

**RECOMMENDATIONS OF WORKING GROUP ON
AGRICULTURAL EXTENSION FOR FORMULATION OF
ELEVENTH FIVE-YEAR PLAN (2007-12)**

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BY
Working Group on Agricultural Extension Constituted by
Planning Commission, Govt. of India

Contents

Sl.No.	Subject	Pg. No.
Executive Summary		I-VI
1. Agricultural Extension Approach for XI Five-Year Plan		
1.1.	Overview of Agricultural Extension System in India	1
1.2.	Emerging Challenges	3
1.3.	Consultation Process	5
1.4.	Salient recommendations of the six sub-groups on agricultural extension	5
1.5.	Basic Approach to Agricultural Extension in the 11 th Five-Year Plan	10
2. Strategies for Operationalisation of Recommendations		
A. Strengthening and Upscaling of On-going Schemes		
2.1.	Support to State Extension Program for Extension Reforms	24
2.2.	Mass Media Support to Agricultural Extension	35
2.3.	Agri-clinics and Agri-Business Center Scheme	37
2.4.	Agro-Polyclinics and multi-purpose service centers	39
2.5.	Kisan Call Center	40
2.6.	Extension Support to Central Institutions	41
B. Proposed New Initiatives		
2.7.	Promotion of Farm schools	44
2.8.	Recognition of outstanding farmers through Awards	45
2.9.	Capacity building for Input Dealers	45
2.10.	Establishment of Community Radio	48
2.11.	Dedicated TV Channel for Agriculture	49
2.12.	Support programme for women in Agriculture	50
3.	Budget Estimates for Agricultural Extension during XI Five Year Plan	52
4.	Annexures	

Annexures

Sl.No.	Particulars
1.	Constitution of working group and ToR
2.	Proceedings of Working Groups
3.	Constitution of Sub-groups and TOR
4.0.	Review of On-going Schemes by Working Groups
4.1.	Recommendations of Sub-group-1 (Extension-General)
4.2.	Recommendations of Sub-group-2 (R-E linkages)
4.3.	Recommendations of Sub-group-3 (Private Sector)
4.4.	Recommendations of Sub-group-4 (Training)
4.5.	Recommendations of Sub-group-5 (Gender)
4.6.	Recommendations of Sub-group-6 (Media and ICT)

FOREWORD

Eleventh Five Year Plan envisages 4.1 percent growth in Agriculture to achieve 10 percent economic growth. Hence, special focus is required in Agricultural Extension with clear-cut operational strategy and technical back-stopping to achieve the desired growth rate in Agriculture.

Planning Commission, Govt. of India constituted a Working Group on Agricultural Extension in the context of formulation of XIth Five Year Plan (2007-2012) with specific terms of reference to undertake a critical review of existing approaches, strategies, priorities and assess gaps between Agricultural Research and Extension System at different levels and also to suggest modalities for strengthening Research-Extension-Farmer-Market linkages.

The Working Group on Agricultural Extension constituted six sub groups with specific terms of reference to suggest ways and means of strengthening extension support services, making them demand driven and also to review physical and financial achievements. Each sub-group had 2-3 meetings and detailed deliberations on the terms of reference and brought out recommendations. The Chairman and Member Secretary had interactions with Member, Agriculture, Planning Commission twice, once in a general meeting where presentation was made by various Groups and the other in special meeting with the Chairman / Member Secretary of the Extension and Natural Resource Management Group. The observations of the Member, Agriculture, Planning Commission regarding weeding out of the redundant schemes, inclusion of such schemes which would make larger impact on agriculture growth, decentralized implementation and monitoring set up have been kept in mind by the Group. Working group has taken into consideration all the recommendations made by the National Commission on Farmers (NCF) pertaining to Agricultural Extension. The Approach for Agricultural Extension for the XIth Five Year Plan is formulated based on the recommendations of the sub-groups, National Commission on Farmers (NCF) and observations of the Planning Commission.

The basic approach to Agricultural Extension focuses on extension reach to Small / Marginal / Women Farmers and dry land areas. It also includes strengthening and up-scaling of on-going Extension Reforms, provision of quality manpower, promotion of Farmers Organizations around Commodities / Enterprises and thrust on Farmer Led extension.

