***

| Area Unit | Crop | No. of FFS events | | No. of sessions planned (W/FN) | No. of sessions up to reporting period (W/FN) | No. of Farmers involved | |
|---|---|---|---|---|---|---|---|
| | | AMEF | ENP | | | AMEF | ENP |
| **Madanapalli** | Groundnut | 6 | 35 | 13 | 12 | 98 | 564 |
| **Mahabubnagar** | Castor | 0 | 7 | 15 | 15 | 0 | 160 |
| | Paddy | 4 | 0 | 20 | 18 | 73 | 0 |
| | Maize | 0 | 6 | 15 | 12 | 0 | 142 |
| | Cotton | 0 | 2 | 20 | 20 | 0 | 40 |
| | Chilli | 0 | 1 | 15 | 7 | 0 | 20 |
| | Tree based farming | 0 | 3 | 20 | 15 | 0 | 54 |
| **Raichur** | Groundnut | 3 | 8 | 16 | 16 | 55 | 168 |
| | Sunflower | 0 | 2 | 16 | 8 | 0 | 36 |
| | Sorghum | 1 | 6 | 20 | 10 | 18 | 104 |
| | Cotton | 2 | 0 | 22 | 15 | 34 | 0 |
| | Tree based farming sunflower | 0 | 3 | 20 | 12 | 0 | 60 |
| **Bellary** | Groundnut | 5 | 13 | 27 | 19 | 96 | 260 |
| | Onion | 1 | 2 | 20 | 14 | 20 | 40 |
| | Sericulture | 2 | 0 | 12 | 10 | 33 | 0 |
| | Chickpea | 1 | 0 | 20 | 8 | 20 | 0 |
| **Bijapur** | Groundnut | 1 | 1 | 24 | MToF | 20 | 20 |
| | Sorghum | 4 | 13 | 28 | MToF | 79 | 232 |
| | Sunflower | 1 | 2 | 33 | MToF | 20 | 40 |
| | Pomegranate | 0 | 1 | 41 | MToF | 0 | 20 |
| | Tomato | 0 | 2 | 35 | MToF | 0 | 40 |
| **Kolar** | Ragi | 0 | 12 | 11 | 10 | 0 | 240 |
| | Groundnut | 0 | 3 | 11 | 11 | 0 | 60 |
| **Tiruchi** | Groundnut | 4 | 6 | 15 | 9 | 75 | 124 |
| | Maize | 4 | 21 | 15 | 10 | 77 | 430 |
| **Total** | | **39** | **152** | | | **718** | **2854** |

In all, **191 FFS events** were conducted across Units covering **3572 farmers in 13 different crop-based farming systems**. This is other than the MToF programme in Dharmapuri. So far, this has been the largest number of FFS events and farmer coverage through FFS by AMEF in a given year.

Three FFS events in AMEF cluster villages for 60 farmers and 23 FFS events for 444 farmers in ENP areas could not be started as planned due to unfavourable weather conditions.

The curricula for season long FFS were developed with the emphasis on critical NRC and NRU operations contributing to improvement in dry land agriculture by using the expertise and experience in the organization, FAO trained officers from Agriculture Department Officers and getting help from subject matter specialists from Universities and Research Stations. The FFS methodology as an empowering process has been useful in bringing positive changes in the farmers' attitude towards dry farming, in improving their skills of farming resulting in higher adoption of SA practices. FFS events have also helped the group members to understand the importance of unity and group cohesiveness in terms of collective input mobilization and marketing of farm produce. The decision-making and observation skills of farmers have improved on account of discovery learning and experiential learning opportunities in the FFS methodology. Women farmers involved in the FFS events have shown significant improvement in their confidence and have learnt the facilitation skills, presentation and documentation skills.

***Madanapalli***

The AU has conducted 41 FFS events in groundnut based farming system involving 662 farmers. In the process, 18 staffs of 6 ENPs were trained in the FFS methodology. A few highlights are as below:

- Farmers estimated soil moisture by taking soil samples at different soil depths and concluded that the plot with dead furrows had more moisture for longer time. But the plant growth, pegging and pod formation was better in repeated inter cultivation treatment.
- Plant growth, flowering and pod formation were better in field applied with FYM @ 4 tonnes/acre.
- Two groundnut varieties, K - 1271 and K - 1375 were found resistant to drought. Plant population (initial and final) was relatively higher in these varieties. They were found to be less susceptible to PBND but affected by stem and root rot.
- Farmers could record higher predator population and lesser incidence of pests and diseases in groundnut + red gram + field bean + castor + cowpea mixed cropping system than in sole groundnut system.
- In root grub management trial, farmers recorded lower incidence of the pest in chemical insecticide treated (Chlorpyriphos) plots than in Neem cake applied plot and the control.
- Incidence of root and stem rot was reduced when Trichoderma was applied with FYM.
- Farmers discovered that adding Azolla as feed supplement to cows, twice a day for 45 days, resulted in an increase in milk yield by one litre and fat content by 3 degrees.

***Mahabubnagar***

The AU organized season long FFS events to build the capacities of farmers in adopting SA practices and systems in castor (7 events, 160 farmers), maize (6 events, 142 farmers), cotton (2 events, 40 farmers), paddy (4 events, 73 farmers) and in tree-based farming systems (3 events, 54 farmers). Four ENPs and 17 staff members were involved in conducting FFS during the season.

**Castor**

- In an experiment comparing SA versus farmers' practice (FP), the farmers recorded an average increase of 30 kg per acre in seed yield. At the same time, the cost of cultivation in SA plot was reduced by about Rs. 346/-. The cost reduction in SA practice was due to the use of optimum seed rate, spacing, balanced fertilizer dose and use of NSKE instead of chemicals.
- Plant compensation study conducted during FFS revealed that 25 per cent defoliation up to 42 DAS did not reduce castor yield.
- Through short studies, farmers learnt about higher water retention in soils with more organic matter, techniques of planting biomass seedlings, Helicoverpa management, trench cum bunding,

pitting and filling of pits for raising horticulture plants, utility of seed treatment, etc. Importance of Azolla as a green manure in paddy was observed through a pot study.

- An FFS farmer found that planting vegetable seeds at the periphery of wetting zone of horticulture basin could increase the water use efficiency and could meet 50 per cent of his family's vegetable need.

**Paddy**

- Farmers observed higher paddy yield (19.28 q/ac) in SA plot than in FP (17.35 q/ac) with a reduced cost of cultivation of Rs 397 per acre. The increase in yield was attributed to balanced fertilizer application, green manuring and Azolla. Azolla as a green manure reduced the cost of top dressing with Urea by Rs. 250 per acre. Farmers depended on AESA for plant protection measures in SA plot and did not apply chemical pesticides saving Rs. 147 per acre compared to their regular practice.
- Paddy yield in SRI method was 20.4 q/ac as compared to 17.40 q/ac in FP. The advantages were in terms of water saving and reduction in the crop duration. Also the paddy crop raised under SRI was resistant to lodging.
- The short study on water holding capacity created lot of impact and the farmers are convinced to practice vermicomposting and composting. Farmers learnt seed selection and seed treatment with cow dung and cow urine. Farmers understood the different components of ecosystem and their inter dependence and have resolved not to burn the crop residue, henceforth.
- A Farmer observed moths of paddy stem borer carefully in his field and came out with a discovery of male and female moth characters and shared to convince other group farmers.

**Maize**

- Farmers observed that the cost of cultivation in SA plot did not vary much in comparison to FP. On the other hand, they recorded increased grain yield and higher net returns (1.7 q/acre more yield and Rs. 1489/ac in SA practice). The increased yield was attributed to improved management practices in SA plot. Farmers applied balanced fertilizers through straight fertilizers instead of complex fertilizers (mainly DAP).
- The farmers have understood the importance of FYM enrichment and the need for generating additional plant biomass and have started adopting the practices.

**Cotton**

- The kapas yield in SA practice was 10 q/ac as compared to 9 q/ac in FP. The cost of cultivation reduced (mainly due to reduction in pesticides use and because of balanced nutrition) by Rs. 1720 per acre in SA practice.
- Neem cake application at sowing and at 45 DAS helped in reducing the sucking pest load in SA plot.
- Through short studies, farmers knew about deficiencies of magnesium and boron, which otherwise were considered as symptoms of diseases making farmers to take up chemical control.

***Raichur***

The Raichur AU facilitated season long FFS in groundnut (11 FFS events, 223 farmers), cotton (2 events, 34 farmers), sorghum (7 events, 122 farmers), sunflower (2 events, 36 farmers) and tree-based farming systems (3 events, 60 farmers). In the process, capacities of 15 staff from 5 ENPs were built on FFS methodology.

**Groundnut**

- The cost of cultivation was reduced by Rs. 436/- in SA practice against FP. However, due to continuous dry spell during growth and reproductive stage, there was crop failure and the difference in yields was not significant.
- Farmers observed healthy bright green and profuse growth of groundnut and red gram plants close to the dead furrows and understood the importance of dead furrows in rainwater conservation.

- Application of FYM and vermicompost resulted in good growth of groundnut crop even during dry spell. However, the pod yield did not vary much between FP (1.65 q/ac), FYM applied plot (1.70 q/ac) and vermicompost plot (1.68 q/ac).
- Through varietal trial in FFS, farmers compared the performance of two improved groundnut varieties (R-8808 and GPBD-4) with local ruling variety (TMV-2). R-8808 was found promising compared to the other two varieties. More number of nodules were observed in R-8808 (112) compared to GPBD-4 (58) and local check (49).
- Farmers concluded that strip cropping of bajra with groundnut at a row ratio of 9:9 is a good cropping system even during drought situation. This was based on their observation wherein they could harvest 1.10 q of groundnut pods and 1.5 q of bajra along with 1 cartload of fodder from 0.5-acre plot.
- In short studies, the farmers learnt that addition of FYM to soil holds more moisture, ridges act as water conservation structure when ploughed across slope, clay texture of soil retains more moisture for long time, more microbial culture and decomposition of material in soil with FYM compared to soil without organic matter, weeds take up more nutrient and moisture than crop, etc.

**Cotton**

- Sign and symptoms as entry point activity helped to understand the effect of chemical pesticides on human health.
- Farmers learnt the importance of and adopted red gram as border crop in cotton, vermicomposting, composting and sheep penning.
- Azolla as a useful fodder supplement was understood.
- Farmers were able to correlate climatic changes with that of crop growth, and make decisions on crop management based on AESA.

***Bellary***

- Season long FFS in groundnut (18 FFS events, 356 farmers), onion (3 events, 60 farmers), sericulture (2 events, 33 farmers) and chickpea (1 event, 20 farmers) were conducted by the AU during the season. Six staff members from 3 ENPs were involved and got trained in FFS.

**Groundnut**

- Average pod yield in 0.5-acre SA plot was 2.25 q against 1.66 q from same sized plot in FP. This increase in yield was attributed to increase in seed rate from 30 kg/ac to 35-kg/ac and gypsum application.
- Growing of bajra as barrier to restrict the movement of thrips reduced the incidence of PBND and thereby reduced the mortality of groundnut plants.
- Three-time intercultivation in SA plot has improved soil moisture retention.
- In the varietal trial, among varieties, GPBD-4 performed better than R-8808, VRI-2, and local check (TMV –2) with more pods and fodder yield. VRI-2 was found tolerant to diseases.
- In a trial on strip cropping of ragi with groundnut, groundnut yield did not vary much (3.8 q/acre against 3.9 q/acre in monocropping) but additional ragi yield was encouraging to the farmers.
- Short studies enriched the knowledge level of farmers. Through short studies farmers learnt the importance of organic matter in soil fertility, effect of shelling methods on seed germination, methods of seed treatment, vermicomposting and composting.

**Onion**

- Bulb yield of onion did not vary much between SA practices (30 q/0.5 acre) and FP (29 q/0.5 acre).
- In varietal trial, farmers found that Arka Niketan is better in terms of yield and quality compared to Arka Kalyan and local check.
- In a trial to optimise seed rate for the region, farmers found 6 kg/ac as optimum than 4 kg and 8 kg/ac. This was based on their observation of uniformity in plant population and bulb size.

- Short studies enriched the knowledge level of farmers and increased in adoption of some low cost SA practices. Some of them are, marginal increase in milk yield with Azolla use, quality onion bulbs with the Vermiwash spray, and reduction in cost of plant protection by using Sanjeevini Kashaya, a herbal mixture made from locally available herbs, against thrips.

**Sericulture**

- In SA plot, leaf yield of mulberry was 300 g more per plant than in FP. The quality of the leaves was good with long straight shoots with broad leaves. Farmers attributed this to application of bio fertilizers, spraying of growth promoters and biomass filled trenches for improving WHC.
- Farmers understood the concept of in-situ green manuring in mulberry with sunnhemp and Daincha. The green manuring crops were raised for 45 days and incorporated in to the soil. On fresh weight basis, sunnhemp yielded 4.5 t of biomass/ acre and Daincha 4 t/ acre.
- With improved method of silkworm rearing with rotary mountages, the farmers harvested 85 kg of cocoons from 150 DFLs against 78 kg in FP.
- Indigenous options like turmeric powder solution, spider web and fermented buttermilk proved to be useful for Uzi fly management as compared to use of chemical traps.
- Short studies enriched the knowledge level of farmers and their capacity in terms of knowledge related to practices and they are sharing the results with other farmers. Some of the short studies like use of polythene sheet in chawki rearing made group farmers to accept the technique as it is cost effective, durable and easy to handle compared to the use of paraffin paper. Farmer could save a minimum of Rs. 200/ crop. Use of Aqua cool chamber and black boxing resulted in uniform and healthy hatching of silkworms, which otherwise made the farmers to loose 10-15 DFL's every time.

***Kolar***

In Kolar, SEEMA (ENP) staff with AMEF support conducted 12 FFS events in ragi and 3 in groundnut based cropping system covering 240 farmers. Four staff of the ENP are trained in the process.

**Ragi**

- Farmers observed about 1q/acre more grain yield in SA plot compared to FP.
- Farmers observed that the seeds treated with Azospirillum germinated better compared to the seeds without treatment. Farmers also noticed that ragi, grown with dead furrows and sown in ridges and furrows, could withstand moisture stress for longer time compared to farmers' practice of without dead furrows. Farmers observed more moisture retention in soils with FYM.
- Farmers conducted varietal trial with GPU-28, Indaf-9, L-5 and HR-911 and found the variety L-5 performing better (12 q/ac) than the others.

**Groundnut**

- Farmers recorded 50 kg/ac more pod yield in SA plot compared to FP. Farmers also recorded the pod weight of 66 g/100 kernel from gypsum applied plot and 61 g/100 kernel in control plot.

***Tiruchi***

The season long FFS events were conducted in groundnut (10 events, 199 farmers) and maize (25 events, 507 farmers). Totally, 14 staffs from 5 ENPs were trained in the process.

**Groundnut**

- Farmers evaluated the decorticator for shelling and concluded that it takes less time (1/3 of manual) for shelling.
- Farmers saw the yield improvement of about 40 per cent in SA plot compared to FP.
- In varietal trials, in spite of the drought condition the VRI-2, Narayani and Pollachi Red varieties showed 25-30 percent more pods than the regular variety grown by the farmers.
- Farmers found that the plants grown in ridges and furrow set more pods than in the normal practice.
- Through short studies, farmers experienced that bunds and ploughing across the slope check runoff and soil erosion (by recording run off of 80 ml water and 25 g of top soil from 1 sq mt of

land as run off in sowing along the slope). Farmers recoded more retention of water in soil with FYM. The seed treatment with Rhizobium, Phosphobacteria and Trichoderma resulted in 100 per cent germination. Farmers realized the importance of incorporation of sunnhemp as green manure. Farmers sprayed NSKE and found control of whiteflies and aphids and realized that botanicals can also save the crop as chemicals.

**Maize**

- Farmers understood the importance of micro organisms in the soil by observing the decomposition rate of cotton cloth and paddy straw.
- Farmers observed that monocots absorb more nutrient compared to dicots and became aware of the importance of weeding for obtaining higher returns.
- Maize farmers harvested good yields from intercrops like red gram, cowpea, green gram and castor as border crop, which were not part of their practice earlier.
- Farmers became aware of the importance of plant biomass in SA and planted species like Glyricidia, Cassia, Neem and Moringa.

### 5.2.2 Capacity building activities for farmers other than FFS

AMEF staff continued to support the farmers to understand the principles and practices of dry farming. Many NRC and NRU aspects have become part of specific crop based FFS across Units, but few planned FFS events could not be started this year necessitating exclusive training events to keep them involved in SA promotion. Even in villages where in season long FFS was conducted, few capacity building events were conducted on request, apart from FFS sessions.

AMEF staff conducted 67 training events for farmers on NRC (practices of rain water management, soil fertility improvements) and NRU (suitable cropping patterns, importance of biomass and raising nurseries), 47 events on aspects of advantages of working in groups, efficient utilization of revolving fund and 30 events on collective marketing benefits, across the AUs in cluster villages (Table-6).

***Table 6. Training activities by AMEF staff to farmers in AMEF villages***

| Sl. No. | Activities | MPL | MHB | RCH | BEL | BJP | TIR | DPI | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | NRC and NRU | 2 | 6 | 27 | 28 | 2 | 1 | 1 | 67 |
| 2 | Group strengthening, RF management | 12 | | 7 | 19 | 3 | 6 | | 47 |
| 3 | Marketing and enterprise development | | 2 | | 4 | | 21 | 3 | 30 |
| | **Total** | **14** | **8** | **34** | **51** | **5** | **28** | **4** | **144** |

Apart from building the capacities of farmers in cluster villages, AMEF staff put in their efforts substantially to train farmers in ENP villages. The staff of respective ENPs participated in these events and subsequently trained other farmers, independently. ENP staff who got trained in different aspects of NRC, NRU and other activities, attending the training events conducted by AMEF staff, conducted 431 training events for farmers across AUs to make the farmers understand the benefits of many dry farming practices to manage and utilize the natural resources (Table-7).

***Table 7. Training activities to farmers in ENP villages (events)***

| Sl. No. | Activities | MPL | MHB | RCH | BEL | BJP | KOL | TIR | DPI | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | NRC and NRU | 24 | 73 | 35 | 28 | 62 | 0 | 72 | 0 | 294 |
| 2 | Group strengthening, RF mgt. | 12 | 9 | 9 | 23 | 33 | 3 | 30 | 1 | 120 |
| 3 | Marketing and enterprise development | 0 | 0 | 5 | 2 | 0 | 0 | 8 | 2 | 17 |
| | **Total** | **36** | **82** | **49** | **53** | **95** | **3** | **110** | **3** | **431** |

In Mahabubnagar, 16 woman farmers were taken to Youth For Action KVK, Kothakota on 22 January 2007 to make them understand the importance of value addition of Ragi. The women farmers learnt to prepare different types of sweets using Ragi.

International Kitchen Garden Day was celebrated in Bijapur AU. It was emphasized that kitchen gardens benefit women and children, who are often found deficient in vitamins and nutrition. In all, 39 women and 33 men farmers and representatives from ENPs attended the programme.

### 5.2.3 Participatory Technology Development

***Dharmapuri***

Moisture stress, declining soil productivity and lack of improved management practices were identified as the main factors influencing tapioca yield in Dharmapuri district. To improve the productivity by addressing these issues, the Dharmapuri Area Unit and Tapioca and Castor Research Station (TCRS) of TNAU conceived a collaborative project. The Participatory Technology Development (PTD) process was initiated in two villages in Harur block of Dharmapuri district with the participation of 40 farmers.

As a part of the programme, 6 farmers tried CO-2, a drought tolerant variety along with a combination of farm management practices. The trials proved successful in terms of the variety's tolerance to drought, pests like aphids and mosaic disease. Higher yields with better starch content is also expected form this variety. There was also an increase in plant biomass production making it attractive to Tapioca cultivators. In a mid season conference, farmers visiting from nearby villages expressed their interest to cultivate tapioca and scale up the new variety.

The Tapioca PTD trial plots showed marginal improvement in net returns from the farmers practice due to following two reasons:

1. CO-2, the newly introduced variety, got the attention of farmers for its drought and mosaic disease tolerance. It also had an increased starch content of 32 % against the 27% in the prevailing H 226 hybrid.
2. The intercrops, cowpea and black gram, introduced in the system yielded well and were used for household consumption.

The harvesting in PTD plots was done on 28 October 2006. The farmers from 5 villages discussed the results based on sharing by the PTD farmers. On 29 October 2006, a multi stakeholder workshop was organized to discuss scaling up of the project to new villages and the possibilities of experimenting on alternatives for improving Tapioca productivity. Discussions were also held on establishing a Tapioca working group with the stakeholders, to discuss the project outcomes and experiences once in every three months.

## 5.3 Internal Capacity Building

### Internal capacity building activities that took place in the reporting period

AMEF considers it critically important that its staff keep continuously abreast of the developments in their specialization, as well as in social methods and management. For this purpose, in-house knowledge updating opportunities are provided by way of organizing training and workshops. These events are apart from the monthly team meetings held regularly in the AUs to review the activities.

### Study tour to Kenya

Seven staff from AMEF and one staff from MYRADA visited Kenya from 1 -13 May 2006. They observed the activity of FFS being carried out in Kenya in terms of methodology, the self-financing mechanisms and the networks involved. Besides farm visits, the participants had useful discussions with farmers, officials and other stakeholders (Annexure-7).

- A one-day Internal workshop on "Improving accounting procedures by introducing new chart of account" was organized on 25th April'06 at Central unit, Bangalore. Shri S.L Srinivas, Treasurer, AMEF, Secretaries from 5 AUs, Finance Secretary, Assistant Administrative Officer and Central Programme Officer (Programme Coordination) participated in this workshop. Existing accounting procedures across units of AMEF were discussed. New chart of accounts to streamline the accounting processes was introduced.
- One-day workshop was organized on Orientation to SA Fellowship Course on 27th April 2006 at CU Bangalore. Participants were AUCs and designated APOs. Main focus was on role of AMEF staff in the Fellowship course.
- A meeting on Revised Action Plan was organized on 31 May 2006 at CU Bangalore. All programme staff of CU, AUCs and an APO from each AU participated to discuss and internalise the activities proposed in the revised plan.

- A three-day Follow-up course for the one-month ToF participants during 2–4 February'06 was held at College of Sericulture, Chintamani. ToF participants, Facilitators, Dr. Rajendra Hegde and Mr. Chandra Sekhar participated in it. The results of the long-term experiments and short-term experiments were discussed, curriculum developed for the FFS in AUs were discussed.
- Refresher course on accounting procedures was organized for AUCs and Secretaries on 24 April 2006 at CU, Bangalore. Mr. S. L. Srinivas, Treasurer oriented on improving accounting procedure by introducing new charts of accounts.
- MToF planning workshop was organized on 16 August at Mangala Raitha Bhavan, Bangalore to look for opportunities of conducting MToF programmes in other Units. It was decided to take up the MToF in Bijapur and Madanapalli in 2006.
- A one-day Budget Review Meeting was held on 16 September at Central Unit, Bangalore. Dr. Dwarakinath, Chairman, AMEF, Shri S.L Srinivas, Treasurer, AMEF were among the resource persons along with the Executive Director. The programme staff of CU, AUCs, Secretaries from CU and AUs participated in this workshop. Programme budget in general, FFS related budgeting in particular, was discussed. A format was designed to track the expenses on FFS events.
- Every month, specific topics are being discussed during Study Circle meetings. The discussions are to evolve common understanding as well as prepare brief guidelines on how we operationalise the concepts in the field. One of the meetings was organized on 30 October to discuss System of Rice Intensification (SRI) and its promotion by AMEF.
- A three-day Workshop on Annual Progress Review and Pre-planning was organized from 2 to 4 November 2006 at SEARCH Training Centre, Bangalore. All programme staff (AUs & CU) have participated. Progress in 2006 against the plans was reviewed and suggestions were made to prepare the Work Plan for the year 2007.
- A five-day Documentation Workshop was organized from 20 to 24 November 2006 at Ancient School of Wisdom, Devanahalli, Bangalore. Total 17 participants benefited from the Workshop. Participants were trained on sourcing information from the field, documenting field experiences, tools for recording information, institutionalising documentation habits and photo documentation.
- A three-day Annual Planning Workshop was organized during 5 -7 December 2006 at Fireflies Training Centre, Pipal Tree Ashram, Bangalore. All AUCs, 1-2 programme staff and Secretaries (AUs & CU) have participated. The AUs and CU presented their respective Annual Work Plan for 2007, which was discussed in the larger group, refined and finalized.