It lays importance on adoption of Farming Systems Approach with focus on Research and Extension agenda determined explicitly by farmers, convergence of extension services of line departments for optimum utilization of manpower and other resources.

Specific provision is made about Gender Mainstreaming in Agriculture and group based Agri-Business income generating activities in addition to their access to extension support with 30 percent allocation of funds in Extension Reforms exclusively for women.

It is realized that 60 percent of the farmers do not access any source of information for advanced Agricultural Technologies resulting in adoption gap, hence, the need for quality manpower with appropriate capacity building programmes. It is also proposed to strengthen Mass Media to supplement and complement extension besides extensive use of Information and Communication Technology to support Agricultural Extension.

Public extension by itself can no longer respond to the multifarious demands of farming systems. Therefore, harnessing synergetic effect of public and private sector extension providers like NGOs, Input Dealers and Agripreneurs etc., find a specific mention.

For increasing the farm level income of the average farmers, it is suggested that the extension should focus on end-to-end approach giving more stress on Market-Led Extension. Due emphasis is also made for a system in position for effective co-ordination, monitoring and concurrent evaluation and decentralized decision making of centrally sponsored schemes.

It is hoped that the Extension approach suggested by the working group for the XIth Five Year Plan will be considered by planners and decision makers in a holistic manner for achieving the targeted growth rate.

I, sincerely thank Planning Commission in reposing confidence in me by assigning this important task. I would like to place my special thanks to Member (Agri), Senior Advisor (Agri), Advisor (Agri), Joint Advisor (Agri) and their staff in Planning Commission for their co-operation in successful completion of the task in time.

I immensely thank Shri A.K.Agarwal, I.A.S., Joint Secretary (Extn.), Department of Agriculture & Cooperation, Ministry of Agriculture, Govt.of India for providing all the necessary information and his active part in the deliberations of the working group.

As Chairman of the working group, I sincerely thank all the Group members, Chairmen and Member Secretaries of various sub-groups who have immensely contributed in finalizing this report. I would specially like to place on record the contribution of Shri K.V. Satyanarayana, I.A.S., Director General, MANAGE, Member Secretary of the working group, his faculty and the staff.

Date: 12-01-2007

Place: New Delhi

J.N.L. SRIVASTAVA
Chairman

Working Group on Agricultural Extension

EXECUTIVE SUMMARY

1. The National Development Council has visualised an overall growth rate of 10 percent for the XIth Five Year Plan for which agriculture sector has to contribute a growth rate of about 4.1% as against an existing contribution of only 1.7%. This is in fact, a quantum jump requiring concerted effort. Therefore, there is an immediate need of a vibrant, dynamic and innovative approach to be adopted for agricultural extension in order to achieve the targeted growth rate and serve the farmers better.

1.1. Over the last five decades, in the name of agriculture and rural development, extension has been pushed around. It has been put to serve some production oriented programmes, area development initiatives, target group based service schemes, and, largely, as a technology delivery mechanism. However, it has hardly served, in any of these attempts, the simple purpose for which it is designed, namely, "helping people to help themselves" by relating technologies to the needs and opportunities of the farmers.

1.2. It is now widely accepted fact that sound agricultural development is essential for overall economic progress. Given its range of agro-ecological setting and more than 120 million farmers, agriculture is faced with a great diversity of needs, opportunities and prospects. If it is to respond successfully to the new challenges posed, greater attention will have to be paid to information-based technologies, strengthen means of dissemination to transmit the information to farmers.

1.3. The National Commission on farmers has drawn attention to the knowledge deficit, which constrains agricultural productivity. To overcome this, the farmers will need effective linkages with Universities and best practices. A good extension system is the means for achieving this linkage, which for the present has virtually collapsed in most states, partly as a result of constraints on non-plan expenditure. As a result, farming practices in large parts of the country are sub-optimal.

1.4. By the year 2010 and 2020, we need to reach a production level of about 247.8 MT and 296.6 MT of food grains respectively from the present production level of 206.39 MT (2004-05). The projected production must come from improved resource efficiency and increase in yield. Since, the output of new technology gradually slowed down and in

fact, for more than two decades no new break-through technologies have been made available. Substantial yield gaps still exist in major crops. It has been observed that the available technologies have not been adopted effectively and efficiently and even wherever adopted there were notable unevenness and distortions.

2. Planning Commission, Govt. of India constituted a working group on Agricultural Extension for formulation of XIth Five Year Plan Approach (2007-2012) under the Chairmanship of Shri J.N.L.Srivastava. The Working Group in turn constituted six sub-groups with specific terms of reference. The subgroups after critically reviewing the existing approaches, strategies and ongoing schemes have submitted their recommendations on the Agricultural Extension approach for the XI Five Year Plan. Working group has also taken into consideration the recommendations of the National Commission on Farmers (NCF).

The major tenets of the recommended approach are as indicated below:

2.1 Farmers in general and small / marginal / women farmers in particular are the most affected since their coping capacity is very limited and they do not have adequate access to extension services. Therefore, the proposed approach to extension would mainly focus on these vulnerable groups.

2.2. The Agricultural Technology Management Agency (ATMA) approach of ITD component of NATP has created significant impact on yields and incomes of farmers. It was up scaled to 252 districts under Extension Reforms in the country and the experience suggests that adequate funds are to be made available to reach large number of small / marginal and women farmers.

2.3. An important means to upgrade the process of dissemination in crops and live stock is farmer-to-farmer approach, which is found to be very pertinent as indicated by National Commission on Farmers. The farmer-to-farmer learning and technology transfer is most frequent and found reliable, hence, services of innovative and progressive farmers will be utilized as change agents / para professionals which would solve the acute problem of manpower shortage at field level through Farm schools and Farmer field schools.

2.4. The need for quality manpower is also realized owing to shifting emphasis towards diversification, commercialization, sustainability and increased efficiency. Adequate attention is given to build the capacity of extension functionaries to promote Farmer-led Extension through Farm schools and Farmer field schools. This would be achieved through concerted efforts and continuous capacity building of stakeholders.

2.5. The challenge before extension agency today is how to involve and motivate more than 74% of the resource poor farmers with a holding size below one hectare to take command of their situation and reduce the innovation adoption period. The other area of concern is the meager marketable surplus at individual farmer level. The emphasis should be to organize the farmers around the commodity for getting them the benefits both mutually within the community and in interaction with external agencies supporting the development process. As such developing farmers organisations and federating them at block/district/state level and linking the economic activities and market assumes greater significance to attain the power of scale of economies and collective bargaining in the present context to sustain the developmental efforts.

2.6. Research-Extension-Farmer and Market Linkages are being undertaken in a routine manner in the present context. Though, there is an interaction between extension and farmers, the interaction between research and extension; research and farmers is lacking very much. This area demands greater focus, since investment in technology generation has to take into account farmers' needs, context and the opportunities available. The integration of Research, Extension, Farmer and Market linkages, need to be addressed by undertaking research and extension activities through the participatory technology development mode, creating a Research-Extension-Farmer and Market coordination committee at state level to take necessary policy initiatives to enable and establish linkages. At district level R-E-F-M linkages would be ensured through ATMA.

2.7. The farming system approach need to emphasize the research and extension agenda determined explicitly by farmers' needs through an understanding of the existing farming systems rather than perceptions by research scientists and extension functionaries.

2.8. There is duplication of efforts with multiple agencies doing extension work without convergence. There should be coordinated effort to synergise and converge these efforts at the district and below to improve the performance of various stake holders. It is essential to route all the state and Central Government extension fund through single agency like ATMA.

2.9. A system may be placed in position for effective coordination, monitoring, concurrent evaluation, application of timely corrective measures and a decentralized decision making process at zonal level for all the centrally sponsored schemes.

2.10 With a view to support extension intervention by private sector, project based funding with clearly defined outlay-outcome matrix with log frame approach should be promoted.

2.11. It is evident that public extension by itself can no longer respond to the multifarious demands of farming community. Public funding for sustaining the vast extension infrastructure is also under considerable strain. Therefore, Public-Private Partnership need to be promoted for sharing of resources and convergence. To promote private investment in Agricultural Extension, it is felt essential to provide fiscal incentives.