**Annual Day Celebration**
For the first time in the history of AME Foundation, the Annual Day was organized on 24 December 2006. The staff members from all the Units participated in the event with their families. The staff members, who participated in the competitions such as essay, debate, poster making and photography, in the month of November, were given away the prizes.

- A five-day basic course on Moderation Skills was organised in February for AMEF and ENP staff (25 nos., 20 from AMEF and 5 ENP). Faculty from Options and Solutions, Bangalore, facilitated the programme.

### Internal Staff training events

- Ms. Shobharani attended the workshop on "Practice and Policy - mainstreaming the governance of Panchayat Raj Institutes in Natural resource management" on 9 April 2006 at Navaspoorthi Kendra, Bangalore organized by an NGO - Foundation for Ecological Security.
- Dr. Arun Balamatti attended a meeting at FAO, New Delhi on the occasion of visit of the FAO Regional Director for Asia, on 19 April 2006.
- Mr. Naganagouda and Dr. T. Krishnaprasad participated as resource persons in "Training of Facilitators Programme" for Mandal Agriculture Officers at Farmers Training Centre, Mahabubnagar organized by Department of Agriculture on 10 May 2006.
- Dr. Dwarakinath, Dr. Arun Balamatti, Mr. KVS Prasad and Ms. T.M. Radha attended the National Workshop on Priorities in Watershed Development, organized by Sujala, the World Bank supported watershed project in Karnataka at Hotel Amee Guestline, Hosur on 22-23 May 2006.

- Mr. Ravindranath Reddy and Mr. C.S. Kallimani participated in group discussion on Promotion of Technologies organized by CSWCR&TI, Bellary on 26 May 2006 and discussed on, potential technologies suitable for semi-arid regions.
- Ms. Veena Kumari attended Workshop on "Strengthening Livestock Component in Watershed Programs - Concerns and Options" on 7 and 8 June 2006 at Karnataka Veterinary College, Hebbal, Bangalore organized by LEAD Advocacy Network Karnataka -Samuha NGO.
- Dr. Arun Balamatti attended the Regional Workshop on "Strategy for Improving the Performance of Farming Systems in Rain fed Areas" at MANAGE, on 14 and 15 June at Hyderabad (CRIDA)
- Bijapur AU organized a two-day training on Accounting Procedure for ENP staff and book writers of FAGs on 15-16 June 2006, to emphasise the importance of systematic accounting in FAGs.
- Ms. S.G. Shashikala participated in training on "Family Business Garden and Low/No-Space Techniques for Urban and Peri-Urban Agriculture" organized by RUAF (Resource Centre on Urban Agriculture and Food Security) and IWMI (International Water Management Institute) at Horticulture Training Institute, Hyderabad on 21-22 November 2006.
- Dr. T. Krishna Prasad attended the Workshop on the capacity building for NGOs organized by MECS, Hyderabad on 8 July 2006 at Mahabubnagar.
- Dr. Arun Balamatti attended a workshop on "Extending Corporate Social Responsibility (CSR) towards Sustainable Development" on 02 August 2006 organized by CCD, Madurai, along with B.Vijayalakshmi, AUC, Tiruchi.
- Dr. Arun Balamatti and Dr. Rajendra Hegde attended an Awareness Building Workshop, jointly organized by ICAR, New Delhi and IIHR, Hesarghatta, Bangalore on 8 August 2006. Dr. Bandopadyaya encouraged Research Institutes, Universities, NGOs and private entrepreneurs to participate in the World Bank supported NAIP project by submitting proposals on consortium mode.
- Dr. T. Krishna Prasad attended District Level Coordination Meeting on 9 August at Mahabubnagar organized by DAATTC.
- Dr. R. Dwarakinath, Dr. Arun Balamatti and Dr. Rajendra Hegde attended a meeting convened by the Principal Secretary (Agriculture and Horticulture) on 10 August 2006 at M.S. Building, Bangalore to discuss future course of action for formulation of New Agricultural Policy for Karnataka State.
- Dr. Arun Balamatti, Mr. Ravindranath Reddy, Mr. M. Nagana Gouda and Mr. G.H. Yogesh participated and facilitated a daylong session on "Farmer Field School as a Participatory Impact Monitoring and Evaluation Tool" on 24 August at Mangala Raitha Bhavan, Hebbal, Bangalore. The session was part of the short course on "Participatory Impact Monitoring and Evaluation of Agriculture and Rural Development Programmes" organized by the Zonal Coordinating Unit (Zone III), ICAR ToT Projects, Bangalore, for Assistant/ Associate Professors of SAUs and Scientists/Senior Scientists from ICAR institutes and KVKs located all over the country.
- Mr. C.S. Kallimani participated and shared AMEF's experiences in the workshop on 'Experience sharing in rainfed sericulture' organized by BIRD-K, on 29-30 August 2006 at Hubli, Karnataka.
- Mr. Megeri Karibasappa, Mr. Anil More and Mr. Ravindranath Reddy participated in the workshop on "Agro-industry Development" organized by JSW, facilitated by NANDAN Agro Products Limited, Israel at Toranagallu, Bellary on 2 September 2006.
- Mr. Aneel Kumar attended the workshop on "Sampling Techniques and Monitoring of NR and Environment Problems" held from 30 August to 1 September 2006, organized by Indian Institute of Science, Bangalore
- Mr. Anil More and Ms. S.G. Shashikala participated in the workshop on "Organic Farming and Mass Media" on 15 -16 September 2006 at Biotechnology Centre, Hulimavu, Bangalore.
- Mr. KVS Prasad and Ms. T.M. Radha participated in the International Editors Meeting (IEM)-2006 held from 25 September to 02 October 2006 in Peru. ETC-Andes, which brings out the Latin American edition of LEISA magazine, had organized the workshop. All the editors of the regional editions of LEISA magazine participated. There were intensive and fruitful discussions on various

aspects related to the magazine – like quality of the magazine, outreach, forthcoming themes, etc.

- Dr. Rajendra Hegde, Mr. C.S. Kallimani and Ms. Veena Kumari attended the National Seminar on "Soil Health and Water Management for Sustainable Sericulture" at RSRS, Kodathi, Bangalore from 27-28 September 2006.
- Mr. M. Nagana Gouda, Mr. Ranganatha Babu and Mr. Aneel Kumar participated in the National Workshop on Sustainable Castor Production – Problems and Opportunities, organized by RARS, Palem on 15-16 October 2006. Other participants included staff from Department of Agriculture, ANGRAU and NGOs.
- Dr. Arun Balamatti attended the Asian Alumni Workshop from 11 – 15 November 2006 organized by the University of Flensburg and SESAM (Sustainable Energy Systems and Management) Institute and presented a paper on 'Natural Resource Management – A New Dimension to Improving Rural Livelihoods' at Bali, Indonesia.
- Ms. T.M. Radha attended the 'National Symposium on SRI' organized by ANGRAU at Rajendranagar, Hyderabad on 17-18 November 2006
- Dr. R. Dwarakinath and Dr. Arun Balamatti attended the inaugural session of Regional Workshop on "Research – Extension Linkages for Effective Delivery of Agricultural Technologies in SAARC Countries" at NAARM, Hyderabad on 20 November 2006. Dr. Dwarakinath delivered the keynote address.
- Ms. Veena Kumari attended the inaugural session of 'Setting up a National Agenda towards Bio Security' meeting held on 23-24 November 2006 at National Institute of Advanced Studies, Bangalore jointly organized by National Institute of Advanced Studies and M S Swaminathan Research Foundation.
- Dr. R. Dwarakinath and Dr. Arun Balamatti participated in the State Level Consultation Meet on Agricultural Extension in Karnataka at Karnataka Regional Office of NABARD on 30 November 2006.
- Mr. C.S. Kallimani, participated in the Workshop on Promotion of Biofuels for Sustainable Development in Karnataka, at Bangalore on 13 December 2006. The workshop was organized by Department of Agriculture in collaboration with Winrock International and PCRA, New Delhi.
- Dr. Dwarakinath and Dr. Arun Balamatti participated in Karnataka Agricultural Policy document release programme at Vidhana Soudha on 14 December 2006.
- Dr. Arun Balamatti and Mr. KVS Prasad visited Rural Development Trust (RDT), Ananthpur on 15 December 2006 and met Dr. Malla Reddy. They interacted with group of farmers during field visits on Groundnut situation in Ananthapur. RDT is keen on their farmers getting benefited from the AMEF's experience on groundnut.
- Dr. Arun Balamatti and Mr. G. Ravikumar participated in the workshop for content creation and capacity building of VKCs, organised by MSSRF at Kottakkal, Kerala.
- Mr. N.R. Adisesha Balaji, AAO, and Ms. G. Hemalatha, Secretary cum Accountant of Tiruchi AU participated in the training on Micro Finance methodology organized by IRMA, Anand during 22-25 January 2007.
- Ms. G. Swaruparani was invited as a resource person for the workshop on "Participatory Knowledge Management" for NVA Fellows at MS Swaminathan Research Foundation, Coimbatore on 14-17 February 2007.
- Mr. S.S. Kulkarni and Mr. Yallappa were invited as resource persons for the training on Bio Fuel Production on 24 March 2007 at Agriculture College, Raichur.

## 5.4 Developing Professionals in LEISA – AMEF Fellowship Programme

Recognizing the need for preparing professionals in Sustainable Agriculture, AMEF launched a 9-month fellowship programme for selected graduate students from Agricultural Universities. Six students were trained in the 2005-06 programme.

**Graduation Ceremony** for the students of the second batch of Fellowship Programme 2006 on 'Operationalising Sustainable Agriculture' was organized on 24 December 2006. Dr. Dwarakinath, Chairman and other Trustees of AMEF attended the graduation ceremony and awarded the course completion certificates.

The second batch fellowship programme with 14 Agricultural graduates was started from 4 May and was concluded in December 2006. There were nine students from Tamil Nadu and 5 from Karnataka.

During the Orientation Programme held from 4 to11 May, the Fellowship candidates were introduced to the course, oriented on the SA principles and practices. The sessions helped the Fellows to understand the prevailing dry farming practices in the Deccan Plateau and to understand and prepare a base line survey schedule. Subject specialists from UAS Bangalore, DoA, Karnataka, practicing farmers and old Fellowship students participated in the programme.

The students stayed for 10 days (12-23 May) in allotted villages and established rapport with villagers, conducted baseline survey and learnt the existing farmers' practices, identified the constraints in crop production, identified the major crops, their yield level, identified the socio-economic status of the farming community and the scope to introduce alternate farming practices in their allotted villages. Base line data was compiled, analysed and a provisional work plan was formulated for initiating steps towards implementing SA with the contact farmers' groups.

The candidates were then placed at Dharmapuri (5), Tiruchi (4), Bellary (3) and Bijapur (2) to implement the SA plans for about seven months to work with a group of farmers.

As part of the programme, the Fellowship students were taken on a study tour to the selected places in Karnataka and Tamil Nadu state, from 25 September to 5 October 2006. The tour provided them with an opportunity to learn from the specific agricultural technologies being practiced by the progressive farmers (Mr. Narayan Reddy, Dr. Praffulla Chandra, Ms.Shivamma, Mr.Thanga Swamy), agencies (OUTREACH, CCD) and Institutions (AUs, KVK, RRS). As part of the performance evaluation, oral presentation and written test were conducted on 21-23 December 2006.

# 6. FOSTERING LEISA INITIATIVES

Promotion of SA is a complex and gradual process. This is so because farmers have to go through a long process of capacity building on the systematics of SA, addressing three critical dimensions of farming – on-farm rainwater management, soil fertility improvement and improved cropping practices. Hence, it is necessary to work with few farmers intensively to develop visible models in the vicinity as learning ground and to develop trained, experienced "lead farmers". This, in turn, will create an opportunity to influence large number of farmers through local SA evidences and lead farmers. The lead farmers are encouraged to enthuse and encourage more farmers by interacting in groups in the village, train interested farmers and mobilize necessary inputs.

With this in mind, while the activities have been initiated and that the farmers and ENPs are making good progress in SA promotion, there are encouraging evidences of spread of technologies beyond the groups of farmers and villages with whom AMEF is working, either directly or through ENPs. While continuing its efforts in creating eco farming base and scaling it up through ENPs, efforts were directed towards inducing interest among many more farmers and development agencies by spreading proven alternative farming practices. Such developments were observed in all the AUs of AMEF.

**World Food Day Celebrations – 2006**

The World Food Day for the year 2006 was celebrated on the theme of “Investment in Agriculture for Food Security”.

**In Raichur**, it was celebrated on 17 October at Puchaladinni, a cluster village. Joint Director of Agriculture inaugurated the programme. The Programme Coordinator, KVK-Raichur, Scientist from Agriculture University, Assistant Director of Research, NGO chief functionaries, progressive farmers participated.

**In Tiruchi**, it was celebrated on 17 October at PSSS Perambalur. Around 250 farmers participated. Mr. John Britto APO of Collectorate Perambalur, Shri. R.P. Ramasamy, JDA, DoA, Mr. R.Venkatasubramanian, Lead Bank Manager, IOB, and Mr. Sekar, AGM, NABARD were the dignitaries present on the occasion. The importance of World Food Day 2006 celebration was shared. There was a wide media coverage of the event by Dinakaran, a local newspaper, All India Radio (AIR), Trichy, S TV and AMN TV.

**Bellary Unit** celebrated the World Food Day on 16 October 2006. The event was organised at two places - Molakalmuru and Bellary. It was organized with GUARD (C) at Molakalmuru. About 750 farmers participated in the programme from cluster, ENP and surrounding villages. Dr. R.V. Patil of Agriculture College, Bijapur, was the Chief Guest. Mr. Srinivas, Thasildar of Molakalmuru, several PRI leaders and Swamiji were present on the occasion. In Bellary, the event was organised in collaboration with Department of Agriculture. As part of the celebrations, competition in rangoli, using food grains, was organised for High School and College students. Exhibition on SA was organised where in charts and models depicting SA activities were displayed.

**Madanapalli and Mahabubnagar Units** jointly conducted the World Food Day at Madanapalli. Officials from line departments, staff of ENPs from Madanapalli and Mahabubnagar Units and about 100 farmers participated and interacted on different SA experiences. The exhibition was organised to provide opportunities of cross learning for the farmers of both the Units.

In **Bijapur,** the ToF team of facilitators and participants celebrated World Food Day in the ToF programme.

## Study Tours

Efforts were made to sensitise farmers about better management of natural resources and their utilization. Farmers were taken on study tours (36 events) to show them the NRC and NRU activities in progressive farmers’ fields (Dharani organic farm, Prakasam District, Sathyavathi Biogas unit, Sindhanur), KVKs, Research Stations (RARS-Nandyal, RRS-Aruppukottai, MSSRF, Kannivadi, TCRS - Salem) and State Agricultural Universities, IFS farms developed by other NGOs like BIRD-K (at Tiptur, Surashettikoppa), MYRADA (at Kamasamudra), CCD (Madurai), etc. Internal tours were also organized by the AUs providing farmers an opportunity to see, observe and interact with the farmers of other groups in the same Unit and between Units. For example, farmers from SEEMA, an ENP in Kolar, visited the cluster villages of Madanapalli, to learn about useful dry farming practices and skills. Similarly, the farmers from ENP villages in Raichur, Bellary and Bijapur visited cluster villages of the respective Area Unit to learn from the ongoing SA activities.

The **Mahabubnagar** AU also organized study tours for farmers (30) and staff (13) from WDS and SDDPA (ENPs) to the AMEF cluster villages to interact with the paddy farmers and understand the SA activities. The farmers from Mannur and Hangaragi villages (where the Fellowship students are gaining hands on experience on SA) of Basavanabagewadi Taluk in Bijapur were taken on study tour to AMEF cluster villages to know about SA practices and to gain from their experiences. A study tour

was organised by the **Bijapur AU** for 43 (8 women) farmers of ISEER (ENP) area to the cluster and ENP villages of AMEF Bellary AU and to the fields of progressive farmers in Bellary and Bijapur to give them an opportunity to learn from various examples and experiences of SA.

The cluster village of **Madanapalli** AU, Mittamalapalli, has been receiving many visitors in the recent times. Few of the visitors who visited the cluster village were Dr.Theodor Bergmann, Dr. Li Weimin, Dr. Usha Palaniswamy and Mr Dinesh.

Volunteers (21) from the Pulcherla mandal (GVS-Tirupathi area) and 7 staff from SEEMA (Kolar) visited the cluster villages of Madanapalli to observe the ongoing SA activities. They interacted with the farmers and observed fields with biomass plants on bunds and recycling through compost and vermicompost, azolla production, etc.

## Field Days

In **Bellary** (onion, groundnut and sericulture), **Madanapalli** (groundnut), **Mahabubnagar** (paddy, maize, cotton, castor), **Raichur** (groundnut, cotton), **Bijapur** (groundnut, sunflower), **Tiruchi** (Brinjal, groundnut, maize), and **Dharmapuri** (groundnut), field days were organized to spread the knowledge acquired by the participating farmers to other farmers through interactions, field visits, exhibitions, etc. Many farmers from the community and from surrounding villages participated and were sensitised. Scientists of Universities and Research Stations, officers of Agriculture Department, Lead Banks of the region and other NGOs were invited. The programmes were covered in various news media.

## Training and Workshops

The **Madanapalli** AU conducted a season long FFS in groundnut for Community Resource Persons (CRPs) of MYRADA - Kadiri project from June to November 2006 at M.Kothapalli. Twenty CRPs who were trained in FFS, repeated the learning in 20 villages of 5 mandals, reaching 625 farmers.

The **Bellary** AU conducted 3-day residential training programme to train staff of NGOs from Bellary and Chitradurga districts at Bellary from 28 to 30 November 2006. A total of 21 staff members were trained. Participants were taken on a study tour to cluster villages to show them SA examples where sets of combinations of practices were adopted. The AU along with NABARD, Chitradurga, also organized one day training on 'Ecological Agriculture' for SHGs of TK Halli, Molakalmuru taluk on 14 November. About 40 participants benefited from the training. On request from DoA, the staff of AU Raichur trained 23 SHG women on SA practices at RSK, Gillesugur. One day training programme on rabbit rearing was organized where in 29 farmers learnt the usefulness of the practice. The AU handled 3 sessions in training to watershed officials of Andhra Pradesh conducted by CSWCR&TI on SA concepts and practices and Ericulture in dry lands.

The **Raichur** AU in collaboration with CEDOK, Dharwad conducted two training events on "Farm Entrepreneurship Development Programme" to the farmers and farmwomen in January 2007. Thirty-eight farmers were trained in the residential training programme to give fundamental ideas of farm business and to develop entrepreneur skills.

The **Dharmapuri** AU has initiated a collaborative programme with the SCINDeA Network on the project management strategies and systems to evolve a plan of action for promoting SA in the watersheds. Training on soil and rainwater management practices was completed for SCINDeA Network partners.

A mid season discussion workshop focusing primarily on technology options for enhancing productivity of dry land Tapioca was held on 28th July 2006 at Vadugapatti. Tapioca cultivators from 14 nearby villages observed and compared the PTD plot (CO 2 variety) with the non-PTD plot. One of the farmers could get a very good price for his produce (Rs.320 per bag of 75kg) due to high starch content (36% instead of normal 27%).

A three-day residential training on "Vision Building for Better Life through Sustainable Agriculture" was organised by **Bijapur** AU for farmers. Fifteen farmers, 12 staff members and 3 ENPs were oriented on SA. Number of azolla units, kitchen gardens, composting and vermicompost pits are visible indicating farmers' acceptance of SA. A team of 'Grama Swaraj Andolana' consisting of experts from various localities across the State visited one of the cluster villages (Jeerankalagi) and interacted with farmers on their SA experiences. A series of Street Plays were organised in 7 villages of the Bijapur Unit through the team of eight farmers from Bellary. More than 1000 farmers watched the play and were sensitised about the benefits of SA.

The **Bijapur** AU trained about 125 farmers and 25 college students on the SA aspects in Kapanimbaragi village in Indi taluk during *Upanyasa Programme* organized by Shri. Renukaachaarya

College under NSS camp on 10th March 2007. The topic on which the training was imparted was Role of Technology in Agriculture for Sustainable Livelihood.

The AU facilitated the training session on soil fertility management and sustainable sorghum production to the farmers at DATC, Bijapur on 24-25 January 2007. A total of 15 men farmers participated in the session.

An SA Jatha (Rally) was held in Basavanabagewadi taluk head quarter of Bijapur AU and POWER ENP shouldered the responsibility of this rally. The participants of the rally comprised of MtoF Graduates from NAFARD, KSARDS, BIRDS and ISEER. The rally began from the office of the Asst. Director of Agriculture and concluded at Basveshwara Temple. About 12,000 farmers witnessed the rally.

The AU in collaboration with CEDOK conducted training on Farm Entrepreneurship Development to 22 farmers from 4 villages (Muttagi, Nagawad, Takkalaki and Uppaladinni) of Basavanabagewadi taluk. The AU participated in a training programme in NABARD sponsored VV Club at Korawar village of Sindagi taluk on 28 February 2007. About 350 farmers including 15 women farmers participated in the training programme.

**International Women's Day Celebration**

The International Women's Day was celebrated in the **Bijapur** AU, which included 40 female and 13 male farmers. Mrs. Parvathi Aravatti, President, Grama Panchayat inaugurated the programme. The women farmers shared their views on how AMEF's interventions have brought about a positive change in their livelihoods. Mrs. Ramabai Bellenavar, SHG member – Inchageri expressed her feelings on how the SHGs have made them economically and socially empowered. They are now respected in the society and the male members of the family seek their opinion on taking family decisions. Mrs. Sujatha Teli shared her experiences about FFS where she has learnt through experimentation about pests, predators and diseases. She added that Azolla production and kitchen gardening activities have also proved very helpful for them.

It was a good gathering of women and men farmers where experience sharing was carried out. The programme ended successfully.

**Raichur** AU also celebrated Women's Day at Kanyadoddi, one of the cluster villages, to educate the farmers on threats to women, women exploitation due to illiteracy, difference in workload of men and women, etc. About 70 farmers (50 female and 20 male) attended the programme and benefited from the message.

The ENP INDO Trust in the **Tiruchi** AU had imparted training on mushroom cultivation to the groups under Nehru Yuva Kendra in Perambalur district. They had also given training on sustainable agriculture to the framers through the NSS camp organized by Dhanalakshmi Engineering College at Perambalur. Around 490 farmers were reached through these training events.

The Tiruchi AU and All India Radio (AIR), Tiruchi, collaborated to start a second Farm School on AIR programme on FFS methodology. As a part of this, the AU organized a one-day CDW on 16th March 2007 with the twin objectives of using the workshop as a platform for disseminating information to various stakeholders about AMEF's activities and discussing about the presentation mode, curriculum and program design.

Eight soil testing awareness meetings were organized (4 in cluster villages and 4 in Fellowship programme villages) in collaboration with the State Soil Testing Laboratory under its Village Adoption Programme. About 150 farmers participated and benefited from the programme.

## Krishi Melas/Congress

The **Mahabubnagar** AU participated in Kisan Mela at RARS, Palem highlighting the SA activities in dry lands. More than 2500 farmers visited the stall and interacted. The Bellary AU participated in Hampi Ustav from 3 to 5 November in collaboration with NABARD. The State Home Minister, Shri M.P. Prakash, inaugurated the stall. Nearly 15000 people visited and discussed different aspects related to agriculture.