2.12. The average contribution of women in farm production is estimated to be about 55-65% with higher percentage in certain regions and farming systems. Understanding of the roles performed by farmwomen and the needs and constraints faced by them in the field would be addressed appropriately and the existing allocation of 30% of funds for extension activities exclusively for women should be continued.

2.13. The use of Information Technology in extension enables the extension workers to be more effective in meeting the information needs of farmers. It is suggested to have a dedicated TV channel on agriculture, subject to feasibility; usage of strengthened network of community radio and FM Radio to focus on location specific problems of farmers and technology transfer. Similarly, Kisan Call Centers would need strengthening.

2.14. The extension should shift the focus from mere production to market demands. Market led Extension would enable the farmer to realize better prices for their farm produce and maximize the farm income.

3. The broad approach suggested by the working group is categorized into two components, i.e. (1) strengthening and up scaling of on-going schemes and (2) launching of new initiatives.

3.1. The Working group has deliberated on the major constraints in implementation of ongoing programmes and strategy to be followed to overcome them. It is recommended that convergence and synergy would be the key principles in operationalising extension reforms by channelizing extension fund of agriculture and line departments through the ATMAs. In view of this, it is proposed to upscale the ATMA model in all 588 development districts.

3.2. The success of NATP served as the basis for launching extension reforms at national level which imbibed process and institutional reforms mechanism of NATP but similar provision for manpower, infrastructure were not made. Therefore, it is proposed to provide dedicated manpower, adequate funds for infrastructure facility and capacity building, which would ensure successful implementation of extension reforms.

3.3. At present, infrastructural support is lacking at block level. As Farm Information and Advisory Centre (FIAC) plays an important role in operationalising ATMA activities at block level, it is necessary to provide adequate support through infrastructure and funds to enable FIAC to deliver extension services.

3.4. Awareness about Agri-Clinics and Agri-Business Centres scheme will be increased through electronic and mass media and the scheme would be continued with credit linked subsidy duly involving agri-business companies, state governments and banks. Services of agripreneurs will be utilized in extension delivery of Government Extension Programmes.

3.5. Agro-Polyclinics may be established by the private sector or in PPP mode at block level to provide multiple services to farmers. Necessary incentives need to be provided.

3.6. Human Resource Development in Agricultural Extension will be strengthened through additional financial support to central institutions, strengthening MANAGE as International Centre for Excellence, restructuring of EEIs and by providing core faculty for SAMETIs.

3.7. It is experienced that the group approach ensures efficiency and equity in delivery of extension services. Hence, farmers organizations and their federations would be promoted and federated for sustaining the developmental efforts. The whole process will be oriented to develop the capacity of farmers to plan, attract support from all related organizations based on their needs and resources. In order to promote Farmer Led Extension, progressive farmers identified from each commodity group / federation will be trained in major commodity / enterprise. These trained farmers would be used as resource persons in extension activities. Programs such as promotion of Farmers Organisation (FOs) and their federation and Capacity Building of Farmers in Agriculture for Farmer-Led Extension (CAFÉ) have been proposed. Outstanding farmers may be recognized through Awards at various levels and their services will be utilized through travelling seminars.

3.8. It is proposed that active and effective NGOs working in the field of agriculture would be involved in extension delivery mechanism.

3.9. In order to make use of large network of input dealers, who are the major source of farm information, are proposed to be supported partially to pursue the Diploma in Agricultural Extension Services for Input Dealers (DAESI) being offered by MANAGE so as to expand the program.

3.10. The total financial requirement for the XI Five Year Plan (2007-2012) to operationalise the proposed extension approach is estimated at Rs. 14767.34 crores other than credit from Banks and margin money contribution of Agri-preneurs under the Agri-clinics and Agri-Business Center Scheme.

1. AGRICULTURAL EXTENSION APPROACH FOR XI FIVE-YEAR PLAN

The National Development Council envisaged an overall growth rate of 10 percent during the 11th Five Year Plan. But, the fact remains that the agricultural sector has lagged behind pace with other sectors of the economy. To achieve the targeted 10 percent growth, agriculture has to gear up to attain a growth rate of 4.1 per cent as against 1.7 per cent of the 10th plan. Declined Agriculture growth during previous plan upshot serious implications on not only food and rural livelihood security but also resulted in farmers' distress and suicides. Therefore, extension principles, technology content and operational strategy demand earnest contemplation. In other words, a vibrant and dynamic approach for Agricultural extension is a strategic necessity to make envisaged growth a reality.

1.1. Overview of Agricultural Extension System in India

Over the last five decades, in the name of agriculture and rural development, extension has been pushed around. It has been put to serve some production oriented Programmes, area development initiatives, target group based service schemes, and, largely, as a technology delivery mechanism. However, it has hardly served, in any of these attempts, the simple purpose for which it is designed, namely "helping people to help themselves" by relating technologies to the needs and opportunities of the farmers.

Perhaps, three important factors had their sway during this period. For the most part, the country was pre-occupied with the goal of attaining food self-sufficiency. Also, there was a strong concern that the development Programmes should be equitable to all segments of the rural population. Thirdly, the emergence of new agricultural technology, made up of seed-fertiliser combination, had an over-whelming influence on the developmental efforts.

In the post-green revolution era, there is a qualitative change in the situation and the food security has been achieved. Alternative poverty alleviation Programmes have been put into operation to reduce the rural inequalities. However, the emergence of break-through technologies has ceased to evolve, for the past several years. The 'technology push', so dominant a factor in the 60s and 70s, is no more a consideration at present. As a result, the role assigned to the extension system as the 'handmaid of research" does not appear to be purposeful, any more. In fact, the context in which extension has been operating has changed in many ways. As experience has indicated, the extension service runs into difficulties whenever it becomes stagnant and gets ritualized losing its dynamism in dealing with the regional and temporal variations or challenges posed by a developing agriculture.

It is now a widely accepted fact that sound agricultural development is essential for overall economic progress. Given its range of agro-ecological setting and more than 120 million farmers, agriculture is faced with a great diversity of needs, opportunities and prospects. If it is to respond successfully to the new challenges posed, greater attention will have to be paid to information based technologies and strengthen means of dissemination to transmit the information to farmers.

The National Commission on farmers has drawn attention to the knowledge deficit, which constrains agricultural productivity. To over come this, farmers need to have an effective linkages with Universities and best practices. A good extension system is the means for achieving this linkage, which for the present has virtually collapsed in most states, partly as a result of constraints on non-plan expenditure. As a result farming practices in large parts of the country are sub-optimal.

The 11th Five Year Plan provides an opportunity to restructure policies to achieve a new vision of growth that will be much more broad based and inclusive and bring about faster agricultural development in the country. In the context of meeting the holistic needs of increasing agricultural production in a sustainable manner, the agricultural extension has a key role to perform. Therefore, there is a need for critical revision of extension approach for achieving the desired goals.

1.2. Emerging Challenges

Significant growth in agriculture is pre-requisite for engineering country's economy on fast track. Support to agri-based and expanding export market besides ensuring national food security needs focus in agricultural growth. The combined effect of an unabated population growth, improved family income, increasing industrial needs and rising export requirement has been causing drastic changes in the demand pattern for agricultural commodities in the liberalized era.

The problem is compounded by the fact that the farm holdings in the country are shrinking in size, production costs are rising, and the resource drain from the farm sector is mounting in recent decades.

By the year 2010 and 2020, we need to reach a production level of about 247.8 MT and 296.6 MT of food grains respectively from the present production level of 206.39 MT (2004-05). The projected production must emanate from improved resource productivity. Since, the output of new technology gradually slowed down and rather, for more than two decades no new break-through technologies have been offered. Substantial yield gaps still exist in major crops with the available technology. Research indicates that the available technologies have not been adopted effectively and efficiently, further more notable unevenness and distortions were observed wherever adopted. Additionally, the main global forces of change that are affecting or are likely to affect the existing structure, mandate and practices of national agricultural extension systems are globalisation and market liberalization; privatization; commercialization and Agribusiness; democratization and participation; environment concerns; information technology break through; sustainable development; Eco technology and genetic engineering; market led extension; diversification and value addition integrated, multidisciplinary and holistic development.