AMEF participated in India Organic 2006 organized by ICCOA at Bangalore from 9-12 November 2006. About 10000 people visited the stall. Nearly 2000 people, including farmers, NGO representatives and input dealers showed interest on the AMEF's activities. AMEF also participated in Krishi Mela 2006 at GKVK, UAS Bangalore from 17th to 20th November. About 15000 farmers visited the stall and interacted. Farmer to farmer interaction through the participating farmers from AU Bellary and Raichur was arranged.

The **Bijapur** AU participated in Krishimela at College of Agriculture, Bijapur. Scientists, students and farmers visited the stall. The AU put up a stall in Siddeshwara Animal Fair in Torvi in Bijapur to showcase SA concept and practices. About 2000 farmers visited and interacted with AMEF staff and farmers.

As part of the scaling up strategy of AMEF, an exhibition was displayed in the TNAU Science Congress by the **Tiruchi** AU to create visibility for the efforts of AMEF on livelihood improvement of small and marginal farmers in the dry lands. Professionals from research institutes, NGOs, farmers and students from various colleges visited to gain information on AMEF's activities and interventions. Farmers from Padalur village, Perambalur demanded for training on SA, which was subsequently planned.

***Table 8. Fostering LEISA activities during 2006-07(events)***

| Sl. No. | Activities | MPL | MHB | RCH | BEL | BJP | CU | TIR | DPI | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Training to farmers, community volunteers, Network NGOs - concepts of SA, PRA, PTD, FFS tools, IPDM, INM and RF management, CEDOK, SCINDeA Network | 10 | 8 | 52 | 9 | 1 | | 35 | 5 | **120** |
| 2 | Study tours | 1 | 15 | 3 | 11 | 1 | | 1 | 4 | **36** |
| 3 | Field days | 12 | 17 | 15 | 7 | 22 | 0 | 3 | 41 | **117** |
| 4 | District Working Group meeting | | | 1 | 1 | | | 1 | | **3** |
| 5 | World Food Day/World Environment Day/ Women's Day | 1 | | 1 | 2 | 2 | 1 | 1 | 1 | **9** |
| 6 | Street plays, Rallies and Farmer Melas | | 1 | 3 | 2 | 1 | 2 | 1 | | **10** |
| | **Total** | **24** | **41** | **75** | **32** | **7** | **3** | **42** | **51** | **295** |

***Table 9. Number of farmers sensitised about SA practices***

| Area Units | No. of farmers | Activities/Means of sensitisation |
|---|---|---|
| MPL | 1,359 | Training to community volunteers and spreading SA by volunteers, Field days and World Food Day |
| MHB | 4197 | Field days, SA awareness training, Kisan Mela at RARS, Palem |
| RCH | 7,000 | Training, orientation, street plays, video shows, SA exhibition |
| BEL | 17,332 | Street plays, Rallies and Farmer Melas (Hampi Utsav) |
| BJP | 8,000 | Field days and Krishi Mela, SA jatha |
| TIR | 412 | Training to community on SA practices, AIR programme |
| DPI | 1,344 | Field days |
| CU | 17,000 | Exhibitions at India organic 2006, Krishi Mela 2006 |
| **Total** | **56,644** | |

# 7. BUILDING INSTITUTIONAL LINKAGES THROUGH COLLABORATIVE ACTIONS

Linkages with public research institutions and progressive farmers enabled AMEF to access technologies and resources to build knowledge and awareness of the farmers and ENPs. Scientists and officials of Agricultural Universities and State Departments of Agriculture, Horticulture, Forest, Animal Husbandry, KVKs in all the three states, were constantly contacted for information and resources. Services of scientists of UAS, Bangalore, Dharwad; Central Silk Board, Bangalore; Central Sericulture Research and Development Institute, Talaghatpura, Bangalore; Indian Institute of Horticultural Research, Bangalore; Regional Sericulture Research Institute, Kodathi, Bangalore; were utilized for MToF in Dharmapuri and Bijapur. District Horticultural Co-operative Society of Raichur and many input dealers were also contacted in carrying out the envisaged activities.

One of the significant developments during the period has been development of concrete working relationship with National Bank for Agriculture and Rural Development (NABARD). A few groups of farmers promoted by AMEF in cluster villages were converted into Farmer Clubs in Bellary and Tiruchi. NABARD district unit in Chitradurga utilised the services of AMEF staff in offering SA training to SHGs. NABARD, Belgaum, Karnataka has sought support of AMEF for one of the NGOs implementing Farmer Club programme of NABARD. NABARD, Bellary has sponsored a stall of AMEF in Hampi Utsava and similarly NABARD Bangalore office sponsored AMEF stall in Krishi Mela at the UAS, Bangalore.

AMEF is gaining in its visibility and is being approached by many such agencies, including MSSRF, for support, particularly in organizing FFS.

The various activities that were organized in collaboration with other institutions and organizations during the reporting year are discussed as below:

## Stakeholder Workshops

The **Bellary** AU organized District Stakeholders' Workshop in Bellary on 27 October 2006. The event was organised to share the activities of AMEF to bring in positive changes in dry land agriculture practices by empowering the farmers, and to link farmers to schemes and facilities provided by Government and other agencies. Mr. G. Karunakara Reddy, MP, Bellary, inaugurated the workshop and appreciated AMEF for their work on dry land agriculture in the district. Other distinguished guests present in the function were Shri.Ramalingappa, Vice President of Zilla Panchayat, Bellary, Shri. Somashekhar Reddy, former Mayor, Bellary City Corporation, Mr. D.V. Ramana Rao, AGM, NABARD, Dr. P.K.Mishra, Head CSWR&TI Bellary, and Dr. Arun Balamatti Executive Director, AME Foundation, Bangalore. Officials from line departments, NGOs, ENPs and farmers attended the programme. Sharing of schemes and facilities available at NABARD bank by Mr. D.V.Ramanarao helped to understand the possible linkage and credit flow to the farmers. Farmers interacted with the different stakeholders and discussed how to take forward SA promotion initiatives in the district.

Following joint action possibilities emerged at the end of the event:

- Initiating Farmers' Club in collaboration with NABARD, so that it enables the group to avail the facilities from other stakeholders.
- Looking for joint action with OUTREACH NGO for effective promotion of Sustainable Agriculture practices to farmers of other taluks of the district.
- Organizing training programme for farmers on SA in collaboration with Agriculture Department for effective dissemination of Sustainable Agriculture practices beyond the operational area.
- Progressive farmers and district organic farmers association came forward for promotion of SA and expressed willingness to join hands with AME Foundation.

The Area Unit, **Raichur** organized District Stakeholder Workshop at KVK Raichur on 6 November 2006 at KVK, Raichur with the objectives of improving the promotion of SA on the basis of shared knowledge, to identify the contributory roles of various agencies and to arrive at a decision of enhanced efforts by stakeholders. The programme was attended by Scientists from College of Agriculture, Raichur; RARS, Raichur; KVK, Raichur; Officers from NABARD, Pragati Grameen Bank; Officials from DoA and other line departments; farmers from cluster villages; and chiefs of ENPs.

**Dharmapuri** AU organized Multi-stakeholders' Workshop on Tapioca based farming system in ADA Office, Harur, on 29.11.2006 with the objectives of sharing the role of AME foundation as a resource agency, sharing the results and experiences of a collaborative programme for productivity

improvement of dry land tapioca initiated in 2006, and to initiate dialogues for joint action and formation of a working group in scaling up the pilot initiatives in Harur taluk in 2007. The scientists of Tapioca and Castor Research Station (TCRS), Yethapur; Assistant Director of Agriculture and Agricultural Officers from Department of Agriculture, Harur; AAOs from Department of Horticulture, Harur; farmers from cluster villages; representative from Primary Agriculture Co-operative Bank (PACB), Krishnapuram; staff and chief functionary of HELP organization (NGO); and press correspondents participated in the event.

Linkage between AU FFS and MSSRF is established as the AU imparted training to 16 NVA fellows on Knowledge Management in Agriculture on 13 February 2007 at Coimbatore. The AU also became part of the ATMA management committee in Dharmapuri.

The **Tiruchi** AU organized a District Stakeholders' Workshop at Perambalur on 1 December 2006. Honorable Forest Minister, Government of Tamil Nadu, Mr.N.Selvaraj, inaugurated the event. Various stakeholders like CEO, Perambalur, Scientists from agricultural college and Research Institutes in Tiruchi and Perambalur, line departments like Sericulture, Official from District Social Welfare Department, farmers, ENP Chief functionaries and staff, attended the programme.

The NABARD Farmers' Club Meet was organized in the AU, which covered the whole cluster villages. During the meeting, an expert from the Veterinary University had participated and shared information of fodder for animals and livestock management.'

The **Bijapur** AU also supported the *Meet the Experts' Programme* of and NGO called Rural Development Society (RDS), working in RamadurgTaluk of Belgaum district. The AU visited the NGO for four times in a quarter and trained about 145 farmers on the aspects of sustainable agriculture. The AU also developed good linkages with the All India Radio through which dissemination of knowledge on SA practices is being done.

In **Mahabubnagar,** 11 farmers purchased 18 milch animals through the linkage developed between AMEF and KBS Bank. 13 farmers also purchased three Tyne cultivators from DoA under the subsidy scheme.

## Meetings/ Visits

In Raichur, linkage has been developed with Zila Panchayat for taking up 15 farm ponds, under NREGA, in cluster and ENP villages; with DoA for supply of seeds (groundnut, sunflower, bengal gram, sorghum) at 50 per cent subsidy under seed village concept; Department of Horticulture - to obtain 400 sapota seedlings. Along with Dept. of Animal Husbandry, the AU organized animal health camp at Gadhar. Around 350 animals were vaccinated against Foot and Mouth disease and other diseases. Through the linkage with DoA, farmers of Puchaladinni in Raichur got Rs. 20,000 sanctioned for establishment of Vermicompost units.

Twenty students from Walchand MSW College, Solapur, visited the cluster villages of the Bijapur AU to know the activities of AMEF.

In collaboration with Veterinary Department, the Bellary AU organized animal health camps in 2 cluster villages to vaccinate the animals for Buck queretes (Chappe roga) disease.

The final year B.Sc. (Agri.) students of TNAU Coimbatore visited the Tiruchi AU for Implant Training programme in September 2006. Fourteen girl students visited the working areas of AMEF in Tiruchi and Perambalur districts and interacted with the farmers and learnt about group mobilization, NGO activities, AMEF's methodological and technological approaches and ways of operationalising sustainable agriculture.

Seven students from TNAU stayed for 12 days in Dharmapuri to learn about the functioning and the activities of AMEF. They participated in one session of the MToF and visited 6 practice FFS sessions. In Raichur, 56 agriculture students had visited the cluster villages to get exposed to SA activities.

Linkages have been developed with Pragathi Grameen Bank and NABARD in Bellary AU to initiate Farmers' Clubs and 6 clubs were initiated during the year 2006-07.

Dharmapuri Unit farmers have established linkage with RRS, Vridhacahalam, Agricultural Engineering College and research Institute, Tiruchi and KVK, Krishnagiri for procuring inputs like groundnut seeds.

Dr. Norman Uphoff, visited the working area of the Madanapalli AU where SRI is being promoted with 7 farmers in 6 acres. Seven NGO staff members from Sudan, who were on a visit to the Bijapur AU to

learn about AMEF's activities, visited Devaranimbaragi, one of the cluster villages and participated in the field day.

## Awards and Achievements

- Ms. K.R. Chandra was awarded Gold Medal by TNAU for obtaining highest CGPA in her Post Graduation in Soil Science.
- The AUs Tiruchi and Dharmapuri were appreciated by TNAU for hosting students of the University and providing excellent learning opportunities about NGO work for the students.
- Dr. Vithal Rajan was honoured by Canadian Government with the "Order of Canada" in recognition of his lifetime achievement and merit of high degree, especially in service to humanity at large under the category – Voluntary Service.
- Senior staffs of AMEF who have served AMEF for five years and above were felicitated during the Annual Day celebrations.
- Two farmers from cluster villages of Raichur AU *viz.,* Sri Gundappa and Sri Pratap Reddy, participated in the quiz competition on agriculture conducted by JSYS during Krishimela, 2007 at UAS Bangalore and won first and second prizes, respectively.

# 8. DOCUMENTATION AND DISSEMINATION

Documentation and Dissemination (D & D) is recognized as one of the five key tasks of AMEF. D & D activity is aimed at building knowledge processes, which ultimately result in enhanced sharing of knowledge on alternatives for practioners, enhanced pool of experiences and learnings for enabling agencies to guide practioners, get the attention of policy makers to alternatives, which are working. While Documentation and Dissemination enables wider sharing of these experiences in public domain the activity is crucial for strengthening organization's own learning processes.

Besides identifying it as a key activity in the organization and creating an interest in the activity, efforts were focused towards building necessary skills and aptitudes. Staff who were earlier involved in the ILEIA-LEISA India consortium documentation programme took lot of initiative in their respective areas to translate some of the learning into tangible products and new programmes. Also, internal capacity events and basic guidelines/ formats for various common products also enabled these processes. Some unique tools have been initiated in the organization to systematize documentation efforts at various levels. Those include, a bilingual **3 year Farmer diary** for documentation at farmers' level, a **database** for recording individual farmer details so as to generate a range of mandatory reports, basic analysis and consolidation of outcomes. All these are aimed at systematic triangulation of facts, which form the basis for a multitude of products. Photo documentation has been another deliberately planned process.

Some of the major outcomes are production of newsletters (e.g. MToF newsletter in English, local language regional monthly newsletters), preparation of case studies, a unique 13 episode AIR Farm Radio programme, and visibility in mass media (Newspaper, Radio and Television).

Following documents were published in the reporting year from time to time:

**AME Info:** The quarterly newsletter was produced which was distributed to selected people interested in AMEF's activities. During the year 2006-07, four issues of AME Info (Jan – March 2006, April – June 2006, July – September 2006 and October – December 2006) were produced.

**MToF Newsletters**: Seven issues of MToF Newsletter were produced covering the programme run in Dharmapuri. It was circulated to over 500 individuals and institutions including printed copies and soft copies. The Newsletters were instrumental in popularising the event among a wide and varied audience.

**MToF Bijapur Final Report** of 300 pages has been compiled and is being finalised.

**House Magazine:** As the organization is growing, both in terms of geographical area, programmes and also staff, the need to share information on a regular basis is becoming increasingly important and enriching, both on programme front and for professional growth of individuals. Official information will keep all the staff abreast of what is happening across the Area Units and personal info helps to strengthen as a team by knowing each other well. House magazine is circulated on a monthly basis and is meant only for internal circulation. In 2006-07, 12 issues of House Magazine were circulated.

**Selected readings:** These are additional reading materials carefully compiled which serve as background materials on basic concepts. Two Selected Readings were released during the year:

- Selected Readings-5 – Nutrient Quantity or Nutrient Access? A New understanding of how to Maintain Soil Fertility in the Tropics.
- Selected Readings-6 – Case Studies Basics.

**Fact sheets:** Fact sheets of all the Units for the year 2006 along with an overall AMEF fact sheet were brought out indicating the programme highlights of each Unit in the year 2006. Totally, 8 Fact Sheets were produced.

**Calendar:** A Calendar for the year 2007 focusing on the training methodologies of SA was produced.

***Susthira Krishi Chetana*** **Newsletter:** The monthly Kannada Newsletter from Bellary AU started in January 2006 to document and share the experiences of farmers, staff and others in promoting SA practices. 11 newsletters were produced during the reporting period.

***Parisar Snehi Krishiyattha*** **(Towards Eco-friendly Agriculture):** Inspired by the success of the Newsletter from Bellary AU, similar efforts were initiated in Raichur. The Raichur AU produced two issues of the quarterly Newsletter in Kannada.

**Training material:**

Mahabubnagar, Raichur, Bellary and Bijapur AUs prepared posters and Flex charts on SA Technology and Methodology. Tiruchi AU prepared a flex chart in Tamil language on the indigenous post harvest technologies meant for processing of cereals, pulses and oil seeds conventionally.

Bijapur AU brought out handouts in Kannada and Marathi on Azolla and Organic Urea preparation using cow urine. The AU prepared a poster on Recycling of Crop Residues. A model on SA practices was also prepared and was used for disseminating information about SA activities.

Tiruchi AU released an activity calendar (in Tamil) on month wise SA practices, in Tamil.

Mahabubnagar AU produced 5 handouts in Telugu, viz., Use of botanicals in plant protection, Vermicomposting, Azolla as green manure and animal feed, SRI cultivation and use of *Trichoderma*.

Table-10 gives a glance of the documentation products produced during the reporting year:

***Table 10. Documentation products***

| Sl. No. | Name of the product | No. of Products |
|---|---|---|
| 1 | Perspectives and selected readings | 02 |
| 2 | Books/booklets | 04 |
| 3 | Brochure on AMEF | 01 |
| 4 | Fact Sheets of Area Units | 08 |
| 5 | Annual Report | 01 |
| 6 | AME info/Newsletter | 17 |
| 7 | Case studies | 07 |
| 8 | Calendar and Greeting Cards | 01 |
| 9 | Posters and handouts (Technology & Methodology) | 40 |
| 10 | AMEF House Magazine (monthly and internal) | 12 |
| 11 | Field Boards and wall painting | 27 |
| 12 | Radio programme | 28 |
| 13 | Papers in Seminars/Workshops | 07 |

**Books/booklets published**

- A book titled "Guidelines for IPM of Major Crops on the Deccan Plateau – A Basket of Options" was published by AMEF.
- *Susthira Krishiyatta*: A booklet consisting of collection of articles from *'Susthira Krushi Chetana'*, was produced by Bellary AU and shared with farmers in Hampi Ustav, India Organic 2006 and Krishi Mela, Bangalore.
- *Mahilhchi tharum manavari*: Tiruchi AU had released a booklet in Tamil. This is the collection of 13 episodes of programme on SA broadcast by AIR, Tiruchi.
- The Mahabubnagar AU brought out two booklets on Sustainable Agriculture Practices and Group Management in Telugu.

**Case studies**

Seven case studies were produced during the reporting year:

- Farmer Field School for Women; An experience of IPM – FFS in Tomato
- Alternative farming practices for remunerative dryland cotton
- Alternative farming practices from cotton to sorghum
- Farmers undertake market operations; A case of collective action
- Changing farming practices; PTD shows the way
- Vermicomposting brings better yields and returns
- *Mahilchi tharum maanavaari* – Drylands bring joy: AMEF-AIR collaborative Farm School Programme

**Papers presented**

- Mr. C.S. Kallimani and Ms. S.G. Shashikala presented a paper on "LEISA Practices towards Sustainable Sericulture" at the National Workshop on 'Organic Farming for Alleviation of Rural Poverty' organized by APOF (Association for Promotion of Organic Farming) on 8-9 August 2006 at Hebbal, Bangalore.
- Mr. Ravindranath Reddy participated in 'Interface Workshop on Integration of PTD Approaches in Addressing NRM and Livelihoods' organized by PTD Learning Forum at ISEC, Bangalore from 19-20 August and presented a paper on 'PTD in Groundnut Farming system: some experiences'
- Mr. C.S. Kallimani presented a paper on "Combination of LEISA practices for sustainability of sericulture" in the National Seminar on 'Soil Health and Water Management for Sustainable Sericulture' organized by Regional Sericulture Research Station and Central Silk Board on 27-28 September 2006 at Bangalore.
- Mr. B.C. Kolhar presented three papers (1. AME Foundation Promoting Sustainable Agriculture: a Step towards Organic Farming; 2.Towards sustainable cotton cultivation; 3. Farmers Field School: A tool for Promoting Sustainable Agriculture) in the National Seminar on " Organic Farming - Trends and Challenges", held on 27- 28 September, organized by Dept. of Rural Development Science, Madurai (TN).
- Dr. Arun Balamatti presented the paper "Natural Resource Management – A New Dimension to Improving Rural Livelihoods" at the Asian Alumni Workshop for ARTES/SESAM graduates held in Bali, Indonesia in November, organised by the University of Flensburg, Germany and European Overseas Campus, Bali.

AMEF made efforts to share its experiences and learning through both print and electronic media like local Newspapers, AIR and Television.

**Print Media**

- The Jatha on eco-based farming in Bellary was covered in Vijay Karnataka dated 21 May 2006.
- The celebration of Environmental day in Bijapur at Savanahalli was covered in Usha Kiran and Vijay Karnataka Dailies on 7 June 2006.
- Training programmes of AMEF Tiruchi and ENPs were covered in five local newspapers and also broadcasted in TV channel.
- " Innovation thy name is Venkatesh! AME Foundation helps dry land farmer to aim high". Under this title, the Vijaya Times (June 17 2006) covered the success story of a farmer who took up Fish Culture in Raichur.
- The news of field day celebration on SRI at Mahabubnagar Unit came in Vaartha, Andhra Jyothi, Andhra Bhoomi and Eenadu. Field day celebration of tomato was covered in Andhra Jyothi & Eenadu dailies.
- Pre seasonal Area Conferences of Mahabubnagar Unit were covered in local Newspapers viz., Eenadu, Andhra Jyothi and Vaartha.
- The training on Rythu Mithra Groups (RMG) conducted by Mahabubnagar Unit under the RSVY programme was covered in Eenadu, a Telugu daily
- Green Festival celebrated in Raichur Unit was published in newspapers namely, Vijaya Karnataka, Prajavani and Raichurvani.
- An article about Street plays on SA practices organized at Raichur Unit was published in Raichur Vani and Vijaya Karnataka.
- Bijapur AU's Post Season Area Conference was covered in Kannada Prabha on 19 March 2006, Prajavani and Vijaya Karnataka on 21 March 2006, and in Sandarshana on 20 March 2006.
- An article about World Environment Day celebration of Bijapur unit was published in Prajavaani, Vijaya Karnataka, Namma Bijapura, Usha Kirana, Sathyakama and Sandarshana Newspapers.
- The Green Festival in Mahabubnagar were published in Vaartha, Andhra Jyothi and Eenadu.
- An article about activities of AMEF Mahabubnagar was published in Yagnam and Praja Shakti.

- Field days (paddy, maize, cotton and castor) conducted in Mahabubnagar AU were covered in Eenadu, Andhra Jyothi, and Vaartha.
- NPM programme orientation to Velugu staff was covered in Vaartha.
- Field days (groundnut) conducted in Raichur AU were covered in Prajavani, Samyuktha Karnataka, Vijay Karnataka, Raichurvani and Sudhimoola.
- An article on animal health camp organized in Raichur AU was published in Prajavani.
- World Food Day celebrated at Raichur AU was covered in Raichurvani and Sudhimoola.
- An article on District Stakeholder Workshop organized at KVK, Raichur was published in Samyuktha Karnataka, Raichurvani, and Sudhimoola.
- An article on AMEF's activities in Bijapur and MToF Dharmapuri was published in Deccan Herald.
- World Food Celebration at Bellary AU was published in Vijaya Karnataka, Prajavaani, Kannada Prabha and Samuktha Karnataka.
- World Food Day celebrated at Tiruchi AU was cover in Thinathanthi, Dhinamalar, Dhinaboomi Dhinakaran and Malai Murasu.
- Thinathanthi, Dhinamalar Dhinaboomi, Dhinakaran, Malai Murasu, Malai Malar and Thinamani covered stakeholder Workshop at Tiruchi.
- The outcomes of Season-long FFS in Tomato conducted by Dharmapuri AU in Kottur village appeared as a box item in the Raitha Vani (the quarterly Newsletter of Farmers' Club Programme of NABARD) in July – Sept 2006 issue.
- An article entitled ' *A quiet revolution'* on the SA promotion activities of AMEF was published in the English daily Deccan Herald on 17.10.2006
- An article on Azolla cultivation was published in Annadataa.
- Two articles on Farmer Field School by Raichur staff were published in Kannada daily, '*Samyukta Karnataka'* and monthly journal 'S*irismrudhi'*
- The Valedictory Programme of Bijapur MToF was covered in various newspapers like Vijayakarnataka, Samyukta Karnataka, Kannadaprabha and Sandarshana.
- An interview of Dr. R. Dwarakinath, Chairman, AME Foundation, '*Farmers must learn to manage farming as a business'* has appeared in Deccan Herald on 27.03.2006
- The Bellary AU team tied up with the *Krishimitra* (Kannada) magazine which has 26, 000 readers and succeeded in getting a dedicated space for publishing AMEF's articles on SA published in the *Susthira Krishi Chetana* Newsletter.
- An article on FFS in Kannada E*nidu E Holadu Patashale* was contributed by Anil More and Ravindranath Reddy of Bellary AU, which was published in Adike Patrike in January 2007.
- Activities of AU Bellary in promoting SA and its efforts towards dryland sericulture and ericulture were published in two issues of Krishimitra in March 2007.