It is true that the growth in the agriculture sector is not the sole responsibility of the extension service. Many other factors including policy interventions, price incentives, institutional support and market facilities also play a significant role. Since agricultural production is entirely in the hands of the farmers, the extension service has the central

role in informing, motivating and educating the farmers about the available technological, managerial and market opportunities and enable them to improve their farm productivity and income.

In order to address the key constraints faced by extension system and to meet the emerging challenges the Innovations in Technology Dissemination component of National Agricultural Technology Project (NATP) was implemented in seven states in the country through four project districts in each state. Agricultural Technology Management Agency (ATMA) approach and the impact were documented by an independent agency, the Indian Institute of Management (IIM), Lucknow. It revealed that there is a remarkable achievement of institutional and operational reforms in addition to the significant project impact. Thus, with the backdrop of changes and keeping in view the futuristic needs, direction and vision, Extension Reforms was initiated in 252 districts all over the country during the Xth five-year plan based on the NATP experiences.

Extension reforms was a major intervention in overhauling the extension system for making it farmer driven and farmer accountable through process and institutional reforms mechanism in the form of Agricultural Technology Management Agency (ATMA) at district level. It operationalises the extension reforms with focus on reforming public sector extension, Decentralized decision making, Farming systems approach, Bottom-up planning, Group approach in Extension, Promoting private sector, Augmenting media & information technology, Mainstreaming gender and Capacity building of various stakeholders. Commitment to promote public-private partnership in agricultural extension management is demonstrated by reserving minimum 10 percent of the funds. Similarly, considering the need for gender concerns to be mainstreamed in agricultural extension, minimum 30% of resources on programs and activities are earmarked for women farmers. ATMA promotes an active participation of farmers / farmer groups, NGOs, Krishi Vigyan Kendras, Panchayati Raj Institutions and other stakeholders operating at district level and below. In addition to Support to State Extension Programmes for Extension Reforms, the Department of Agriculture & Cooperation (DAC) has initiated number of schemes to revitalize the agricultural extension system in the

country, duly incorporating the elements needed for reforms. These Schemes are Mass Media Support to Agricultural Extension — utilizing infrastructure of Doordarshan and All India Radio; Kisan Call Centres — for providing agricultural information through toll free telephone lines; Establishment of Agri-Clinics and Agri-Business Centres — by providing self-employment opportunities for professionally qualified agricultural graduates facilitating delivery of value added extension services and finally Extension support to central institutions.

1.3. Consultation Process

The Working Group on Agricultural Extension for formulation of XI Five Year Plan (2007-12) was constituted by the Planning Commission, Govt. of India vide letter No.M-120432/7/2006-Agri dated 6th June, 2006 (**Annexure-1**) under the chairmanship of Shri J.L.N. Srivastava, I.A.S., (Retd.) Former Secretary (Agri.), Ministry of Agriculture, Govt. of India. The working group decided that for facilitating broad-based consultations, more experts have to be co-opted as members (**Annexure-2**). It was also decided to constitute six sub-groups to consider the specific ToR assigned to them. Accordingly, the sub-groups on Extension (General), Research and Extension Linkages, Private Sector, Training, Gender and Media & ICT were constituted (**Annexure-3**). The sub groups critically reviewed the existing approaches, strategies, priorities, institutional arrangements, on-going policies and performance of Programmes relating to Agricultural Extension at the Central and State level; and suggested for continuation / discontinuance / rationalization / improvement in design of the on-going Programmes or new initiatives and an effective mechanism for inter-sectoral convergence with a view to meet extension needs during the XI plan. The sub-groups have submitted their recommendations. (**Annexure-4**). The recommendations were considered in a meeting of the Chairmen and Member Secretaries of the sub-groups. The recommendation of the National Commission on Farmers (NCF) have also been considered while formulating the approach paper on Agricultural Extension under XI Five Year Plan.