**Electronic Media**

- Bellary Unit participated in Doordarshan's unique phone-in programme on interaction between farmers and line departments. Mr. Bandeppa Kashempur, Agriculture Minister, inaugurated the programme. Farmers from all over Karnataka including three farmers from our working area participated
- Rudragouda, APO, Bijapur Unit, gave a talk on wheat cultivation methods in ETV Annadata.
- In Madanapalli area, Television channels like ETV and MCTV covered the Field day in groundnut organized at cluster village- Thuguvaripalli and celebration of World Food day at Madanapalli. The same had appeared in the local newspapers like Enadu, Andhra Jyothi and Vaartha.
- Street play on SA practices, interaction with master farmers, groundnut and onion production technologies were telecasted on Chandana TV.

- The Proceedings of the District Stakeholder Workshop in Raichur was telecasted in E-TV Kannadanadi NEWS on 7th November 2006.
- The World Food Day programme was broadcasted in the AMN TV and S-TV at Perambalur.
- The Stakeholder Workshop was broadcasted in the AMN TV and S-TV at Perambalur.

**All India Radio**

- A radio talk on Sustainable Agriculture Practices and AMEF's efforts in promoting SA, was given by a farmer from Devaranimbaragi village in Bijapur area, on 30th March 2006.
- All India Radio, Tiruchi recorded and broadcasted the experiences of AMEF in 13 episodes. Women farmers in Tiruchi shared their experiences with enthusiasm in the AIR programme, which earned the appreciation of many listeners of the programme. Both men and women farmers responded equally well to the AIR programme which was evident from their letters to the programme in charge of AIR.
- Radio talk on AMEF activities was broadcasted at AIR Raichur in February 2006. This was covered in the entire district. Farmers shared about the programme.
- A phone in programme and two of the 13 episodes of the Farm School on AIR programme on SA in drylands were aired by AIR, Tiruchi as a collaborative programme. The field days of AMEF has been covered in 2 local dailies.
- Field day at KM Halli in Bellary was audio documented by AIR Hospet.
- Mr. Suresh Talawar, a lead farmer from Bijapur AU, gave Radio talk on AMEF's SA promotion.
- A programme on Sustainable Agriculture practices was broadcasted in AIR in Raichur unit.
- The Tiruchi Unit organized the contact programme of Farm School on AIR at Sevasang School, Tiruchi on 23 September 2006. Officials from various departments such as Department of Agriculture, NABARD, TRRI, Agricultural College and Research Station (TNAU), National Pulse Research Centre (NPRC) and KVIC, shared their views in the programme. Around 200 participants from 14 districts participated and interacted with experts.
- A discussion between Dr. R. Dwarakinath and Dr. Arun Balamatti, on "Critical issues in Agricultural Development Today" was broadcasted in Gyanavaani FM Radio run by IGNOU, Bangalore on 15 December 2006.
- All India Radio, Raichur organized radio programme, in which Raichur AU and College of Agriculture staff interacted with farmers and ENP staff. Farmers and ENP staff shared their learning. Around 10000 people in the district got the information. Topics broadcasted were soil fertility improvement, crops and cropping systems, seed treatment, dry land horticulture, IPM in groundnut, FFS concept and its processes, Azolla cultivation, etc.
- AIR, Raichur broadcasted the proceedings of World Food Day and Stakeholder Workshop organized by the AU on 18 October and 12 November, respectively.
- AIR Tiruchirapalli broadcasted a one-day contact programme of Farm School on AIR in an interactive mode among participants, talents & scientists.
- AIR Tiruchirapalli broadcasted the World Food Day celebration on the regular farm broadcast programme, which covered more than 20 districts of Tamil Nadu.
- Bijapur AU staff Mr. S.N. Doni, Mr. Sathish Pattepur, Ms. N. Bhavani and Mr. Yogesh gave a Radio Talks on Azolla cultivation, Promotion of SA practices, Gender and Sustainable Agriculture and Importance of Organic Matter in Soil Health, respectively.

**Others**

- **Prajashakti**, a leading Telugu daily of Mahabubnagar district, in its Calendar for 2007, has put a box item mentioning the AMEF's FFS activities in the villages of AP.
- **V-SAT Programme:** Staff of AUs in Karnataka are participating in V-SAT programme of MYRADA for spreading SA information addressing specific issues of dry land agriculture.

# 9. OTHER PROJECTS

## 9.1 LEISA India Project (April 2006-Mar 2007)

**Production of LEISA India Magazine**

Four issues of LEISA India magazine were produced during the year 2006. The issues focused on *Towards Policy Change, Documentation for Change, Changing Farming Practices and Knowledge Building Processes*. Focused strategic efforts were made to increase the outreach through PR and advertisements. All along, continuous quality improvement of the magazine has always been the priority area. Regular efforts were made to make farmers share through the special feature "Farmers Diary". This was a period of proposals, work plans and budget preparations for seeking support for the programme beyond year 2006.

**Readership**

The total number of subscribers as of December 2006 is 8492, registering an increase of 36% in the last one year.

Of the total, 98% belong to the Indian subcontinent while 2% of the subscriptions reach outside India mainly to countries like Nepal, Bangladesh, Japan, Pakistan, Bhutan etc. Across various categories, Individuals form the major chunk with 36%, followed by NGOs, academic and research institutions with 27%, 14% and 11% respectively.

Maintenance of LEISA India database is an ongoing activity. During the last one year, about 2475 addresses have been added and 130 deleted, with a net increase by 2345. 62% of the new readers were individuals, while 14% were NGOs.

**PR and promotion efforts**

PR and promotion efforts were intensified and focused during this year more than ever before as a deliberative exploratory strategy.

Systematic efforts have been made to increase the number of subscribers.

- A special insert requesting readers to suggest new names, was enclosed in all the four issues produced during the period. There has been tremendous response and the number of readers under "individuals" category has increased from 1552 in 2005 to 3093 in 2006 registering a 100% increase.
- An advertisement on LEISA India was placed in two publications. One in "HINDU" group's prestigious publication, "Annual Survey of Agriculture", which has a country wide circulation. The second one in "Annadata", a farmer diary produced in Telugu by Eenadu group, widely used in Andhra Pradesh, mostly by farmers. .
- Participated in two regional level exhibitions – one organised by ICCOA and the other was Krishi Mela. We received requests for the magazine from around 250 persons / institutions during these two exhibitions. Contacts during workshops also enhanced the outreach.
- A database of more than 1000 NGOs working in the field of agriculture development has been prepared. Complimentary copies will be sent to them. These organizations will become a part of our mailing list once they express their interest in receiving the magazine.
- Apart from this, there have been a number of requests coming in from individuals and organizations on their own.

**PR products**

- A PR product in the form of a calendar for 2007, indicating the forthcoming themes was produced and distributed to all the subscribers in the "Knowledge Building Processes" issue.
- A few cotton T-shirts were produced with LEISA message. These were distributed to select NGOs working in the field on sustainable agriculture, to spread the message of LEISA. The T-shirt was also given to distinguished visitors to the organisation.

**Wider sharing**

For wider sharing on LEISA, a customised webpage for LEISA India has been developed, as a part of ILEIA's website (http:\\india.leisa.info). All the issues produced till now have been updated on the web. Call for articles is being updated periodically.

Also, articles were written for two issues of the LEISA magazine during this year –

Mr. KVS Prasad and Ms. B Vijayalakshmi, "Practices, platforms and policies – AME's experience", LEISA India, Dec 2005, Vol 7 (3), p. 26-27

Mr. KVS Prasad and Ms. T.M. Radha, "Building documentation and communication capacities", LEISA (global edition), March 2006, Vol 22 (1), p.10-12

**Documentation Programme**

A summary report of the Programme and a draft manual were prepared and sent to Director, ILIEA. A paper on the Documentation programme experience was written, which has been published in the global issue on documentation.

Meanwhile, the consortium partners kept the momentum of documentation activities within their organisations going. In AMEF, a capacity building workshop on Documentation and communication was organised for the entire organisation. MYRADA used the documents produced as inputs for special publications and policy proposals. LEISA Network along with AME Tiruchi organised a similar workshop with network partners and policy proposals. One of the outcomes of interactions during the workshop led to a 13-episode prime time programme on All India Radio – Tiruchi – **'Drylands bring joy'** that became extremely popular. GEAG besides organising workshops also utilised its documentation efforts to influence policy on the plight of women farmers and inadequate public extension systems.

A note was prepared seeking extension of the Documentation programme with proposed activities and sent to ILEIA for approval.

The products produced as a result of 2 year Documentation and Communication programmes, were highly appreciated and could influence policy thinking to a limited extent. In fact, one of them was shared with the honourable President of India, when our magazine layout specialist, Mr. Jayaraj, met him personally.

**LEISA India – its increasing popularity**

Feedback from various organisations and individuals are encouraging. LEISA India is being increasingly recognized and appreciated for its content and quality.

**Proposals and funding for the next phase**

As a follow up of the discussions during IEM in Senegal the previous year, a revised business plan was presented in the IEM in February 2006. LEISA India team participated actively and contributed

**Feedback**

The articles are extremely informative and bring fresh imagination in the field of agriculture. I like the features like Farmer's diary and the selection of books on various aspects of sustainable agriculture

*Rajat Kumar Mishra, IAS, MD, Rajasthan State Mines and Minerals Ltd.*

LEISA India is a useful magazine for all those working in the field of agriculture

*Mr. Gadekar, Dy. Director, CSSS, Pune*

Your issue on "Contribution of small animals" is very good. Articles of MYRADA KVK and Narayana Reddy column are really impressive

*Dr. Thirumavalavan, Asst. Professor, TANUVAS*

I am extremely fascinated with your magazine. It will help us in helping farmers to grow organically.

*Mr. Anirban Sen, Kolkata*

I happened to read your issue on "Contribution of small animals" and found it very educative. I would be happy if it sent to all the regional offices where the information can be used in field level.

*Dr. B. Sethuraman, GM, National Bank for Agriculture and Rural Development*

significantly in the preparation of conceptual framework for the joint proposals for funding with ILEIA. Formalities required for submission of proposal to DGIS were fulfilled as required by ILEIA.

During the IEM at Peru during September 2006, ILEIA informed its partners about the DGIS extending its funding for the period 2007-2010. Based on the discussions in IEM Peru meeting thereafter, a brief proposal with agreed activities within the framework of the DGIS sanctioned proposal was submitted.

Meanwhile Ms. Edith van Walsum, took over as the new Director of ILEIA from January 1, 2007. She along with Mr. Jorge Chavez-Tafur visited AMEF during 19-24 February 2007 and discussed with the LEISA India team and AMEF on the proposed activities, strategies and budgets for the period 2007-10.

Also, revised proposals for utilizing the balance funds of LEISA India consortium programme were submitted for approval.

**LEISA India team as a resource**

Editors were invited for prestigious National level policy workshops at the organizers' cost (Deccan Development Society, Anthra, RASTA). Mr. Prasad was invited as a resource person in a workshop on information sharing using ICT tools. This workshop was organized by RASTA in Kerala. The participants included representatives from NGOs as well as agencies from the State Government. The highlight was the tremendous appreciation for LEISA India magazine by one and all. The use of its contents by NGOs was heartening, for instance, SRI paddy cultivation.

**Human resources**

Part time human resource support was identified for updating the subscribers' database and bringing it online. This was also the year in which the subscriber growth was excellent owing to proactive efforts. Thus, the professional team has three persons now - Managing Editor, Associate Editor and Documentalist with one secretary to support and one part time subscription secretary. Layout designing and printing of the LEISA India and PR Products are being done with the help of consultant.

## 9.2 DST Project- Bio-Farms for Livelihood Development of Resource Poor Farmers

The project on Bio-Farms for Livelihood Development of Resource Poor Farmers, supported by Department of Science and Technology (DST) completed the second year of the project phase.

The Project is being implemented in Tiruchi Area Unit with the following objectives:

- To assess system structures and processes in bio intensive resource integrated innovative small medium farms.
- To document traditional and indigenous knowledge systems / practices.
- To develop bio-intensive model farms and / or farm clusters through participatory research based on agro eco system principles.
- To ensure nutritional and livelihood security of model resource poor small and medium farm households.
- To explore possibilities of forward linkages (including value addition) at individual and collective farm level.

The project area comes under the Semi-arid Western Ghats zone (Agro-ecological regions by the ICAR) and the western zone of Tamil Nadu (Agro-climatic zones under NARP) (Ref. Agroecological regions in India, NAARM). The project covers four villages viz. Mazhavarayanallur, Vaithyanathapuram, Permathurkudikaadu and Melaganatham of three panchayats that come under the Veppur block of Perambalur district of Tamil nadu. There are 20 participating farm families and 53 observer farm families in the project. The participating farm families belong to the small and category with an average land holding of 4 acres. The total acreage of the 20 participating farm families is 69 acres (90% are dry lands) of which the trial area constitutes 23%. Agriculture is the primary source of livelihood for all the families and dairy is a subsidiary source of income for 50 % of the participating farm families. 60 % of the farm families have their men migrate, during non-agriculture season to the neighbouring cities for masonry and truck driving. The literacy percentage is around 60% and

majority of the families belong to the backward class. Social coherence among farmers is weak and access to institutional facilities is poor.

## Methodology

The project is being implemented by integrating the technical and social aspects.

| Social dimension | Technical dimension |
|---|---|
| Village meetings in the project area are being held to enable participatory selection of participating and observer farm families for the project and group formation of the selected farmers | A workshop involving various stakeholders (R&D, extension, financial institutions, farmers) to plan their participation in the project was launched. |
| PRA with farmer groups to document existing NRM systems and problems in resource integration as regards to external inputs and under/non utilization of system residues were identified. | Soil Testing Laboratory at AME office was established. Installation of equipments to measure rainfall, temperature and RH in the project area was done. |
| Participatory assessment of existing practices with farm families was done. Participatory development of farm design through the farm planning exercise was also done. | Baseline data collection of farmers in the prescribed format was completed. Consulting experts of R&D institutions to plan interventions was also done. |
| Field days were organized to disseminate the Bio farm experiences in the project villages. | Periodic data collection, consolidation and analysis have been a regular work throughout the program activities. |
| Four Farmer Field Schools (FFS) for livelihood improvement, each with the four farmers' groups, was facilitated. | Various documentation and dissemination products were developed. |

## Brief summary of progress

### Technical Aspects

#### Agriculture

- The participating farm families took up measures for soil and water conservation. Intercropping with legumes, green manuring, crop nutrition management, composting, vermicomposting, bund planting with biomass trees were taken up by all the farmers for the soil fertility management. The sun hemp, sesbania, tephrosia and horse gram were used as green manures in the fields.
- Enriched farmyard manures were prepared as a part of bio digesters. Farmyard manures were enriched with rock phosphate, azospirillum, phosphobacteria.
- In crop management, suitable alternate varieties, quality seeds, IPM and INM methods were employed with the farmers.
- Fodder banks were created in each village by including various kinds of fodder crops such as cumbu (Bajra) Napier hybrid (CO-1, Co-3), Desmanthus, Lucerne and fodder sorghum. This was created with the aim of creating a seed bank for fodder at each village for the farmers. Apart from this dry land horticulture, azolla production on bunds and seed production was also initiated.

#### Livestock Management

- To ensure resource integration and recycling appropriate sub systems in livestock such as cattle, goat, poultry and turkey were added with the participating farmers. This had facilitated the additional income and employment generation for the farmers.

#### Aquaculture

- Pisciculture with common carp and Mali in wells was also initiated with the farmers to ensure resource flow within the system.

#### Homestead gardening

- Homestead gardening was started with all the farmers (20) with 8 vegetables as a vegetable kit, which added the nutritional security to the farm families. Tomato, brinjal, bhendi, cluster bean, lab lab, pumpkin, moringa, greens, hibiscus subdariffa and bitter gourd were used in homestead gardening.

**Energy conservation**

- Smokeless chulahs were included in the system as apart of energy conservation. The energy conservation through this system was ensured to the extent of fifty per cent compared to the traditional cooking system.

**Biomass based off-farm enterprises**

- Mushroom production as a nutritional component was initiated for additional income with the farmers.
- Value addition of maize as cattle feed was done to have nutritious feed for cattle.

**Documentation**

- The existing systems and structures at the time of project initiation were documented through PRA. They were on farming systems, cropping pattern, energy conservation and homestead gardening.
- Indigenous technical knowledge, practices on crop production, pest management, storage and livestock management were collected, documented and utilized in the project.
- In documentation, leaflets, pamphlets, folders and posters containing training materials and activity calendar were developed.
- The experience s of AMEF in the DST-BIOFARM project was shared through writings in Biofarm Newsletter. The newsletter is being circulated to 17 agencies across the country. The articles concentrated on the experiences on use of Indigenous Technical Knowledge (ITKs) in the farming system.
- One of the APOs from Tiruchi AU participated in the workshop held on Documentation of ITKs organized by DST Biofarm project at Wardha.

**Bio input lab and soil testing**

- Through the bio input lab Rhizobium, Phosphobacteria, *Trichoderma viride* were produced and supplied to the farmers. The impacts of usage of bio inputs on seed germination were studied through Farmer Field School.
- The status of soil EC, pH, organic carbon, water holding capacity and bulk density, nitrogen, phosphorous and potassium were analysed for base line year, Year I and Year II.

**Social Dimensions**

**Groups and Federation –People Participation**

- Four farmer groups were formed with 20 participating farm families and 53 observer farm families. Farmer groups initiated the savings as a group activity @Rs.50/- per head among themselves. All the four groups were recognized as Farmer clubs by NABARD. Four expert meets were conducted on livestock management and cattle feed production. A farmer federation was also formed with a purpose of collective activities such as input mobilization, marketing etc.
- Farmers Planning Workshop was organized for the participating farmers. The farmers prepared the resource flow among various components with their systems over the years. They also prepared a plan for the year 2007-08.
- Animal health camp was organized for Malavarayanallur and Melaganatham village in collaboration with veterinary department. During the camp vaccination, treatment for infections and artificial insemination was given for animals. A study tour was organized for the farmers to BAIF, Tiptur, Karnataka where around forty farmers were shown the soil and water conservation measures, bio mass generation, and group strengthening and performances in marketing.

**Farmer field schools (FFS)**

- FFS for livelihood improvement are being conducted for the farmers, where farmers learn by doing the practices in a model plot. Four such FFS were conducted in four villages at the rate of 10 sessions for each FFS.

- At the end of the FFS, a field day was conducted, in which all the non-participants of the village people were invited for sharing their experiences in FFS.

**Scaling up Efforts**

- A field day at Melganatham village was organized with the farmers, where the farmers shared their experiences of trial year to various stakeholders, other farmers from their villages.
- The group on livestock management also organized village level expert meet.
- Experiences of bio farm project is being shared periodically with the units of AME in Andhra Pradesh, Tamil Nadu and Karnataka
- The experiences and learning are being shared with the five eco-network partners in two districts.
- The experiences were also shared in the bio farm newsletter.

## 9.3 Urban Horticulture & Peri Urban Agriculture Project

**The RUAF-CFF Project** (Resource Centres on Urban Agriculture and Food Security-Cities Farming for the Future) is designed to contribute to urban poverty reduction, urban food security, improved urban environmental management, empowerment of urban farmers and participatory city governance by capacity development of local stakeholders in urban agriculture and facilitating participation in multi-stakeholder policy formation and action planning on urban agriculture, including safe reuse of urban organic wastes. The project is of 4-year duration (2005-08) and is global in scale involving 20 cities in 14 countries over 5 continents. **IWMI** (International Water Management Institute) is the South Asia and Southeast Asia Regional Coordinator of the RUAF-CFF project. Bangalore has been selected as the Second Pilot City (2006-07) and similar work is initiated in Hyderabad.
AMEF has been recognized as the focal point for facilitating activities in Bangalore. AMEF along with IWMI initiates, coordinates and supports the Multi-stakeholder process for Action planning and Policy Design (MPAP) initiative in Bangalore. The 2-year process broadly involves the following activities.

  - Establishing an enabling team for urban horticulture and peri-urban agriculture consisting of interested stakeholders.
  - Identifying select areas in the city for urban horticulture initiatives.
  - Identifying a peri-urban area for promoting ecological agriculture.
  - Organizing inception meeting, Capacity building workshops.
  - Conducting exploratory study on the status with information provided.
  - Facilitating collaborative forums, action proposals

- The inception meeting of Peri-Urban Agriculture and Urban Horticulture project was held on 6 September 2006 at Bangalore. Around 50 people representing different organizations from Government, NGOs, academia, individuals and media participated. The participants were exposed to the objectives of the project, the roles they can play as members of the enabling team.
- Follow up meeting of Peri-Urban Agriculture and Urban Horticulture was held for Bangalore on 5$^{th}$ October 2006. This meeting was held to identify the roles of participants as enablers, implementers and policy mobilisers. On 6 October similar meeting was held for the stakeholders of selected peri-urban area (Magadi).
- Multi-stakeholder Process of Action Planning and Policy Making (MPAP) workshop for the stakeholders of Bangalore Urban Horticulture was organised on 16 to 18 November 2006. The focus of the workshop was to familiarize the stakeholders about the Peri-urban Agriculture and Urban Horticulture project and its needs. A core group of interested individuals and institutions was forged. Eminent personalities and institutions volunteered to be a part of this 'enabling team' for urban horticulture.
- Subsequently, this Enabling Team had seven meetings facilitated by AMEF and IWMI between December 2006 and April 2007. As a result, TOR for Core Team members was finalised, a framework of Exploratory Study developed and further proposals discussed. Various members/institutions of the enabling team took up responsibility to contribute to various sections of the Exploratory Study.

| |
|---|
| Section I: Bangalore City Profile - Basic data of city+ Administrative data |
| Section II: Urban Horticulture Status |
| Section III: Urban Solid Waste Management Status |
| Section IV: Scope of Urban Horticulture, BMP – Policies and Plans |
| Section V: Potential Clients and their needs |

The survey and Focused Group Discussions (FGD) with select urban areas is going to be taken up.

**Initiating action at Magadi:** The following actions are planned for Magadi for Peri Urban Agriculture:

- Identifying villages
- Conducting PRAs, doing need assessment, situation analysis.
- Understand existing production, marketing and Solid Waste Management practices, institutional scenarios and social groups.
- Initiating capacity building programmes with interested farmer groups for promoting ecological agriculture.

- A stall was set up in the Horticultural Show from 19-26, January 2007 at Lalbagh by AME Foundation. The stall was managed by AME fellowship student and Master's students of Horticulture. The posters prepared for the occasion highlighted possibilities of Terrace gardens, strengthening production systems in peri-urban areas to meet growing urban population food needs, recycling urban and peri-urban wastes for productive use in agriculture. Response of the visitors was obtained through a simple questionnaire. Out of about 1000 visitors to the stall, 202 responded to the questionnaire. The analysis showed that 72% were interested in having a garden, 93 % were interested in getting trained on gardening (Kitchen, roof-top etc).

## 9.4 DBT Project - Promoting Simple Biological Options to Improve Livelihood of SC/ST Families in Kolar District

A project supported by the Department of Bio Technology (DBT) entitled "Promoting Simple Biological Options to Improve Livelihood of SC/ST Families in Kolar District" is initiated in Bangarpet taluk of Kolar district from February 2007. The project is of two-year duration (February 2007 to January 2009).

The project is being implemented with the following objectives:

- To organize awareness and training programmes for 300 SC/ST families on various biotechnology interventions viz. animal husbandry and economic rearing of livestock, nursery and fodder seed multiplication, and organic farming and bio fertilizers production.
- To improve the farming by introducing sustainable farming practices and enhance their income level.
- To utilize farm waste to improve the soil fertility.

## 9.5 SRI Promotion

Dr. Norman Uphoff, Cornell University, USA, has provided limited financial support to AMEF from TRIAD Foundation, Ithaca, New York, to popularise SRI in India. The SRI promotion activities are being intensified.

# 10. VISITORS

- Dr. Norman Uphoff, Professor, Cornell University, USA, visited Madanapalli Area Unit on 16 October 2006 and made field visit to see SRI paddy cultivating areas.
- Mr. Dominique Vijay visited Bangalore Office on 23 November 2006 to discuss on issues related to agriculture marketing.
- Dr. Chengappa and Dr. Vijayalakshmi, Professors, UAS, Bangalore, visited AMEF on 22 December to discuss with ED regarding the visit of students from IOWA University, USA as part of cross learning programme.
- Dr. Tim Hanstad from Rural Development Institute, visited AMEF on 22 December 2006 for discussion on collaboration with AMEF in Namma Bhomi Namma Thota scheme in Karnataka
- Dr. Usha Palaniswamy, Assistant Professor, University of Connecticut, USA visited AMEF on 27 December 2006 for discussing about Sustainable agriculture developments.
- Dr (Mrs.). Gail. R. Nonnecke, and Dr. (Mrs.) Manju Reddy, Professors of IOWA State University and Dr. Grace Marquis from McGill University, USA visited AMEF on 6 January 2007 to discuss about placement training for their students of International Course on Agriculture.
- South Sudan Team from CONCERN World Wide and Japan Asian Association Friendship Society (JAFS), its network members visited the MToF training centre at Bijapur and the cluster villages to understand SA activities and methodologies adopted.
- Ms. Veronique Lucas, a French Journalist who writes articles for several French farm and rural magazine visited AMEF office on 6 January and interacted about the SA promotion activities taken up by AMEF. As a follow up, she also visited the Raichur AU on 7-8 February 2007 where she interacted with Puchaladinni farmers, to understand the LEISA practices adopted by them and the impact it has made.
- Prof. Dr. Theodor Bergmann, Stuttgart University, Germany and Prof. Li Weimin, Professor at Chinese Academy of Agricultural Sciences, China visited AMEF Madanapalli AU on 26 January 2007 to see the ongoing SA activities in cluster villages and participated in the interaction meeting on 27 January at IAT, Bangalore.
- Dr. John Rogers, from ACIAR, Australia, visited AMEF, Bangalore and Area Units Raichur and Madanapalli in February 2007 to see the impact of white grub project and the present work on groundnut farming system. He indicated his interest on furthering the collaboration with AMEF.
- Dr. Francesca Mancini of FAO visited Dharmapuri Unit during 14-17 March 2007. She facilitated the FFS follow up workshop and the Sustainable Livelihood Analysis (SLA) study for assessing the impact of MToF and FFS on SHG women.
- Mr. Murthy Sudhakar, Infrasys, USA, visited Milaganatham of Perambalur in Tiruchi district to explore opportunities for energy conservation programme.
- Mrs. Edith van Walsum (former Team Leader, AME in Project Phase & now the Director, ILEIA) and Mr. Jorge Chavez-Tafur (Editor, LEISA) visited AMEF in February 2007 for assisting AMEF in preparing the proposal for new phase of LEISA India programme. She evinced keen interest in the ongoing activities of AMEF and appreciated the good work of AMEF after her interaction with AMEF staff during Moderation training.
- A team from Second Green Foundation, USA visited Tiruchi Unit to know about AMEF's intervention and impact on sustainable agriculture in dry land farming systems.

**Dr. M.S.Swaminathan visits AME Foundation**

Dr. M.S. Swaminathan, Chairman, National Commission on Farmers, Govt. of India, visited AME Foundation on 25th June 2006.

Dr. R. Dwarakinath, Chairman, AMEF shared the Foundation's vision in addressing dryland farming issues. Dr. Arun Balamatti, Executive Director, AMEF outlined AMEF's activities. Mr. KVS Prasad shared information on LEISA India programme.

Dr. Swaminathan appreciated the meaningful work of AMEF in promoting LEISA. He was impressed with AMEF's Fellowship programme in training young graduates in Sustainable Agriculture, which would play in important role in spreading LEISA.

# 11. STAFF POSITION

## Staff position as on 31 March 2007

| Sl. No. | Name | Present Designation |
|---|---|---|
| **CU, BANGALORE** | | |
| 1 | Arun Balamatti | Executive Director |
| 2 | KVS Prasad | CPO-Doc.& Dissemination cum M.E. |
| 3 | Rajendra Hegde | CPO-Programme Co-ordination |
| 4 | G. Ravikumar | CPO-Training |
| 5 | TM Radha | Associate Editor-LEISA India |
| 6 | S.G. Shashikala | Associate CPO-GEC |
| 7 | Devi KA | Secretary - Programme |
| 8 | Asha R | Secretary - General |
| 9 | Adisesha Balaji NR | Asst. Administrative Officer |
| 10 | Shobha Maiya | Secretary - Information & Doc. |
| 11 | Vijayalakshmi S | Secretary - Accounts |
| 12 | Ramu K | Driver |
| 13 | Gopalakrishnan R | Driver |
| 14 | Govindaraju BT | Driver |
| 15 | Lalitha N | Cook cum Cleaner |
| 16 | Chikkanna | Attendant |
| 17 | Kantha A | Cleaner cum Cook |
| 18 | Ravi M | Attendant |
| **MADANAPALLI** | | |
| 19 | M. Ram Prasad | Acting Area Unit Co-ordinator |
| 20 | S.S.N. Malleswara Rao | APO-IFS/NRM |
| 21 | G.Swarupa Rani | APO-IFS/IPM |
| 22 | N.R. Hemalatha | APO-IFS/NRM |
| 23 | S Kavitha | Secretary cum Accountant |
| 24 | N Ravindranath | Driver |
| 25 | V Ranga Raju | Attendant |
| 26 | Basavaraj Avati | Driver (Temporary) |
| **MAHABUBNAGAR** | | |
| 27 | M. Nagana Gouda | Area Unit Co-ordinator |
| 28 | Ranganatha Babu | APO-GEC |
| 29 | Anil Kumar | APO-IFS/NRM |
| 30 | C. Nageswara Rao | APO-IFS/IPM |
| 31 | J.B.Raghavendra | Secretary cum Accountant |
| 32 | N.Ramadasa Reddy | Driver |
| 33 | D.C. Kullayappa | Attendant |
| **RAICHUR** | | |
| 34 | Shyamrao S. Kulkarni | Area Unit Co-ordinator |
| 35 | B K Suresh | APO-IFS/IPM |
| 36 | B.C.Kolhar | APO-IFS/NRM |
| 37 | Manohar Gouda S | APO-IFS/NRM |
| 38 | Sangeeta R. Patil | APO-GEC |
| 39 | M.K. Veena | APO-IFS/NRM |
| 40 | M Srividya | Secretary cum Accountant |
| 41 | Virupakshappa S Kelur | Driver |
| 42 | Sharanappa M Gulagi | Attendant |
| **BELLARY** | | |
| 43 | Ravindranath Reddy | Acting Area Unit Co-ordinator |
| 44 | Anil More | APO-IFS/NRM |
| 45 | Chandrashekar S Kallimani | APO-IPM |
| 46 | Megeri Karibasappa | APO-IFS/IPM |
| 47 | Sanjeev N. Joshi | APO-IFS/IPM |

| | | |
|---|---|---|
| 48 | S. Nagaraja | APO-IFS/NRM |
| 49 | Prasanna V | Secretary cum Accountant |
| 50 | Manjunath B | Driver |
| 51 | Babu | Attendant |
| **BIJAPUR** | | |
| 52 | S S Madiwalar | Area Unit Co-ordinator |
| 53 | Rudragouda | APO-IFS/NRM |
| 54 | G.H.Yogesh | APO-IFS/NRM |
| 55 | Shreesail N. Doni | APO-IFS/IPM |
| 56 | Sateesh V. Pattepur | APO-IFS/NRM |
| 57 | N. Bhavani | APO-IFS/GEC |
| 58 | Nandakishore AR | Secretary-cum-Accountant |
| 59 | B S Dyapur | Attendant |
| 60 | Sadoba Maruti Kanse | Driver |
| **TIRUCHI** | | |
| 61 | J. Krishnan | Acting Area Unit Co-ordinator |
| 62 | M. Lawrence | APO-IFS/NRM |
| 63 | K. Gandhimathi | APO-IFS/NRM |
| 64 | M.R. Kalaivani | APO-IFS/IPM |
| 65 | N. Lalitha | APO-IFS/NRM |
| 66 | V. Menaka | APO-IFS/IPM |
| 67 | R. Kuttimani | APO-GEC |
| 68 | G. Hemalatha | Secretary cum Accountant |
| 69 | G. Balaraman | Driver |
| 70 | RL Pouline Selvi | Attendant |
| **DHARMAPURI** | | |
| 71 | J. Diraviam | Area Unit Co-ordinator |
| 72 | I.Jaisankar | APO-IFS/NRM |
| 73 | K.R. Chandra | APO-IFS/NRM |
| 74 | G. Mathumalar | APO-IFS/GEC |
| 75 | G. Parvathi | APO-IFS/IPM |
| 76 | Jayasundara Naidu | Secretary cum Accountant |
| 77 | B.Kandasamy | Driver |
| 78 | Jawahar Krishnaraj | Attendant |

# 12. BUDGET

## 12.1 Sources of funds

During the reporting period, AME Foundation received financial support for specific programmes as given below.

**FAO:** The AMEF-FAO partnership project on "Promoting Livelihood Improvements in Dryland Farming on the Deccan Plateau" commenced from 11 August 2004. However, the programme implementation started from January 2005. An amount of Rs. 54.30 lakhs was carried forward from the year 2005-06 and Rs.547.61 lakhs was received during the year. The total available during the year was 601.91 lakhs.

**ILEIA**: AMEF and ILEIA, The Netherlands, continued the collaborative project to produce and distribute the Indian edition of the LEISA magazine on Low External Input and Sustainable Agriculture on a quarterly basis. An amount of Rs. 36.87 was available for different activities during the year.

**LEISA India Consortium**: The Consortium supported different activities through AMEF with an amount of Rs.13.11 lakhs during the year.

**DST:** The project supported by DST (Bio farms for livelihood development of small and marginal dry land farmers) was implemented in two villages of the Perambalur district, Tamil Nadu. The outlay for the project activities was Rs. 5.65 lakhs in the year.

**IWMI:** AMEF is collaborating with IWMI, Hyderabad, for promoting urban horticulture and peri-urban agriculture with Bangalore as the focal city. An amount of Rs. 4.33 lakhs was received for various planned activities during the financial year.

**TRIAD Foundation –** TRIAD Foundation, New York has supported AMEF for promoting SRI Paddy concept with an amount of Rs. 0.57 lakhs.

## 12.2 Budget utilization

The Foundation has completed fifth year of accounting. The budget utilisation under respective projects during the year is given below:

***Statement of budget, expenditure and funds received – 2006 - 07*** *(Amount in Rs.)*

| Projects | Opening balance | Funds received | Total | Expenditure | % Expenditure | Ending Balance |
|---|---|---|---|---|---|---|
| ILEIA | 350,254 | 3,336,609 | 3,686,863 | 2,651,133 | 71.9 | 1,035,730 |
| LEISA India Consortium | 1,261,605 | 49,899 | 1,311,504 | 161,774 | 12.33 | 1,149,730 |
| FAO | 5,429,746 | 54,760,995 | 60,190,741 | 40,992,063 | 68.1 | 19,198,678 |
| DST | 257,447 | 307,850 | 565,297 | 356,353 | 63.04 | 208,944 |
| DBT | | 1,265,000 | 1,265,000 | | | 1,265,000 |
| CEDOK | | 70,832 | 70,832 | 70,832 | | - |
| TRIAD Foundation | | 56,937 | 56,937 | 5,000 | 8.78 | 51,937 |
| IWMI | | 433,159 | 433,159 | 96,204 | 22.2 | 336,955 |
| AMEF own funds | 1,164,050 | 928,137 | 2,092,187 | 117,935 | 5.64 | 1,974,252 |
| **Total** | **8,463,102** | **61,209,418** | **69,672,520** | **44,451,294** | | **25,221,226** |

The annual income and expenditure account for the year ended March 31 2007 was to the tune of Rs. 4.62 crores, which is about 15 per cent more as compared to Rs. 4.00 crores achieved during the previous year. In comparison with the year 2005-06, the utilisation was considerably high on budget heads such as capacity building of NGO and NGO networks (265%), support to NGOs for programme implementation (41%), SA Fellowship programme (111%), and production of publications/ manuals/ video (150 %).

## Annexure 1

***Rainfall in AMEF working areas in 2006-07***

| Months | Madanapalli | | | Mahabubnagar | | | Raichur | | | Bellary | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Normal Rainfall (mm) | Actual Rainfall (mm) | No. of rainy days | Normal Rainfall (mm) | Actual Rainfall (mm) | No. of rainy days | Normal Rainfall (mm) | Actual Rainfall (mm) | No. of rainy days | Normal Rainfall (mm) | Actual Rainfall (mm) | No. of rainy days |
| Apr 06 | 15.80 | 7.34 | 2.25 | 6.50 | 39.60 | 0.50 | 17.20 | 9.00 | 1.00 | 9.00 | 42.20 | 2.00 |
| May 06 | 60.50 | 57.80 | 11.38 | 22.90 | 106.20 | 4.50 | 34.40 | 46.00 | 4.00 | 33.00 | 204.00 | 7.00 |
| Jun 06 | 81.60 | 115.00 | 13.38 | 71.20 | 164.00 | 8.00 | 75.50 | 63.80 | 6.00 | 45.00 | 31.00 | 2.00 |
| Jul 06 | 64.53 | 16.70 | 2.25 | 146.60 | 62.58 | 6.60 | 108.10 | 25.60 | 2.00 | 52.50 | 15.10 | 2.00 |
| Aug 06 | 86.45 | 81.56 | 4.00 | 121.00 | 53.28 | 6.50 | 112.80 | 16.20 | 3.00 | 68.50 | 12.00 | 2.00 |
| Sep 06 | 114.70 | 107.80 | 6.88 | 107.00 | 166.43 | 11.25 | 152.10 | 197.50 | 8.00 | 134.30 | 52.90 | 3.00 |
| Oct 06 | 143.00 | 162.70 | 10.00 | 90.30 | 14.15 | 1.20 | 85.90 | 16.80 | 2.00 | 109.50 | 31.95 | 1.50 |
| Nov 06 | 108.00 | 48.00 | 3.00 | 25.70 | 35.82 | 2.75 | 22.80 | 24.00 | 2.00 | 17.30 | 105.30 | 2.00 |
| Dec 06 | 41.00 | 16.00 | 3.00 | 6.00 | 0.00 | 0.00 | 5.50 | 0.00 | 0.00 | 10.85 | 0.00 | 0.00 |
| Jan 07 | 9.13 | 0.00 | 0.00 | 1.50 | 0.00 | 0.00 | 1.60 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Feb 07 | 33.90 | 0.00 | 0.00 | 1.90 | 0.00 | 0.00 | 2.70 | 0.00 | 0.00 | 4.00 | 0.00 | 0.00 |
| Mar 07 | 43.60 | 0.00 | 0.00 | 4.10 | 0.00 | 0.00 | 1.80 | 0.00 | 0.00 | 2.34 | 0.00 | 0.00 |
| **Total** | **802.21** | **612.9** | **56.14** | **604.70** | **642.06** | **41.3** | **620.40** | **398.9** | **28.0** | **487.29** | **494.45** | **21.5** |

| Months | Bijapur | | | Tiruchi | | | Dharmapuri | | | Kolar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apr 06 | 19.00 | 9.80 | 1.00 | 42.90 | 10.20 | 2.00 | 47.70 | 0.00 | 0.00 | 34.30 | 7.00 | 0.00 |
| May 06 | 35.00 | 83.60 | 8.00 | 77.00 | 24.70 | 2.00 | 30.70 | 215.00 | 5.00 | 36.80 | 78.90 | 3.50 |
| Jun 06 | 78.00 | 124.80 | 7.00 | 30.30 | 10.50 | 4.00 | 103.20 | 51.00 | 3.00 | 97.50 | 226.80 | 7.50 |
| Jul 06 | 79.00 | 32.03 | 4.00 | 37.40 | 0.12 | 0.00 | 30.00 | 71.90 | 2.00 | 71.45 | 17.85 | 1.50 |
| Aug 06 | 77.00 | 21.73 | 3.00 | 91.60 | 26.25 | 6.00 | 39.00 | 147.50 | 3.00 | 103.45 | 117.40 | 3.50 |
| Sep 06 | 157.00 | 189.00 | 12.00 | 114.00 | 31.20 | 7.00 | 69.00 | 114.20 | 3.00 | 138.25 | 52.20 | 2.50 |
| Oct 06 | 83.00 | 55.15 | 4.00 | 183.10 | 72.00 | 8.00 | 174.80 | 245.00 | 9.00 | 139.15 | 82.75 | 2.50 |
| Nov 06 | 28.00 | 0.00 | 0.00 | 147.10 | 0.00 | 0.00 | 88.90 | 41.00 | 8.00 | 83.80 | 75.35 | 6.00 |
| Dec 06 | 8.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 39.70 | 0.00 | 0.00 | 26.20 | 19.50 | 1.50 |
| Jan 07 | 3.00 | 0.00 | 0.00 | 28.10 | 0.00 | 0.00 | 7.90 | 0.00 | 0.00 | 10.50 | 0.00 | 0.00 |
| Feb 07 | 4.00 | 0.00 | 0.00 | 12.40 | 0.00 | 0.00 | 6.10 | 0.00 | 0.00 | 6.40 | 0.00 | 0.00 |
| Mar 07 | 6.00 | 0.00 | 0.00 | 14.10 | 0.00 | 0.00 | 12.80 | 0.00 | 0.00 | 9.80 | 0.00 | 0.00 |
| **Total** | **577.00** | **516.11** | **39.0** | **840.00** | **174.97** | **29.0** | **649.80** | **885.6** | **33.0** | **757.60** | **677.75** | **28.5** |

** Average of rainfall in the operational area*

## Annexure 2

***Table-1: Number of farmers practicing in-situ soil and rain water management activities in cluster villages***

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=81* | 2006 N=98 | 2005 N=53 | 2006 N=73 | 2005 N=87 | 2006 N=107 | 2005 N=220 | 2006 N=201 | 2005 N=79 | 2006 N=119 | 2005 N=166 | 2006 N=152 | 2005 N=40 | 2006 N=40 | 2005 N=726 | 2006 N=790 |
| A.1 | Fall / early ploughing | 81 | 97 | 55 | 73 | 31 | 107 | 200 | 201 | 75 | 94 | 166 | 152 | 40 | 40 | **648** | **764** |
| A.2 | Land preparation across the slope | 81 | 97 | 55 | 73 | 58 | 107 | 136 | 116 | 75 | 109 | 166 | 111 | 40 | 40 | **611** | **653** |
| A.3 | Bunding and bund repair | 10 | 78 | 55 | 73 | 34 | 84 | 200 | 5 | 79 | 4 | 93 | 140 | 11 | 34 | **482** | **418** |
| A.4 | Small section / interception bunds | | | 5 | 20 | 20 | 16 | | | 0 | 1 | 30 | 4 | 11 | 13 | **66** | **54** |
| A.5 | Ridges and furrows | | | | | 50 | 24 | | | 0 | 3 | 0 | 0 | | 13 | **50** | **40** |
| A.6 | Graded Furrows | | | | | | | | | | | 30 | 50 | | | **30** | **50** |
| A.7 | Compartment Bunding | | | | 29 | 10 | 1 | | | 2 | 13 | 30 | | | 7 | **42** | **50** |
| A.8 | Gully Plugging | | | | | 7 | 22 | | | | | | | | | **7** | **22** |
| A.9 | Farm ponds | | | | | 5 | 3 | | 1 | 2 | 1 | | | 4 | | **11** | **5** |
| A.10 | Drip Irrigation | | | | | | 43 | | | 17 | | | | | | **17** | **43** |
| A.11 | Protective water management practices (drum kits) | | | 5 | 3 | 34 | 5 | | | 44 | | | | | 2 | **83** | **10** |
| A.12 | Dead furrows | 16 | | 20 | | 5 | 8 | 3 | 39 | | | 10 | 7 | | | **54** | **54** |
| A.13 | Crescent Bunds | | | | | | 13 | | | | 25 | | | | | | **38** |
| A.14 | Ring Trench with biomass addition | | | | 1 | | | | 7 | | | | | | | | **8** |
| A.15 | Live fencing (Agave) | | | | | | | | | | | | | | | | |
| A.16 | Mulching | | 16 | | | | | | 3 | 10 | 47 | | | | 2 | **10** | **68** |
| A.17 | Intercultivation | | | | | | 91 | | 173 | 70 | 108 | | | | | **70** | **372** |
| A.18 | Border trenches | | | | | | 24 | 6 | 4 | 8 | 8 | | 20 | | 1 | **6** | **57** |

***Table-2:** Number of farmers practicing soil fertility improvement activities in cluster villages*

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=81* | 2006 N=98 | 2005 N=53 | 2006 N=73 | 2005 N=87 | 2006 N=107 | 2005 N=220 | 2006 N=201 | 2005 N=79 | 2006 N=119 | 2005 N=166 | 2006 N=152 | 2005 N=40 | 2006 N=40 | 2005 N=726 | 2006 N=790 |
| B.1 | Tank silt application | 6 | | 15 | 5 | 5 | 2 | 47 | 31 | 19 | | 4 | 11 | | | **96** | **49** |
| B.2 | Balanced Nutrient application | 10 | | 15 | 71 | 92 | | 236 | | | | 166 | 81 | | 40 | **519** | **192** |
| B.3 | Use of bio fertilizers | 104 | 78 | 32 | 11 | 105 | 107 | 137 | 148 | 83 | 109 | 135 | 73 | 39 | 40 | **635** | **566** |
| B.4 | Enriched FYM application | | | 2 | 3 | 5 | 22 | | 47 | | 15 | 135 | 63 | | 13 | **142** | **163** |
| B.5 | Composting | 9 | 2 | 0 | 24 | 87 | 67 | 7 | 68 | 8 | 4 | 120 | 151 | 15 | 23 | **246** | **339** |
| B.6 | Vermicomposting | 5 | 1 | 11 | 14 | 45 | 71 | 34 | 70 | 31 | 9 | | 6 | | | **126** | **171** |
| B.7 | Legumes as inter/border, mixed crops | 81 | 78 | 10 | 50 | 72 | 90 | 200 | 122 | 89 | 109 | 132 | 110 | 40 | 40 | **624** | **599** |
| B.8 | In-situ green manuring | 1 | | | 33 | 5 | 7 | | 19 | | | 51 | 88 | | 1 | **57** | **148** |
| B.9 | Vermi wash | | | | | | | | | | | | | | | | |
| B.10 | Sheep penning | | | | | | 59 | | 12 | | | | | | | | **71** |
| B.11 | SSP, Gypsum application | | | | | | 0 | | 7 | | | | | | | | **7** |
| B.12 | FYM application | | 76 | | 73 | | 60 | | 152 | | 69 | | | | 1 | | **431** |
| B.13 | Biogas slurry application | | | | | | | | | | | 3 | 11 | | | **3** | **11** |
| B.14 | Jeevamrutha application | | | | 1 | | | | 9 | | | | | | | | **10** |