1.4. Salient recommendations of sub-groups on agricultural extension:

- Extension is the most important instrument for agricultural development, hence, extension Reforms Scheme may be up-scaled in all the 588 development districts

- in the country for strengthening extension system by establishing Agricultural Technology Management Agencies (ATMAs).
- There is a need to establish a well equipped State Agricultural Management and Extension Training Institute (SAMETI) at state level, full complement of staff in ATMA, and strengthening a training institution at the district level for effective delivery of extension system.
 - Since all the districts have Krishi Vigyan Kendras (KVKs), generally one per district, the mandate and functioning of KVKs should be clearly defined, and KVKs and ATMAs must complement activities of each other and should avoid duplication. Synergy between these institutions should be clearly promoted.
 - Progressive farmers from different commodity groups may be identified, trained at District, State and National level. They may be recognized as resource persons in extension activities, further promoting the farmer-to-farmer extension.
 - Wide publicity is required for popularizing Kisan Call Centres among farming community and other stakeholders.
 - Diploma in Agricultural Extension Services for Input Dealers (DAESI) programme may be up scaled to entire country so that the services of input dealers can be utilized as Para extension workers at village level.
 - Create mechanism at district and block levels for integration of the efforts of multiple agencies involved in research and extension activities both in public and private sectors.
 - To monitor effectively the Operationalisation of Research – Extension linkages, a separate Monitoring & Evaluation Cell (Research-Extension-Farmer and Market Coordination Committee) to be operationalised with the Agricultural Production Commissioner (APC) in each state. Similarly, at district level ATMA should ensure R-E-F-M linkages.

- Farm schools and farmers organizations would be promoted on a massive scale in extension work.
- National Institute of Agricultural Extension Management (MANAGE) may be promoted as International Centre of excellence in Agricultural Extension Management laying greater emphasis on capacity building activity at National level and SAMETI at State level.
- Establishment of a national forum for research and extension as a clearinghouse for various developmental issues in research and extension.
- Adequate provisions are made under Extension Reforms for involvement of PRI's, which need to be effectively implemented.
- Agripreneurs may be identified, trained under Agri-Clinics and Agri-Business Centres Scheme and established with the help of ATMA's. Such Agripreneurs may be linked to commodity specific groups. AC-ABCs may also be associated in implementation of ATMA activities.
- Agri-Clinics and Agri-Business Centres Scheme may be continued with strengthened handholding mechanism involving state governments, ATMA's, Agri-Business companies and Banks.
- Agro-Polyclinics may be established at block level by private sector or in Public Private Partnership (PPP) mode to provide multiple services to farmers.
- Awards may be instituted at different levels in recognition of services / achievement of farmers and extension service providers.
- Sustained Capacity Building of Public Extension Functionaries should be taken up for providing quality extension services.
- Extension intervention by the private sector should preferably be in project mode with quantifiable results and accountability aiming at maximizing profit of

farmers. Private initiatives may be supported by government schemes, fiscal incentives.

- There is a need to strengthen Extension Education Institutes (EETs) as Zonal level Training Institutions liberating from State Agricultural Universities(SAUs) control.
- In all the trainings programmes at all levels, women participation must be ensured. Specialized training for women trainers; women farmers have to be organized. Across all the programmes, allocation of minimum 30% of the resources may be ensured for training of women functionaries/women farmers.
- Involvement of private training / Human Resource Development / consultancy institutions in training programmes in specialized areas.
- Placement of core faculty in management areas is needed at SAMETIs to inculcate managerial competencies in extension functionaries.
- To organize the Farmers field schools on massive scale, adequate trained manpower may be ensured by State Agricultural Universities, KVKs, SAMETIs and State Agriculture and allied sector departments.
- Training Need Assessment (TNA) at grass root level to be conducted by ATMAs / SAMETIs.
- Specific schemes like Women in Agriculture with modifications should be continued till gender mainstreaming is made operational at various levels.
- All the stakeholders in agricultural extension may be sensitized in gender issues.
- Self Help Groups may be supported with better credit, marketing facilities and support services.
- Gender budgeting may be introduced meaningfully in agricultural extension programs.