***Table-3:** Number of farmers adopting improved crop production practices in cluster villages*

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=81* | 2006 N=98 | 2005 N=53 | 2006 N=73 | 2005 N=87 | 2006 N=107 | 2005 N=220 | 2006 N=201 | 2005 N=79 | 2006 N=119 | 2005 N=166 | 2006 N=152 | 2005 N=40 | 2006 N=40 | 2005 N=726 | 2006 N=790 |
| C.1 | Use of good quality seeds | 81 | 97 | 53 | 136 | 82 | 85 | 120 | 125 | 63 | 109 | 151 | 126 | 39 | 18 | **589** | **696** |
| C.2 | Maintaining optimum plant density | 65 | | 45 | | 76 | 19 | 44 | 126 | | | 100 | 126 | 39 | 40 | **369** | **311** |
| C.3 | IPM - using alt. to pesticides- bio agents/ botanicals | 79 | 99 | 35 | 144 | 85 | 103 | 145 | 149 | 6 | 92 | 135 | 73 | 39 | 12 | **524** | **672** |
| C.4 | Varietal trials | | 20 | 3 | | 55 | 21 | 2 | 13 | 26 | 12 | 80 | 13 | 39 | 14 | **205** | **93** |
| C.5 | Use of improved varieties | 73 | 17 | 43 | | 65 | 3 | 24 | 18 | 54 | 18 | 100 | 24 | 39 | 6 | **398** | **86** |
| C.6 | Seed production / multiplication | 7 | 13 | | 10 | 5 | 2 | 5 | 9 | 1 | 6 | 20 | 90 | 0 | | **38** | **130** |
| C.7 | Promoting crop rotation | | | 20 | 17 | 82 | 88 | | 42 | 0 | 53 | 10 | 10 | 0 | | **112** | **210** |
| C.8 | Promoting alternative and sequential crops | | | | | 0 | 4 | | | | 7 | | 1 | 39 | | **39** | **12** |
| C.9 | Introduction of efficient cultivation implements | | | | 19 | 1 | | | 35 | 4 | | | | | 5 | **5** | **59** |
| C.10 | SRI method of rice cultivation | 6 | 4 | 17 | 10 | 0 | | 2 | 3 | | | | | | | **25** | **17** |
| C.11 | Seed treatment with local resources | | | 55 | 1 | 12 | | | 7 | 38 | | | | | | **105** | **8** |
| C.12 | Introduction of minor millets | | | | | 10 | | | 10 | | | | | | 1 | **10** | **11** |
| C.13 | Strip cropping | | | | | | 5 | 8 | 20 | 2 | 4 | | | | | **10** | **29** |
| C.14 | Cocoon production Technologies (Sericulture) | | | | | | | | 91 | | | | | | | | **91** |
| C.15 | Mixed cropping | | | | 22 | | 106 | | 109 | | 45 | | | | | | **282** |
| C.16 | Catch crops | | | | | | 4 | | 11 | | 73 | | | | | | **88** |
| C.17 | Others (Vegetable crops for gap filling) | | | | | | 63 | | 5 | | | | | | | | **68** |

***Table-4:** Number of farmers involved in plant biomass generation programmes in cluster villages*

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=81* | 2006 N=98 | 2005 N=53 | 2006 N=73 | 2005 N=87 | 2006 N=107 | 2005 N=220 | 2006 N=201 | 2005 N=79 | 2006 N=119 | 2005 N=166 | 2006 N=180 | 2005 N=40 | 2006 N=40 | 2005 N=726 | 2006 N=790 |
| D.1 | Bund plantation for bio-mass production | 60 | 88 | 12 | 52 | 61 | 76 | 220 | 46 | 75 | 111 | 100 | 58 | 39 | | **567** | **431** |
| D.2 | Recycling – Green manure | | | | 50 | 2 | | | 56 | | | 44 | 10 | | | **46** | **116** |
| D.3 | Nursery Raising | 1 | 4 | | 8 | 30 | 1 | | | | | | | 2 | | **33** | **13** |
| D.4 | Fodder production | | 3 | | | 102 | 15 | 220 | 8 | 75 | 110 | 30 | 60 | | | **427** | **196** |
| D.5 | Biomass generation on waste lands | | | | | | 1 | | 5 | | 1 | | | | | | **7** |
| D.6 | Azolla promotion | 15 | 29 | | 10 | | 31 | | 39 | | 9 | | 37 | | 3 | **15** | **158** |
| D.7 | Others - seed dibbling | | | | | | | | 6 | | 106 | | | | | | **112** |

***Table-5:** Number of farmers involved in income generation programmes in cluster villages*

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=81* | 2006 N=98 | 2005 N=53 | 2006 N=73 | 2005 N=87 | 2006 N=107 | 2005 N=220 | 2006 N=201 | 2005 N=79 | 2006 N=119 | 2005 N=166 | 2006 N=180 | 2005 N=40 | 2006 N=40 | 2005 N=726 | 2006 N=790 |
| E.1 | Dairy/goat/sheep rearing | | | | | | 77 | | 5 | | | | 11 | | | | **93** |
| E.2 | Nursery Raising (Mulberry, biomass species) | | 3 | | 4 | | | | 12 | | | | | | | | **19** |
| E.3 | Poultry | | | | | | 44 | | | | | | | | | | **44** |
| E.4 | Dry Land Horticulture (DLH) | | | | | 42 | 8 | | | | 2 | | | | | **42** | **10** |
| E.5 | Kitchen Garden/Vegetable garden | | 18 | 21 | 47 | | 89 | 34 | 48 | 22 | 2 | 99 | 150 | | | **176** | **354** |
| E.6 | Others | | | | | | | | | | | | | | | | |
| | Neem seed powder production | | | | 20 | | | | | | | | | | | | **20** |
| | Pisiculture | | | | | | 2 | | 15 | | | | | | | | **17** |
| | Ericulture | | | | | | | | | | | | 10 | | | **10** | **10** |
| | Smokeless chullahs | | | | | | | | | | | | 8 | | | | **8** |

***Table-6:** Number of farmers practicing In-situ soil and rainwater management activities in ENP villages*

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | Kolar | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=492* | 2006 N=564 | 2005 N=436 | 2006 N=685 | 2005 N=434 | 2006 N=523 | 2005 N=160 | 2006 N=300 | 2005 N=234 | 2006 N=352 | 2006 N=320 | 2005 N=483 | 2006 N=554 | 2005 N=240 | 2006 N=891 | 2005 N=2479 | 2006 N=4189 |
| A.1 | Fall / early ploughing | 332 | 356 | 178 | 390 | 139 | 403 | 116 | 300 | 190 | 315 | 84 | 483 | 554 | | 320 | **1438** | **2722** |
| A.2 | Land preparation across the slope | 332 | 205 | 140 | 518 | 141 | 405 | 160 | 204 | 151 | 579 | 190 | 450 | 554 | | 214 | **1374** | **2869** |
| A.3 | Bunding and bund repair | 83 | 514 | 178 | 325 | 139 | 118 | 160 | 12 | 158 | 61 | 1 | 363 | 50 | | 92 | **1081** | **1173** |
| A.4 | Small section / interception bunds | | 356 | 20 | 84 | 69 | 15 | | | | | | 52 | | | 24 | **141** | **479** |
| A.5 | Ridges and furrows | | 155 | | | 67 | 76 | | | 36 | 39 | 2 | | | | | **103** | **272** |
| A.6 | Graded Furrows | | | 5 | | | | | | | | 3 | 110 | 167 | | | **115** | **170** |
| A.7 | Compartment Bunding | | | | 90 | | 13 | | | 10 | 42 | 4 | 140 | | | 109 | **150** | **258** |
| A.8 | Gully Plugging | | | | | 20 | 35 | | 8 | 77 | | 2 | | | | | **97** | **45** |
| A.9 | Farm ponds | | | 6 | | | | | | 3 | | | | | 4 | | **13** | |
| A.10 | Drip Irrigation | | | | 1 | | | | | 50 | | 4 | | | | | **50** | **5** |
| A.11 | Protective water management practices (drum kits) | | | 20 | 24 | | 3 | 2 | | 127 | | 3 | | | | | **149** | **30** |
| A.12 | Dead furrows | | 6 | 20 | | | 139 | 2 | 62 | | | 16 | 22 | | | | **44** | **223** |
| A.13 | Crescent Bunds | | | | | | | | | | 11 | | | | | | | **11** |
| A.14 | Ring trench with biomass addition | | | | | | | | | | 27 | | | | | | | **27** |
| A.15 | Live fencing (Agave) | | | | | | | | | | | | | | | | | |
| A.16 | Mulching | | 8 | | | | | | | | 1 | | | | | | | **9** |
| A.17 | Intercultivation | | | | | | 224 | | 300 | 59 | 222 | 248 | | | | | **59** | **994** |
| A.18 | Border trenches | | 12 | | 8 | 50 | 3 | 2 | 3 | | 45 | | | | | 99 | **52** | **170** |

***Table-7:** Number of farmers practicing soil fertility improvement activities in ENP villages*

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | Kolar | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=492* | 2006 N=564 | 2005 N=436 | 2006 N=685 | 2005 N=434 | 2006 N=523 | 2005 N=160 | 2006 N=300 | 2005 N=234 | 2006 N=352 | 2006 N=320 | 2005 N=483 | 2006 N=554 | 2005 N=240 | 2006 N=891 | 2005 N=2479 | 2006 N=4189 |
| B.1 | Tank silt application | 34 | | 42 | 23 | 10 | 12 | 0 | 87 | 25 | | | 4 | 82 | | | **115** | **204** |
| B.2 | Balanced Nutrient application | | | 39 | 147 | 162 | | 80 | | 80 | | | 483 | 554 | | 120 | **844** | **821** |
| B.3 | Use of bio fertilizers | 441 | 236 | 83 | 93 | 287 | 240 | 80 | 235 | 133 | 150 | 249 | 475 | 536 | | 64 | **1499** | **1803** |
| B.4 | Enriched FYM application | | | 15 | 85 | 6 | 40 | 0 | | 40 | 82 | 226 | 475 | 536 | | 72 | **536** | **1041** |
| B.5 | Composting | 176 | 76 | 7 | 139 | 143 | 251 | | 122 | 33 | 58 | | 404 | 400 | | 299 | **763** | **1345** |
| B.6 | Vermicomposting | 63 | 7 | 71 | 124 | 67 | 295 | 30 | 149 | 85 | 46 | 7 | 38 | 45 | | 154 | **354** | **827** |
| B.7 | Legumes as inter/border, mixed crops | 492 | | 120 | 320 | 276 | 143 | 80 | 290 | 65 | 234 | 250 | 389 | 468 | | 442 | **1422** | **2147** |
| B.8 | In-situ green manuring | 6 | | | 13 | 12 | 6 | | | | | 7 | 216 | 351 | | 27 | **234** | **404** |
| B.9 | Vermi wash | | 70 | | | | | | 25 | | 1 | | | | | | | **96** |
| B.10 | Sheep penning | | | | 25 | | 85 | | 18 | | 23 | | | 99 | | | | **250** |
| B.11 | SSP, Gypsum application | | 204 | | 9 | | 32 | | 28 | | | 10 | | | | | | **283** |
| B.12 | FYM application | | 20 | | 330 | | 138 | | 239 | | 15 | 191 | | 519 | | 7 | | **1459** |
| B.13 | Biogas slurry | | | | | | | | | | | | | | | | | |
| B.14 | Jeevamruth/ Panchagavyaa | | 175 | | | | 150 | | 3 | 2 | 9 | | | | | | | **337** |
| B.15 | Others | | | | | | | | | | | | | | | | | |
| 1 | Organic Urea (cow urine + sand + soil) | | | | | | 14 | | | | | | | | | | | **14** |
| 2 | Incorporation of crop residues | | | | | | | | | | | | | 251 | | | | **251** |

***Table-8:** Number of farmers adopting improved crop production practices in ENP villages*

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | Kolar | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=492* | 2006 N=564 | 2005 N=436 | 2006 N=685 | 2005 N=434 | 2006 N=523 | 2005 N=160 | 2006 N=300 | 2005 N=234 | 2006 N=352 | 2006 N=320 | 2005 N=483 | 2006 N=554 | 2005 N=240 | 2006 N=891 | 2005 N=2479 | 2006 N=4189 |
| C.1 | Use of good quality seeds | 492 | 78 | 258 | 579 | 381 | 55 | 87 | 216 | 137 | 787 | 258 | 440 | 554 | | 226 | **1795** | **2753** |
| C.2 | Maintaining optimum plant density | 225 | | 150 | 10 | 217 | 12 | 45 | 200 | 1 | | 61 | 340 | 554 | | 50 | **978** | **887** |
| C.3 | IPM - using alt. to pesticides- bio agents/ botanicals | 401 | 107 | 184 | 685 | 228 | 165 | 80 | 205 | 84 | 178 | 18 | 400 | 531 | | 45 | **1377** | **1934** |
| C.4 | Varietal trials | 2 | 23 | 18 | 1 | 129 | 33 | 3 | 8 | 47 | 22 | 7 | 12 | 70 | | | **211** | **164** |
| C.5 | Use of improved varieties | 298 | 70 | 104 | | 186 | 131 | 4 | 6 | 126 | 192 | 215 | 40 | 70 | | 45 | **758** | **729** |
| C.6 | Seed production / multiplication | 27 | 45 | 8 | | 34 | 45 | 3 | 8 | | | 1 | 5 | 353 | | | **77** | **452** |
| C.7 | Promoting crop rotation | | | 90 | 49 | 189 | 215 | | 50 | | | 26 | 50 | 133 | | | **329** | **473** |
| C.8 | Promoting alternative and sequential crops | | 27 | | | | 75 | | | | | | | 32 | | | | **134** |
| C.9 | Introduction of efficient cultivation implements | | | 12 | 25 | 1 | | | 31 | 10 | 3 | 4 | | | | 20 | **23** | **83** |
| C.10 | SRI method of rice cultivation | 8 | 12 | 25 | 33 | | | | 2 | | | 3 | 3 | 21 | | | **36** | **71** |
| C.11 | Seed treatment with local resources | | 110 | 78 | | 32 | 45 | | | 63 | 224 | 2 | | | | 560 | **173** | **941** |
| C.12 | Introduction of minor millets | | 11 | | | | 24 | | | | 12 | | | | | | | **47** |
| C.13 | Strip cropping | | | | | 1 | 17 | 20 | 76 | 5 | 47 | | | | | | **26** | **140** |
| C.14 | Cocoon production Technologies | | | | 2 | | | | | | | | | | | | | **2** |
| C.15 | Mixed cropping | | | | | | 150 | | 290 | | 47 | | | | | | | **487** |
| C.16 | Catch crops | | | | | | | | 45 | | 54 | | | | | | | **99** |
| C.17 | Others (Vegetable for gap filling) | | | | | | 28 | | | | | | | | | | | **28** |

***Table-9:** Number of farmers involved in plant biomass generation programmes in ENP villages*

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | Kolar | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=492* | 2006 N=564 | 2005 N=436 | 2006 N=685 | 2005 N=434 | 2006 N=523 | 2005 N=160 | 2006 N=300 | 2005 N=234 | 2006 N=352 | 2006 N=320 | 2005 N=483 | 2006 N=554 | 2005 N=240 | 2006 N=891 | 2005 N=2479 | 2006 N=4189 |
| D.1 | Bund plantation for bio-mass production | 270 | 240 | 127 | 414 | 235 | 107 | 80 | 32 | 235 | 352 | | 250 | 486 | | 55 | **1197** | **1686** |
| D.2 | Recycling – Green manure | | | | 2 | | | | 110 | | | | 211 | | | | **211** | **112** |
| D.3 | Nursery Raising | | 2 | | | 85 | | | 135 | | | | | | | 40 | **85** | **177** |
| D.4 | Fodder production | 25 | | | | 127 | 52 | 80 | | 229 | | | 100 | 161 | | | **561** | **213** |
| D.5 | Biomass generation on waste lands | | | | | | | | 58 | | | | | | | | | **58** |
| D.6 | Azolla promotion | 45 | 10 | | 101 | | 67 | | 127 | | | 34 | | 201 | | 265 | **45** | **805** |

***Table-10:** Number of farmers involved in income generation programmes in ENP villages*

| Item code | Activities | MPL | | MHB | | RCH | | BEL | | BJP | | Kolar | TIR | | DPI | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *2005 N=492* | 2006 N=564 | 2005 N=436 | 2006 N=685 | 2005 N=434 | 2006 N=523 | 2005 N=160 | 2006 N=300 | 2005 N=234 | 2006 N=352 | 2006 N=320 | 2005 N=483 | 2006 N=554 | 2005 N=240 | 2006 N=891 | 2005 N=2479 | 2006 N=4189 |
| E.1 | Dairy/goat/sheep rearing | | | | | | 9 | | 3 | | | | | 183 | | | | **195** |
| E.2 | Nursery Raising (Mulberry, biomass species) | | | | 17 | | | | 1 | | | | | | | | | **18** |
| E.3 | Poultry | | | | 3 | | 29 | | | | 3 | | | | | | | **35** |
| E.4 | Dry Land Horticulture (DLH) | | | | 100 | | 11 | | | | 1 | 4 | | | | | | **116** |
| E.5 | Kitchen Garden/Vegetable garden | | 57 | 108 | 118 | | 77 | 81 | 97 | 33 | | 7 | | 120 | | 498 | **222** | **974** |
| E.6 | Others - | | | | | | | | | | | | | | | | | |
| | Neem seed powder production | | | | 40 | | | | | | | | | | | | | **40** |
| | Pisciculture | | | | | | | | 44 | | | | | | | | | **44** |
| | Ericulture | | | | | | | | 47 | | | | | | | | **47** | **47** |
| | Medicinal plants | | | | | | 15 | | | | | | | | | | | **15** |

## Annexure – 3

## Brief Report of Modified Training of Facilitators on Farmers Field School for Improving Livelihoods of Dry land Farmers, Bijapur

**Introduction**

AME, in its project phase, started using FFS as one of the important methodology with rice farmers in Tamil Nadu in 1997, and has subsequently conducted FFS in other crops such as cotton, groundnut and sorghum in Andhra Pradesh, Karnataka and Tamil Nadu. FFS has continued to be an important participatory approach being used by AME in its Foundation phase. Presently, AME Foundation (AMEF) is implementing a partnership project with FAO 'Promoting Livelihood Improvements in Dry land Farming on the Deccan Plateau'. Eight of its staff had an opportunity to participate in the season-long Training of Trainers Programme facilitated by FAO master trainers with vast experience. Subsequently, AMEF, Dharmapuri organized the Modified Training of Facilitators (MToF) for Farmers Field School (FFS) Livelihood Improvement in Dry land Agriculture by broadening the curriculum adding aspects related to livelihood improvement of dry land farmers. The success of this programme led to another MToF in Bijapur.

**The objectives**

- To build capacities of staff members of NGOs in Bijapur District on natural resource conservation (NRC) and natural resource utilization (NRU) aspects of dry land agriculture for livelihood improvement.
- To enable scaling up of awareness, knowledge, adoption, technology innovation and experiences for sustainable NRC and NRU, among dry land farmers in the district.

**MToF Implementation**

**1. General set up:**

- Venue: IJFAADC training hall, Burnapur, Bijapur, Karnataka, India
- Duration: Five months. It commenced on 18th September 2006 and will be completed on 17th February 2007. The programme included 4-day classroom sessions followed by two-day practice FFS.
- Accommodation: The programme was fully residential. All the participants and facilitators are staying in the hostel accommodation provided at IJFAADC hostel, Burnapur, Bijapur.
- Learning Field: Mr.Amogsidda Madar's field which was located near to the IJFAADC training hall, Burnapur.
- Grouping of participants: The participants were divided into 6 small groups, which enabled effective learning.
- Host team: In order to develop managerial and organizational skills, the participants in small groups were given opportunity to shoulder the responsibility of training management. Each group worked as host team for three week on rotation basis.

**2. Personnel:**

a. **Facilitators:** A team of one Coordinator and 6 Facilitators as managed the day-to-day activities of the MToF.

***Details of facilitators***

| Sl. No. | Name | Designation | Affiliation |
|---|---|---|---|
| Coordinator and Facilitators | | | |
| 1. | S.S.Madiwalar | MToF Coordinator | AME Foundation |
| 2. | Rudragouda | Facilitator | AME Foundation |
| 3. | Yogesh, GH | Facilitator | AME Foundation |
| 4. | Jaljakshi Mudukavi | Facilitator | State Department of Agriculture |
| 5. | Yasmeen Thanedar | Facilitator | State Department of Agriculture |
| 6. | M.R.Nagutr | Facilitator | State Department of Agriculture |
| 7. | Mahadev Nyamgoudar | Facilitator | State Department of Agriculture |

b. **Participants:** Totally, 27 staff from 6 NGOs of 4 taluks in Bijapur district and 2 AMEF staff are trained.

***Details of participants in MToF, Bijapur***

| Sl. No. | Organization | No. of participants | | Total |
|---|---|---|---|---|
| | | Male | Female | |
| 1. | BIRDS | 3 | 1 | 4 |
| 2. | ISEER | 5 | 1 | 6 |
| 3. | POWER | 7 | 1 | 8 |
| 4. | KSARDS | 3 | 0 | 3 |
| 5. | NAFARD | 4 | 0 | 4 |
| 6. | OUTREACH | 2 | 0 | 2 |
| 7. | AME Foundation | 1 | 1 | 2 |
| **Total** | | **25** | **4** | **29** |

**3. Curriculum and activities**: Broad based curriculum for the MToF was developed based on the discussions in curriculum development workshop (12 - 13 September 2006). However, curriculum was flexible to accommodate the changes depending upon the need. The daily sessions were planned from 8.30 am to 6.00 pm and during the field activities the daily activities commenced at 7.00 am.

**4. Long term experiments and field studies**

The learning cycle process was adopted in choosing the problems for experimentation. Six experiments were conducted with three replications. The data was analysed by simple statistical analysis method.

The following long-term experiments (LTEs) were laid out

- Integrated management practice trial (IMPT) Vs farmer practice(FP)
- *In situ* rain water conservation
- Soil fertility management
- Crop selection
- Intercropping
- Spacing
- Varietal trial

**5. Short studies and special topics**

Depending on the needs of the participants and the problems in the field, short studies and special topics were planned. The speciality of the MToF was the studies were mainly concentrated on four different topics in sustainable agriculture (SA) *viz., In-situ* rainwater management, soil fertility up gradation, crop management and support and allied activities. In addition, other social aspects like gender, PRA, HIV awareness, energy conservation, etc were discussed with special attention. The apiculture topic was handled with the help of Sri Ashok Havannavar, a progressive farmer from Manguli.

**6. Insect zoo studies**

Insect zoo studies helped in creating curiosity and interest among the MToF participants and FFS farmers. The MToF participants were facilitated to conduct such insect zoo studies and come up with their findings, which strengthened their decision-making ability for crop management.

**7. Participatory discussions with external resource persons**

In MToF, normally the facilitators deal with most of the field problems by conducting suitable field exercises. However, for some new aspects as well as to get deeper insights into some subjects external resource persons were invited to share their experiences with the participants. (Crop Physiology – Dr. Chimmad, AC Bijapur; Soil fertility – Dr. Gali, AC, Bijapur; Dr. Padma Doddamani, Dept. of Animal Husbandry: Dr. Javed Mulla, Poultry specialist, AC Dharwad; Dr. Shakuntala Masur, Specialist in value addition in sorghum, Bakery Unit, UAS, Dharwad; Dr. Arun Balamatti, Executive Director, AME Foundation).

**8. Non-formal education/ facilitation activities**

As the participants were being trained to conduct FFS to train farmers using non-formal education principles, importance was given to NFE topics in the MToF curriculum. These topics helped in strengthening their skills in facilitation, communication, presentation and planning and to improve the individual's contribution to the group.

**9. Practice FFS**

A pair of participants conducted FFS in two villages in a week. Hence, 26 FFS events were organized in 26 villages of four taluks of Bijapur district, reaching 496 farmers (151 women and 345 men). The major crop was sorghum in all the villages except in two villages where farmers did practice FFS in sunflower.

**10. Farmers adoption by practice FFS farmers**

In addition of training 496 farmers in practice FFS, deliberate attempts were made to make each farmer to adopt three non-FFS farmers to spread the knowledge to more farmers. By this way, a total of 1129 farmers were reached through the MToF.

***NGO wise details of practice FFS and outreach farmers in MToF Bijapur***

| NGO | FFS Farmers | | | Adopted farmers | | | Grand Total |
|---|---|---|---|---|---|---|---|
| | Female | Male | Total | Female | Male | Total | |
| BIRDS | 36 | 43 | 79 | 27 | 93 | 120 | 199 |
| ISEER | 22 | 83 | 105 | 7 | 130 | 137 | 242 |
| KSARDS | 26 | 22 | 48 | 19 | 50 | 69 | 117 |
| NAFARDS | 34 | 45 | 79 | 38 | 73 | 111 | 190 |
| OUTREACH | 1 | 38 | 39 | 3 | 36 | 39 | 78 |
| POWER | 32 | 114 | 146 | 28 | 129 | 157 | 303 |
| **Total** | **151** | **345** | **496** | **122** | **511** | **633** | **1129** |

***Taluk-wise details of FFS and adopted farmers in Bijapur district***

| Taluk | FFS Farmers | | | Adopted farmers | | | Grand Total |
|---|---|---|---|---|---|---|---|
| | Female | Male | Total | Female | Male | Total | |
| Indi | 87 | 160 | 247 | 55 | 288 | 343 | 590 |
| Bijapur | 12 | 48 | 60 | 6 | 47 | 53 | 113 |
| B.Bagewadi | 18 | 92 | 110 | 19 | 98 | 117 | 227 |
| Muddebihal | 34 | 45 | 79 | 42 | 78 | 120 | 199 |
| **Total** | **151** | **345** | **496** | **122** | **511** | **633** | **1129** |

***Overview of Practice FFS with farmers during MToF***

| Sl. No | NGO Name | Village Name | SA group name | No of FFS sessions | Average attendance (%) | No of LTEs | No. of short study completed | No of GD completed | Percentage change in knowledge level | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Pre BBE | Post BBE |
| 1 | POWER | Muttagi | Gangamatha | 18 | 12 | 2 | 16 | 11 | 22 | 94 |
| 2 | POWER | Uppaladinni | Bagewanthi | 18 | 18 | 2 | 14 | 13 | 32 | 96 |
| 3 | POWER | Kyathankeri | Basaweshwara | 15 | 10 | 1 | 6 | 7 | 49 | 77 |
| 4 | POWER | Takkalaki | Jai hanuman | 16 | 15 | 1 | 7 | 11 | 35 | 80 |
| 5 | POWER | Nagwad | Siddarameswar | 18 | 18 | 1 | 11 | 14 | 71 | 88 |
| 6 | POWER | Karjol | Basweswar | 17 | 11 | 1 | 5 | 9 | 32 | - |
| 7 | POWER | Savanhalli | Bumatha | 16 | 14 | 1 | 18 | 9 | 59 | 82 |
| 8 | POWER | Thonsyal | Bumatha | 18 | 14 | 1 | 8 | 10 | 60 | - |
| 9 | KSARDS | D.Nimbaragi | Sarudaya | 13 | 13 | 2 | 10 | 8 | 71 | 87 |
| 10 | KSARDS | Jeerankalagi | Bumatha and Gangamatha | 16 | 26 | 2 | 13 | 9 | 54 | 80 |
| 11 | OUTREACH | Managuli | Veerbdreswar | 13 | 17 | 2 | 7 | 12 | - | - |
| 12 | OUTREACH | Islampur Thanda | Sewalal | 16 | 15 | 2 | 6 | 13 | 52 | 70 |
| 13 | ISEER | Jeegajeveni | Sarvodaya | 15 | - | 3 | 14 | 13 | - | 77 |
| 14 | ISEER | Dumakanal | Mallikarjun | 15 | 18 | 2 | 7 | 8 | 65 | 79 |
| 15 | ISEER | Jeegajeevani | Mallingraya | 15 | 13 | 2 | 10 | 9 | 48 | 88 |
| 16 | ISEER | Patil vasthi | Vanadevathe | 15 | 15 | 2 | 10 | 12 | 50 | - |
| 17 | ISEER | Hatagar vasthi | Bumatha | 15 | 14 | 1 | 14 | 11 | 70 | 94 |
| 18 | ISEER | Jeegajeevani | Malakarisidda | 16 | 12 | 2 | 18 | 12 | 65 | - |
| 19 | BIRDS | Kanakanal | Parisar | 16 | 14 | 2 | 14 | 10 | 40 | 79 |
| 20 | BIRDS | Giniyanpur | Attamsakshi | 16 | 17 | 2 | 13 | 14 | 51 | 85 |
| 21 | BIRDS | LT No 1 | Durgadevi | 17 | 14 | 3 | 11 | 8 | 40 | 76 |
| 22 | BIRDS | Inchegeri | Madavand | 14 | 17 | 1 | 9 | 11 | 56 | 94 |
| 23 | NAFARD | Maskanal | Maruteshwar | 18 | 16 | 2 | 12 | 7 | 47 | 79 |
| 24 | NAFARD | Talikoti | Kastheswar | 18 | 15 | 2 | 5 | 8 | 65 | 79 |
| 25 | NAFARD | Maileswar | Marutheswar | 18 | 17 | 1 | 11 | 8 | 48 | 76 |
| 26 | NAFARD | Bommabanahlli | Ambleswar | 18 | 16 | 1 | 13 | 11 | 30 | 75 |

**11. Graduation criteria**

Ballot Box Exercise (BBE) was conducted as pre-evaluation and post evaluation tool to assess the effectiveness of MToF. The participants' overall performance in the day-to-day activities, his/her attendance and test scores are the main criteria for awarding graduation to the participants.

**12. Sensitisation of SA through field days**

In all, the MToF participants organized 20 field days. This apart from making participants to get useful experience on organizing skills, sensitised about 2500 farmers on SA practices

***Sensitisation of farmers through field days in practice FFS villages***

| Sl. No. | Village | Date of field day | Participation | | |
|---|---|---|---|---|---|
| | | | Male | Female | Total |
| 1. | Inchageri | 26.01.2007 | 113 | 56 | 169 |
| 2. | Kanakanal | 27.01.2007 | 115 | 55 | 170 |
| 3. | Inchageri (Lambani Tanda 1) | 28.01.2007 | 100 | 30 | 130 |
| 4. | Hatagar vasthi | 27.01.2007 | 146 | 60 | 206 |
| 5. | Kesaral vasthi | 28.01.2007 | 164 | 51 | 215 |
| 6. | Dumukhnal | 28.01.2007 | 130 | 05 | 135 |
| 7. | Jigjevani | 29.01.2007 | 130 | 30 | 160 |
| 8. | Bommanahalli | 25.01.2007 | 94 | 44 | 138 |
| 9. | Maskanal | 26.01.2007 | 86 | 74 | 160 |
| 10. | Talikot | 27.01.2007 | 94 | 28 | 122 |

| | | | | | |
|---|---|---|---|---|---|
| 11. | Maileshwar | 28.01.2007 | 117 | 38 | 155 |
| 12. | Manguli tanda | 28.01.2007 | 120 | 57 | 177 |
| 13. | Jeerankalgi | 28.01.2007 | 134 | 108 | 242 |
| 14. | Devarnimbargi | 27.01.2007 | 0 | 0 | 0 |
| 15. | Savanahalli | 27.01.2007 | 108 | 12 | 120 |
| 16. | Thonshyal | 28.01.2007 | 121 | 9 | 130 |
| 17. | Takkalaki | 28.01.2007 | 90 | 35 | 125 |
| 18. | Nagwad | 26.01.2007 | 219 | 1 | 220 |
| 19. | Uppladinni | 27.01.2007 | 220 | 30 | 250 |
| 20. | Kyathkeri | 26.01.2007 | 69 | 48 | 117 |
| **Total** | | | **2370** | **771** | **3141** |

**Opinions expressed during field days**

- Learnt the importance of FFS, it is really an empowering process for farmers in improving the livelihood
- Important learnings should reach the other farmers in the village and nearby villages. (ZP Member, Dumuknal)
- This is the first step to promote healthy vegetables, learnt that conserving natural enemies is most important (Farmer, Mavinamarad, Jigjeevani))
- Panchayath members called for organized production of vermicompost, which should stimulate other farmers in the village; panchayth is ready to help financially
- Today's agriculture is like feeding other than breast milk, we need to work out the location specific and eco-friendly solutions through FFS (progressive farmers, Talikot taluk)
- The importance of the FFS and weekly meeting of farmers was known to all the villagers today (S.K.Doranahalli, Bommanahalli, Talikot taluk)
- Learnt the importance of panchagavya and simple method of its preparation
- Addition of livestock component in agriculture will add value to livelihood improvement (Progressive framers, Jeerankalgi)
- Like a doctor interacting with patient, for a farmer it is possible to interact with soil, crop and other components of agriculture. By this way farmer can find solutions in his farm through FFS.
- Experiential and discovery learnings in the field day impressed other farmers (other farmers, Jeerankalgi)
- Striga management was major problem in sorghum. This field day gave us some ideas to manage striga (A farmer from Jeerankalgi)
- The exhibitions in the field day were impressed the visitors. Progressive farmers were encouraged to take these learnings to other farmers
- Stage courage of farmers is improved, while sharing experiences in large groups
- The LEISA technologies are the need of the hour (farmer)
- Experience is far better than preaching. As a preacher of agriculture, I was not able to spread this much as these farmers are doing. (Purohit, a lecturer in Agriculture, College of JOC in Agriculture)
- Conversion of sunflower residues through Vermicomposting is one of the way to sustain the soil productivity in the depleting commercial copping system.(Mallikarjun Halli, FFS farmer, Savanahalli)
- Farmers in the village are discussing the SA practices than political / other issues during leisure hours. (Reavappa Sathalgaon, A Farmer from Inchageri)
- Farmers should learn to experiment new technology before adopting on large area (A farmer, Nagwad).

## Annexure – 4

## Report on

## Training on Gender in Sustainable Agriculture

**Date:** 13 to 15 March 2007

**Venue:** Shree Madhavandha Matt, Inchageri, Indi (Tq), Bijapur (Dist)

**Day-I**

The training started with opening remarks by Dr. S.S. Madiwalar who shared information about AMEF's concept of working on sustainable agriculture and the relation between agriculture and gender.

**Objectives of the training**

Following were some of the main objectives of the programme:

- To understand the basic concept of gender and to internalize in one's life
- To sensitize every individual about gender issues.
- To bring about gender sensitivity in families, societies, agriculture as well as nature
- To know about gender discrimination in various places
- *To aware the organizations about internal and external gender issues in their organizations in order to create gender sensitivity. List of NGO participants*

| Sl. No | Name of the NGO | No. of Participants | | | Adress |
|---|---|---|---|---|---|
| | | Men | Women | Total | |
| 1. | NAFARD | 4 | 0 | 4 | Thalikot<br>Mudhebihal (Tq)<br>Bijapur (Dist) |
| 2. | KASARD | 2 | 0 | 2 | Inchageri<br>Indi (Tq)<br>Biojapur (Dist) |
| 3. | OUTREACH | 2 | 0 | 2 | Managuli<br>Bijapur (Tq & Dist) |
| 4. | Chetana Rural Development Society | 0 | 2 | 2 | Korvar<br>Sindhagi (Tq)<br>Bijapur) |
| 5. | Jyothi Mahila Mandali | 0 | 1 | 2 | Muradi<br>Sindhagi (Tq)<br>Bijapur (Dist) |
| 6. | RDS | 1 | 0 | 2 | Muragod,<br>Savadatti (tq)<br>Belagum (Dist) |
| 7. | CRDS | 2 | 0 | 2 | Jevur<br>Indi (Tq)<br>Bijapur (Dist) |
| 8. | Nava Chetana | 0 | 2 | 2 | Nidagundhi<br>Basavana Bagevadi (Tq)<br>Bijapur (Dist) |
| 9. | Ambika Rural Development Society | 1 | 1 | 2 | Gubbevada<br>Sindhagi (Tq)<br>Bijapur (Dist) |
| | **Total** | **12** | **6** | **18** | |

**Self-Introduction:**

Participants introduced themselves with the help of seed selection method which made the process effective.

- Persons name
- Role
- His/her model picture
- Vision and;
- Selected seeds

This exercise showed the identification of individual qualities, which are masculine and feminine.

**Participants' expectations from the workshop:**

- To learn about Gender

- Realtionship between agriculture and gender
- Somebody expressed Lingatva means Hindutva/Hinduisam. The issue was noted for discussion.
- To know about sustainable agriculture
- To know historical background of training venue

**Gender in Self:**

By Using "I am Instrument" method participants identified their individual characteristics.

**Day-II**

**Yoga:** Mr. Chandrashekar Mattikalli facilitated session on major "Asanas" in Yoga.

**Gender in Nature:**

Facilitated to collect things which are traditionally related to men and women and these things are gift of nature. It means except man made things.

Later on participants collected materials, which were available in nature like flowers, leaves, stones, soil, stick, wood, seeds, fruits etc. Based on the materials collected, we discussed about characteristics of things and traditionally what we believe about those things. The materials collected were related to the characteristics of men and women as below:

| Men | Women |
|---|---|
| Hard | Sensitivity |
| Roughness | Softness |
| Courage | Peaceful |
| Stability | Motherhood |
| Protection | Patience |
| Aggressive | Respect |
| | Faithful |
| | Service attitude |

**Human Eco System Analysis**
In this session, the facilitator asked questions to participants about how they look. The participants saw their faces in mirror and expressed about how they were looking

- Cleanliness
- I am Smart
- Good speaker
- Black/medium
- Smiling face
- Big face
- Beauty, healthy hair
- Normal / aggressive face
- It is not easy how we are to say to others.

Facilitator appreciated every individual's opinion and gave previous day's tool (I am instrument-this picture is a human being and is based on the intrinsic human qualities. Many participants expressed that externally we are good looking but, internally, we are handicapped). This internal quality includes masculine and feminine qualities of human being.

Participant's opinion about gender in self

- We should manage internal behaviour
- It is a question of our own characteristics
- Physical and internal mirror shows about how we are.
- To manage masculine and feminine qualities

**Gender in Family:**

Participants were divided into two groups, which were male and female headed families. Both the groups presented role-plays with different characters of family. After the role-play, it was discussed in large group about major characteristics of both families.

| Male-headed Family | Female-headed Family |
|---|---|
| There is no respect to elders | Even though female headed family, elder son has the management responsibilities. |
| Elder son holds the power of family | Females have the power holding in their hand |
| Daughters are given less importance having less importance | More importance given to local resources |
| Less importance of wife | Having organic concept |

| | |
|---|---|
| Interrelationship is low | Participatory approach |
| Less importance of indigenous technologies | Less power is given to daughter in law |
| More importance of modern agriculture | More work load to daughter in law |
| Mono cropping system | More responsibility |
| Low responsibility | Participatory Decision |
| Supremacy/decision making power | Sustainability |
| Less work | Opinions are acceptable |
| Less sustainability | Resource/material management |
| Order behaviour | Sensitive behaviour |
| Ownership on resources (land, money, house) | Even though female headed family, she does not have ownership on resources (Gold, land, house etc) |

These characteristics probably show masculine and feminine qualities between two families. Both the family characteristics indicate as to which family has sustainable concept and balancing roles within family.

**Gender in Group:**

Participants were divided into two groups and these groups showed dummy exercises through role-plays. After role-play, discussion was carried out in large group about gender issues and management of gender sensitivity in groups.

| Group-1 | Group-2 |
|---|---|
| More importance to financial aspects | Time management is good |
| Gender discrimination<br>▪ Sitting arrangement/positions<br>▪ Less value to women participation<br>▪ With out participation/ discussions goes to one or two participants | Gender Balanced:<br>▪ Good women participation<br>▪ Information sharing<br>▪ Personal space for sharing<br>▪ Importance given to all opinions<br>▪ Increased internal confidence |
| Good time management | More importance to technical and developmental aspects |
| Dependent group/ waiting for outside resources | Dominant people management |
| Members aren't aware about objectives of group | Stage for experiential sharing |

**Day Evaluation:**
Ms. Rekha Korvar facilitated day's evaluation.

## Opinions from participants

- Yoga can brings peaceful mind and good impact of physical health
- It is first time, we aware gender includes in nature
- Aware about existing and lack of masculine and feminine qualities in self
- Based on situation we should manage masculine and feminine characteristics
- Gender in family shows about how men and women balanced their roles in different situations
- Gender in Group focused participatory discussion and decision between men and women members

**Satsanga:**
It was facilitated by Mr.Chandrashekar Mattikalli and Mr. Vivekanadha Arali based on their traditional and spiritual experience of Inchageri matt.

**Day-III**

**Gender in Sustainable Agriculture:**

- **Work load analysis:**
  Participants were divided into four groups and were given assignment on working pattern of rural context. This analysis was made based on the present situation of the society in different areas of Bijapur district.
  Bijapur AUC focused about gender mainstreaming in agriculture. Gender includes exploitative (masculine) and conservative (feminine) nature in agriculture. In our country, women do 60% more work than men but still her work is not recognized in the society. People should be sensitised on gender issues; only the, the women will get due respect and recognition in the society.

**Participants' opinion**

- Balanced gender roles is very important
- Gender sensitisation is necessary in the society
- Reduce discrimination in families
- Maintain work balance between male and female farmers
- Intellectual smartness is required along with physical smartness
- Based on the situations, men or women should act gender sensitively

## Annexure-5

## Report on Farmer Field School in Dharmapuri - An IPM-FFS in Tomato

AME Foundation started working in Dharmapuri district through its Area Unit, for bringing about livelihood improvement, partnering with the Community Managed Resource Centres (CMRCs), promoted by MYRADA. CMRCs are collectives, managed by elected representatives of Self Help Affinity Groups (SAGs), formed with the support of MYRADA. There are 18 CMRCs functioning, each having a membership of 150 – 170 SAGs. AMEF started working with four such CMRCs in 2005. Palacode CMRC is one among them covering three villages, namely, Kottur, Siriampatti and Eachampallam.

Tomato is the main cash crop for farmers of Kottur, Seeriampatti and Eachampallam villages in Dharmapuri district. Being a highly labour intensive crop, tomato cultivation has also been a source of employment in these villages. Farmers in these villages have been practicing tomato cultivation, largely depending on expensive external inputs. Chemical fertilisers and pesticides are being used indiscriminately, resulting in high cost of production. To enable farmers to switch over to ecological ways of farming in general, and reduce their cost of cultivation in particular, it was necessary to educate them on alternative practices in tomato cultivation. Farmer Field School (FFS), a discovery learning approach, was found appropriate in achieving this objective.

The FFS programme was unique in two ways. The Firstly, FFS was organised exclusively for women members of the SAGs. This was apt because women carry out most of the activities in tomato cultivation. Secondly, it was in collaboration with CBOs like CMRC, which meant that it was convenient to scale up the process with the organised groups like SAGs, under the auspices of the CMRC.

The programme was organised during the tomato season 2005-06, for duration of 20 weeks beginning from January 2006. Kottur village was the chosen venue as it is easily accessible to farmers from other two villages. 23 farmers from three villages along with 6 CMRC staff participated in the programme. Four staff from AMEF facilitated the sessions.

Baseline information of the area was collected to get an understanding of the operations and the problems related to tomato cultivation. Curriculum focusing on IPM was developed, as incidence of pests like fruit borer, leaf minor, spider mite, leaf curl etc., were found to be intensive.

**The agencies involved**

A number of agencies were involved in this FFS. Palacode CMRC was the major stakeholder in getting its members trained. The CMRC assisted in identifying the village and the group of farmwomen, and took active part in arranging necessary inputs. AMEF has provided the technical support. The State Department of Agriculture, Senthil Enterprises, Salem and Basarass Biocon India Ltd., helped in supplying inputs. MYRADA and Palacode CMRC helped in scaling up of the practices.

***FFS Processes***

**Agro Eco System Analysis (AESA)**

A plot of size 63.82 cents was identified for conducting FFS and to enable participants to understand the agro ecosystem and practice the techniques learnt during the process. The plot was divided into five subplots - IPM Plot, Standard Plot, Farmers practice plot and two plots for Long-term experiments. Cowpea was used as an intercrop. IPM plots were planted with border crop (maize, bajra) to act as barrier for pests. African marigold was used as a trap crop.

**Group Dynamics**

Group dynamics exercises formed a part of the FFS process for developing team building and problem solving skills.

***Important outcomes***

**Nursery Raising**

Raising tomato seedlings in nurseries, particularly through the raised bed method, enabled farmers to understand its benefits in combating the soil borne pathogens and producing healthy seedlings. Participants learnt that line sowing in the nurseries helps in proper weeding. Prior to the FFS, the farmers used to purchase seedlings.

**Use of barrier crops and trap crops**

Tomato was always being grown as a sole crop. Prior to FFS, the farmers were of the opinion that intercrops competed with tomato crop and attracted pests. Participating in the FFS, the participants, for the first time, understood the importance of other crops in tomato, clearing their wrong notions. Border crops like maize and bajra served as a barrier to whitefly movement. The trap crop 'African marigold' attracted fruit borer adults for egg laying, and the eco-feast crops (cowpea) served as a source of food for the predators.

**Mulching yields multiple benefits**

Understanding the benefits of mulching was one of the important learning, which the participants gained during the process. Farm residues like sugarcane trash, unusable paddy straw and coconut leaves were used as mulch in the tomato field. Farmers observed that the mulching practice resulted in maintaining moisture levels in the soil resulting in three important benefits. Firstly, there was a drastic reduction in Red spider mite incidence, which was damaging the crop extensively. Secondly, it helped in reducing the frequency of irrigation (from once in 3-4 days to once in 7 days), and thirdly, weeding was not required at all.

**IPM methods**

Several IPM methods such as use of yellow sticky trap, pheromone trap, pitfall trap, release of Trichogramma egg parasitoids, Chrysoperla predators, spraying of chilli-garlic extract, Lantana leaf extract, Panchagavya, NPV, *Pseudomonas fluorescence* were the other learning in plant protection.

**Yellow sticky trap**

Farmers learnt about trapping pests using yellow sticky traps. Farmers discovered that the height of the trap was an important factor, influencing insect trapping. The traps kept too lowered compared to the crop height, did not trap many insects. Hence, the height of the traps had to be periodically adjusted to the crop height for effective pest management.

**Farmers Innovation**

Enthusiastic farmers also came out with a local alternative to yellow sticky trap. The participants innovated an alternative to the yellow sticky trap. Coconut shell and rachis were collected, painted yellow and were smeared inside with castor oil to trap insects. Smearing of castor oil was repeated every 3-4 days to effectively trap the pests.

**Gains from the FFS**

**Cost Reduction**

There has been a substantial reduction in the cost of cultivation. Learning to raise tomato seedlings on their own helped farmers in reducing the seedling cost by half. Cost on fertilisers and pesticides were reduced by a whopping 75% as compared to the farmers' earlier practice. There was absolutely no cost incurred on weeding owing to suppression of weed growth due to mulch. The total reduction in cost was to the tune of Rs. 13,000 per acre.

**Reduction in cost of certain inputs**

| Item | Baseline (Rs.) | FFS plot (Rs.) | Reduction in FFS (Rs.) |
|---|---|---|---|
| Seedlings | 4000 | 1280 | 2720 |
| Fertilizers | 5960 | 1570 | 4390 |
| Plant protection inputs | 4430 | 1075 | 3355 |
| Labour for weeding | 2600 | nil | 2600 |
| **Total** | **16990** | **3925** | **13065** |

**Attracting Fellow Farmers**

FFS participants proactively attended other group meetings in the villages and shared their FFS learning. A field day was organised at the conclusion of FFS wherein the participants shared their experiences with other tomato growers from neighbouring villages. Tomato growers from other villages visited the FFS field and participated in the sessions to know more about tomato cultivation.

**IPM decisions - Women are making a difference**

Rani is a participant in the FFS. Initially, she had to face a lot of resistance from her husband Mathi, to participate in the FFS. Not only she, but also most of the women were not taken seriously. However, Rani continued to attend and learn many new things about tomato cultivation. She started applying her newly gained knowledge at her farm. Mathi, who was discouraging her all along, was surprised to observe that there was no incidence of red spider mite in their plot due to mulching. He started gaining confidence in her abilities.

Decisions on farming, particularly those related to pest management, were always a man's domain in Kottur. But this time he followed Rani's advice of non-pesticidal management and was happy for not spending on chemicals. Experiencing the benefits of new knowledge, he now wholeheartedly encourages Rani to participate in FFS taking care of all the household activities himself. Many men in the village have followed his path. Now, women are happy that their voices are being heard, at last.

**Igniting young minds on ecosystem conservation**

This was a unique experience in helping children understand the relationships within an ecosystem. Children, during their free time, were involved in certain FFS activities. They participated enthusiastically in activities like field observation, preparation of charts and their presentation. With their new understanding on crops, pests and their relationship, these young children, in turn, shared their knowledge with their schoolteachers and other students.

## Annexure - 6

## Report of Season Long Farmer Field School in Parvathapur, Mahabubnagar

The Kondurg mandal in Mahabubnagar is known for vegetable cultivation due to favourable soil and climate, and also because of its proximity to the Shadnagar and Hyderabad markets. AMEF Mahabubnagar unit is working with Eco-Club, a promising ENP in the Kondurg area. During the late Rabi or early summer season, the farmers of Parvathapur generally take up tomato crop under protective irrigation. An extensive baseline survey was conducted on the crop cultivation with an intention of conducting the Farmers Field School and addressing certain core issues. Later, focused group discussion was held to develop the crop calendar and prioritise the problems. The prioritised problems were as below.

- Damping off in the nursery stage,
- Fruit borer, Helicoverpa
- Early blight,
- Whiteflies,
- Leaf curl, and
- Powdery mildew

The farmers were using harmful chemicals like cypermethrin, endosulfan, quinalphos and carbendazim to control the pests and diseases. The farmers were not aware of the improved nursery techniques, usage of botanicals and bio agents. The cost of cultivation was modest but the farmers were not aware of the greater potential of production and lower net returns due to lack of awareness about the advanced and low cost practices. After thorough discussion with the farmers, the curriculum was developed involving the vegetable specialists from the Research Stations of the region and was refined during the ToF Refresher course conducted at Chintamani on 2-4 February 2006. Mr. Gopal was unanimously chosen as the collaborator farmer from the group. The pre-FFS sessions included the sensitisation about the FFS, the explaining about the need for conducting it in this village, and signs and symptoms as entry point activity of FFS.

The FFS was conducted in 15 sessions with special emphasis on the soil fertility improvement and modified cropping practices. Three long-term experiments (LTE) were laid out in the FFS field.

**LTE 1**

The main learning field for the farmers was to show the difference between the SA/SA practices (T1) and farmers' practices (T2). SA practices were evolved from the critical AESA decision of the sub groups.

**LTE 2**

Plant compensation study was taken up by keeping in view of the foliage loses due to the defoliator insects, early and late blight diseases.

**LTE 3**

The varietal trial was conducted to show farmers the differences in the yield performance of different varieties in terms of yielding ability. Selected varieties (Tokita, US-618, JK Desi), however, did not show significant difference among them.

**Salient findings of LTEs on the collaborator farmer field**

- SA plot yield (7.44 tons/acre) yielded 50 per cent more than the farmers practice (4.96 tons/acre)
- The cost of cultivation in SA plot was Rs.17,040/- per acre against Rs.19,120/- in farmer's practice ( 10 per cent lesser)
- The net returns from SA plot was Rs. 52, 080 as against farmers' practice which was Rs.34, 720/- (33 percent more)
- Plant compensation study revealed that 25 per cent defoliation at 25 DAT does not reduce the yield of tomato (4.58 t/acre) significantly, whereas 50 per cent defoliation at 50 DAT decreases yield by 17 per cent (4.52 t/acre) against the control (4.6 t/acre)

**Short Studies**

Short studies conducted in the FFS were as follows:

***List of short studies conducted with the salient learning***

| S. No | Short study | Learning/Remarks |
|---|---|---|
| 1 | Seed germination | • Understood the importance of seed germination test to choose good quality seeds before sowing of any crop |
| 2 | Seed treatment | • Learnt the method of seed treatment and observed significant reduction in damping off incidence due to Trichoderma seed treatment |
| 3 | Nursery raising techniques | • Farmers could save 50 % cost on the seeds due to significant reduction in damping off disease.<br>• All the FFS farmers are practicing improved raising technique after undergoing the FFS |
| 4 | FYM enrichment | • Observed the profuse mycelia growth because of Trichoderma enrichment with FYM |

| | | |
|---|---|---|
| 5 | Panchagavya preparation and spray | • Farmers learnt the method of preparation<br>• Better shelf life of tomato in Panchagavya sprayed plot was observed |
| 6 | Living soils study - Decomposition of organic matter | • Farmers discovered increased decomposition of organic matter in light textured soils<br>• Addition of organic manure increased the decomposition rate irrespective of soil types<br>• Farmers felt that this study can be used to determine the fertility status of soil |
| 7 | Spray dye exercise | • Realized how pesticide covers the entire body while spraying<br>• The ways of minimizing this effect was discussed |
| 8 | Sign and symptoms of pesticide poisoning | • Farmers felt the need for reducing the usage of pesticides after understanding the signs and symptoms of pesticide poisoning |
| 9 | Insect zoo | • Farmers understood the life cycle and functional role of insects<br>• Farmers discovered following natural enemies: Mirid bug, spiders, LBB, Chrysoperla, ground beetle, Anthocorid bug and syrphid |
| 10 | Pheromone traps, sticky traps and bird perches | • Observed the whiteflies being trapped by yellow sticky traps<br>• Observed several Helicoverpa adults trapped in pheromone trap for pest monitoring |
| 11 | Nutrient uptake | • The crop weed competition were well understood |
| 12 | Soil Testing | • The essence of soil testing, method of soil sampling was understood by the farmers |
| 13 | NPV | • Observed the death of Helicoverpa larva after feeding the NPV treated Bengal gram seed. |
| 14 | AES concept | • The link between living and non-living entities, energy flow, the causes for disturbed ecosystem were understood. |
| 15 | Management of early blight | • Bordeaux mixture controlled the disease<br>• They also tested it in chilli for powdery mildew management and got very good control. All the FFS farmers are using Bordeaux mixture in disease management of various crops in place of fungicides |
| 16 | Border and intercrops | • Observed more aphid population on cowpea and syrphids, Ladybird beetles feeding on them.<br>• Observed preference of egg laying by Helicoverpa on marigold than on tomato.<br>• Observed more natural enemy activity on niger because of pollen and nectar |

**Group dynamics and energizers**

The facilitators had an opportunity to learn the dynamics of the group during the FFS over 15 weeks. The farmers were initially shy to do even prayer before the session and within couple of weeks of commencement of FFS, the farmers started volunteering for singing prayer. The most interesting aspect of the group dynamics was that the farmers have decided themselves to organise the field day as their family celebration. The field facilitation of the group was exemplary. The guests and other visitors witnessed the attitudinal changes among the participant farmers. The following is the list of group dynamic exercises and energizers conducted during the FFS. The group dynamics during the sessions enhanced the group cohesiveness, problem solving ability, leadership qualities and organizing qualities of the farmers.

***List of Group dynamics exercises and Energizers***

| Sl. No. | Group Dynamics | Sl. No. | Group Dynamics |
|---|---|---|---|
| 1 | Group formation | 7 | Inheritance |
| 2 | Water brigade | 8 | Pond in pond out |
| 3 | Longest line | 9 | Confusing game |
| 4 | Pen in bottle | 10 | Fruit salad |
| 5 | Communication distortion | 11 | Rain clap |
| 6 | 9 dot game | | |

**Field day**

The FFS farmers, to share their discoveries of FFS to the other farmers, conducted a field day at the end of the FFS. Every FFS farmer was eager to share his learning. For the easy facilitation of learning, farmers established 5 stations. Two farmers were placed at each station. At each station, the relevant photographs, charts and materials were displayed. Remaining farmers were engaged in guiding the guests, registration and other logistic arrangements. The participants were divided into several sub groups consisting of 15 farmers. They were taken

to the field. The participants visited short study zone, nursery raising techniques, IPM plot, farmers' practice plot, standard plot and general plot, in sequence. Later the participants visited exhibition, which consisted of AESA charts, different short studies, different botanicals, pests and natural enemies, photographs and different bio-agents. At each station, intensive interaction between FFS farmers and non-FFS farmers was observed. The non-FFS farmers were motivated by the way in which the FFS farmers presented their learning. They were also impressed about the displays at each station, which helped them to understand the concept better and effectively.

Apart from all 45 participating farmers, **121 farmers** from surrounding villages and 14 staff from other partner NGOs attended the field day.

Dr. Radha Rani, scientist, Vegetables section, ANGRAU, was the chief guest. The participants were impressed by the way in which Mr. Gopal, an illiterate collaborator farmer, shared his learning with confidence. Dr. Radha Rani, during her address, expressed her happiness to see all these activities and suggested to take up the learning forward through similar FFS programmes in other crops.

**FFS in the Media:** Two leading Telugu daily newspapers 'Eenadu' and 'Andhra Jyothi' covered the FFS field day event.

**Adoption of FFS learning**:

1. All the FFS farmers have increased the crop diversity in their fields in the form of border crop, trap crop, pollen-yielding crops. Ten non-FFS farmers also have adopted the similar practice.
2. The traditional nursery raising method, flat bed - without seed treatment, is disappearing from the village, as a whole. The farmers are now saving 50 per cent of the seed cost, which accounts to Rs.250 /acre.
3. The usage of botanicals is commonly seen among the FFS farmers in various crops.
4. The fungicides are almost replaced by the Bordeaux mixture.
5. Farmers' decision-making capacity has increased tremendously from one session to other
6. Now, the FFS farmers are assisting other farmers in better crop management.

## Annexure – 7
## Report on the study tour to Kenya

**Participants**

1. B. Vijayalakshmi, Area Unit Coordinator, Tiruchi
2. Ravindranath Reddy, Area Unit Coordinator, Bellary
3. G. Ravi Kumar, Area Unit Coordinator, Dharmapuri
4. Shyamrao. S. Kulkarni, APO, Bellary
5. Rudragouda, APO, Bijapur
6. Naganagouda, APO, Mahabubnagar
7. B. K. Suresh, APO, Raichur
8. M.C. Shivarudrappa, Project coordinator, MYRADA

**Objective**

1. To look in detail about FFS for – land and water management, soil fertility and nutrient management, dryland agriculture
2. To understand the Institutional framework of FFS – FFS groups, divisional and district networks, financing aspects

**Tour schedule**

| Date | Place visited | Aspects covered |
|---|---|---|
| 01.05.06 | Nairobi | Arrival at Nairobi and travel to Kitui |
| **Eastern province** | | |
| 02.05.06 | Kitui district, Chuluni division<br>1. Kalia<br>2. Muma | Agro-forestry FFS<br>FFS on Water harvesting for fruit trees |
| 03.05.06 | Kitui district<br>1. Nzangathi<br>2. Kiini | Cotton varietal trials in FFS<br>Kiini graduated FFS group and discussion with the Chulini Divisional FFS network |
| 04.05.06 | Mwingi District<br>1. Mwingi<br>2. Mbondoni | Discussion with the district network officials<br>Visit to farm and discussion with Farmer innovator – off farm runoff water harvesting for crop production |
| 05.05.06 | Mbeere District<br>1. Saikago<br>2. Mururiri<br>3. Kamarugu | Visit to Rural Agricultural technology development centre and discussion on Conservation agriculture<br>FFS on CA – discussion with group and field visit<br>On farm rainwater harvesting for horticulture and income generation activities |
| 06.05.06 | Travel to Nairobi | Halt at Nairobi |
| 07.05.06 | Travel to Kakamega | Halt at Kakamega |
| **Western province** | | |
| 08.05.06 | Kakamega district<br>1. DAO office<br>2. Brangasi<br>3. Kakamega | Discussion on agricultural programmes in general and FFS in particular, in the district<br>Sweet potato FFS – discussion with group on production and value added products from sweet potato<br>Discussion with the district FFS network officials |
| 09.05.06 | Bungoma district<br>1. DAO office<br>2. Mikalo<br>3. Kulabusia<br>4. Marabanga | Discussion on agricultural programmes in general and FFS in particular, in the district<br>Discussion with self financing FFS on projects of group<br>FFS on varietal trials ad planting techniques in sweet potato<br>Discussion with the Bungoma FFS District network |
| 10.05.06 | Busia (Kenya) District<br>1. DAO and DC offices<br>2. Alung oli<br>3. Undugu | Discussion on agricultural programmes in general and FFS in particular, in the district<br>FFS on Sweet potato varietal trials<br>FFS group discussion on revolving fund management |
| 11.05.06 | Travel to Nakuru | Visited the Lake Nakuru National park, stay at Nakuru |
| **Rift valley province** | | |
| 12.05.06 | Nakuru district<br>1. Kerma | Field day on CA – discussion and field visit to farmers practicing CA, discussion with the FAO representative |
| 13.05.06 | Travel back to India | Preparation of the study tour report |
| 14.05.06 | Briefing at Central unit, Bangalore | |

**Contextual description of the provinces visited**

| Aspects | Eastern | Western | Rift valley |
|---|---|---|---|
| **Social** | Small isolated communities with 10 – 12 households, literacy around 50 %, women managed farming, livestock not prominent, family labour for farming, less infrastructure facilities for transport, education, health, electricity, drinking water etc. English is the official language, with most of the educated having proficiency in spoken English. Generally articulate population. Maize is the staple food, followed by beans and sweet potato | | |
| **Economic** | Generally high cost of living compared to India, other income generation options are less | | |
| **Institutional** | Development programmes mostly donor driven, Indian population controls businesses, CBOs not prominent, less facilities for banking and credit services. Agricultural department is active, with good extension network (1 staff / 2000 farmers), committed and technically sound officials, a national policy and road map is available for the nation as a whole and districts as units. High level coordination among departments | | |
| **Rainfall** | Bimodal with not so sure first season (800 mm) | Bimodal with assured two seasons (1800 mm) | Bimodal with long and short seasons (1500 mm) |
| **Farms** | Small holdings (1.5 - 3 acres), Undulating terrain | Small farms (1.5 – 3 acres), undulating terrain | Small and Large farms coexist, more plain terrain |
| **Cropping** | One season, mainly Maize with intercrops, subsistence farming | Commercial crops like Coffee, Sugarcane, Tea, Potato and Maize. | One season, long duration Maize, Wheat and Sorghum. Intensive and chemical input based. |
| **Productivity** | Maize 450 to 700 kg / acre. | Medium productivity (Maize 1300 to 1800 kg/ac) | High productivity (Maize 2000 kg – 3500 kg / acre) |

**Key observations from field visits and discussions**

**A. FFS as a Methodology**

1. Initiated in 1996 in one district, with support from FAO, now in 30 distrcits. However more emphasis given since 2001.
2. The other extension methodologies like T&V, demonstrations, focal area approach are also used along with FFS
3. FAO mobilizes funds for FFS from many sources and the donors also support FFS directly like Catholic Action aid, Plan international, (UNDP, IFAD, SIDA, GTZ etc)
4. PRA done to assess needs.
5. FFS mainly done on food crops, with objectives set for each
6. Many collaborators in FFS (MoA, Donors, service providers etc)
7. Wider curriculum developed in stakeholder workshops
8. FFS are organized 'enterprise' wise, taking one or two technologies at a time.
9. Inter group learning visits and field days (which are organized in a exhibition pattern, wherein trained farmers share their experiences with neighbouring communities) are part of the plan
10. More women farmers in the FFS groups
11. Members of one FFS are from many neighbouring communities, in certain cases (where wilful participation within the communities is less)
12. No age regulations. Some villages, youth groups are used for FFS
13. Session plan is followed strictly
14. Special topics not part of the curriculum and based on the problems – handled by experts from various departments / experienced farmers
15. AESA frequency based on enterprise
16. Teaching materials are present in each group
17. Host farmers volunteer to provide plots for experiments based on mutual agreement with the group
18. Starts with large numbers and only less than 20 graduate
19. Certificate provided to graduated members, based on criteria (like 75 % attendance in sessions and active participation in the discussions). The members graduate in the 'methodology' and not on the enterprise, normally after 2 to 3 cycles
20. After graduation, identified farmers qualify as 'farmer facilitators', after completing a 2 week refresher training in that enterprise. They can facilitate FFS, only on the trained enterprise
21. Groups are registered as CBOs and have good management structure
22. Other Departments are using the FFS groups
23. Visitors book is present in each FFS.

**B. FFS Financing**

1. Farmer groups apply for grant directly to the district network
2. Farmers pay for the facilitator's travel, from the grant money

3. Support is for a period of 18 months
4. Support is provided as material and 600 dollars for facilitator run and 400 dollars as grant for farmer run FFS
5. Income generation activities carried out by the groups
6. Self-financing is of two types – semi SF and SF. The first repays half of the grant to the district network, while the later repays the whole amount.
7. Savings, membership fee are used for mainly the purchase of inputs for the FFS
8. The self-financing groups are those, which continue to raise income from the plots, even after the completion of the FFS cycles.
9. District networks facilitate the individual groups for developing fund raising proposals

**C. FFS Networks**

1. At zonal, divisional and district levels, with complimenting objectives and written byelaws.
2. Marketing needs is the driving force behind the formation of many district networks. Stronger networks present only in the western province, where this need is more predominant
3. Networks are farmer formed and managed. Mainly patronized by the MoA
4. Elected representatives of graduated FFS groups in the district is the board of directors. A district level officer is a member of the board.
5. Zonal level networks perform following key roles, apart from other ones
   - Link with the FFS within the zone
   - Monitors the quality of the FFS on behalf on the division and the district levels
   - Nominates participants for the district level workshops
6. Divisional networks are more of a link between the district and zonal ones, and also organizes capacity building programmes, based on identified needs
7. District networks function as a link between the FFS groups and development partners operating in the district. Plays a facilitating and fund raising function. Also coordinates the quality check and logistics arrangements for marketing. It organizes district level workshops and consultations. It evaluates the proposals from FFS, and channelises the funds to them.
8. The district FFS network represent farmers in district level MoA forums.

**D. Other aspects observed**

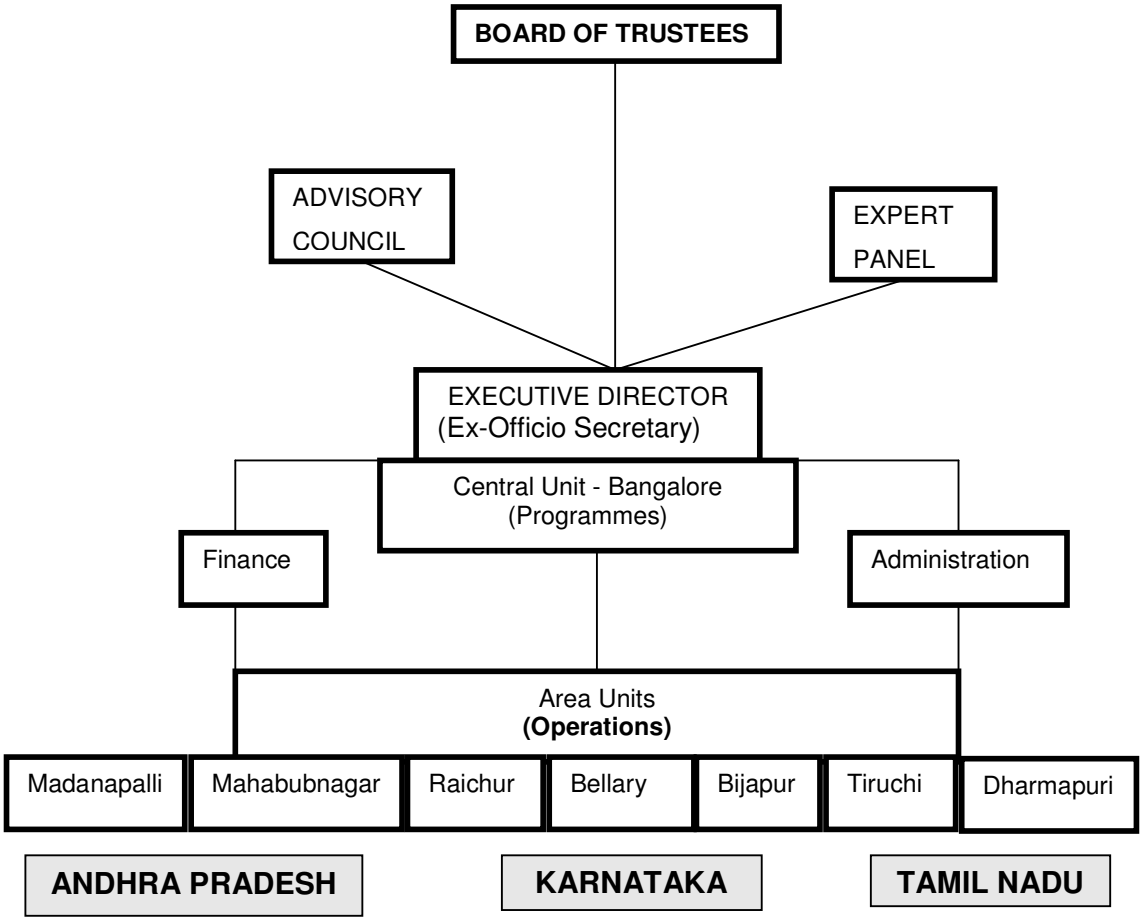
1. A farmer innovator harvests run off water from common lands, to feed to his crop requirements. This farm was visited and the team learnt on the aspects of rain water harvesting, changes in the farm before and after situations and the scaling up to nearby farmers. A catalogue of such innovators had been developed by the 'promotion of farmer innovators' programme, implemented by the district Department of Agriculture

2. Farmers implementing 'Conservation agriculture' in their farms, were visited and the team learnt about the core principles (Minimum disturbance to the soil, maintaining a permanent soil cover and possible crop rotations), its practicality of application to small holder farms, experiences of farmers, implements used for minimum tillage sowing etc.,

**E. Lessons from the Visit and relevance to AME Foundation**

1. Concept of graduation and farmer facilitators – can be introduced into the activity plans of AUs
2. Cluster and district level federations existing in area units – can be streamlined to deliver more functional roles
3. Revolving funds to groups – can be streamlined to make groups more responsible, by providing the same based on action plans developed by the groups
4. Field days – stalls and exhibition pattern field days can be tried
5. Linkages with more actors - need to be concentrated, with DoA as major actor
6. Training and learning materials – to be developed in local languages

# ORGANOGRAM OF AME FOUNDATION



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## *AMEF BELIEVES*
## *IN*
## *"HELPING PEOPLE TO HELP THEMSELVES"*

***AMEF is a resource organization**. It seeks to empower dry land farmers in degraded ecological situations on the Deccan Plateau, in improving their own livelihoods, along with gender and social equity concerns. Pursuing this goal, it works with farming communities, like-minded NGOs, and government agencies in creating and testing technological options, for wider applications. In the process, it strives to forge institutional synergy among the bio mass actors, playing a catalytic and facilitative role.*

***AMEF is motivated by a deep-going concern**. Transformation in Indian agriculture became possible through Green Revolution technology, which benefited the better-endowed regions and resource-rich farmers, using expensive purchased farm inputs. But, it bypassed the vast dry farming tracts. Trapped in these areas are a large number of small and marginal farmers struggling to make a living, with their environment-depleted soils eroded and ground water sinking rapidly. Working with these families, searching for alternative farming options is a matter of great socio-economic and strategic necessity.*

***Does AMEF create something out of nothing?** Hardly the case. Adopting the PTD and FFS approaches, AME teams up with responsive farmers groups, interested NGOs and development agencies to locally explore new ways of managing the available natural resources. In the process, new perceptions are generated, new insights are gained and new approaches are devised, combining the traditional knowledge with scientific contributions. Thus, farmers are enabled to progress one step beyond the present.*

# ANNEXURES