- The programme content, service delivery and the business models of Mass Media and Information & Communication Technology (MM&ICT) should specially address the needs of small and marginal farmers.
- KVKs should play a key role in support of the Mass Media and ICT initiatives in each district. The Community Radio Centres may be established at each KVK so as to provide location specific information to the farming community.
- A dedicated TV channel for agriculture may be launched, if feasible.
- Mass Media & ICT attempts by public, private and NGOs in the field of agriculture and related sectors need to be converged and shared among them.
- The gaps identified in Strategic Research and Extension Plans (SREPs) of each ATMA district and Frequently Asked Questions (FAQs) of Kisan Call Centers may be used for production of the messages/programmes for Radio, TV, print and content for training Programmes.
- There is a need to improve the awareness among farmers on Kisan Call Centres (KCC)- particularly its cost free services through toll free telephone so as benefit needy farmers.
- Expertise of level-I of KCC needs to be improved.
- FM Radio should have a provision for advertisement while broadcasting of agriculture programmes as a business model to generate revenue under Public-Private-Partnership mode.
- For decentralized decision-making, effective coordination, monitoring and concurrent evaluation of centrally sponsored Programmes, Zonal level coordination units similar to Zonal coordination unit of KVKs need to be established.

1.5. Basic Approach to Agricultural Extension in 11th Five-Year Plan

With a view to meet the challenges facing extension services and overcoming most of the identified constraints, the following extension approach would be adopted during 11th five-year plan through various programs and activities.

Focus on extension reach to small, marginal farmers, women, and disadvantaged groups

Due to decline in agricultural growth and adverse climatic conditions, farmers in general are in distress and the most affected are small, marginal, women farmers and disadvantaged groups. They suffer more since their coping capacity is very limited as their dependence is more on monsoon under rain fed condition and they have limited access to organized extension support. Poverty reduction will be possible only when small and marginal farmers, farmers from rain fed areas and women farmers participate fully in economic growth. Hence the extension should focus more on these groups aiming to raise their overall economic efficiency.

Strengthening and up scaling new institutional mechanism

National Agricultural Technology Project (NATP) was pilot tested in seven states and 28 districts based on which up scaling the scheme under extension reforms was considered. Evaluation study conducted by Indian Institute of Management (IIM), Lucknow revealed that NATP project had significant impact on yield levels and income of farmers. Adequate funds for extension activities, dedicated manpower at different levels and infrastructure support played important role in bringing the changes at farmers level. The success of NATP served as basis for launching Extension Reforms Scheme in 252 districts at national level during X five-year plan. Extension Reforms imbibed process and institutional reform mechanism of NATP but similar provisions for manpower, funds and infrastructure were not made.

Over the years, manpower and shortage of funding have adversely affected the performance of public sector agricultural extension services. In India there are about 120 million farm holdings and the number is growing year by year. If it is proposed to provide one village extension worker for every 800-1000 farm families then the requirement of field level extension workers is estimated to be about 13-15 lakhs, against which the present availability is only about one lakh workers. Presently no state government can provide required number of field level workers, as it is cost prohibitive. Further, the state government priorities for utilization of services of their staff are different, which are generally utilized for various supply oriented and popular schemes, rather than transfer of technologies to the farmers and extension is likely to be casualty. Hence, it is essential to provide dedicated manpower at ATMA and core manpower at SAMETI for realization of the full impact of Extension Reforms.

Due to obvious reasons known to all and even under the present liberalization, privatization and globalization regime, public extension system has key role in educating farmers and helping them to take right decisions. In this context, it is to be noted that Extension should be treated as a service delivery mechanism and shall not be viewed as a revenue-generating program. Hence, the principles governing business models of revenue-generating program should not be made applicable for extension services. The fund allocation for extension activities under extension reform was very meager. If the extension expenditure on farm households is @ Rs 1000/year, to cover 120 million farmhouse holds need a huge fund outlay. Hence adequate fund allocation to reach large number of small and marginal farmers by extension agency is essential. Adequate infrastructure below district level is needed to support capacity building of farmers. In view of the above, it is essential to upscale the ATMA to all 588 development districts by incorporating the modifications and taking consideration of all the pre-requisites to meet the emerging and imminent changes in the context of "Wake up Call" given by the **National Commission on Farmers (NCF)** and "Regaining Agricultural Dynamism". These provisions are expected to enhance the acceptability of the scheme by states and effective Operationalisation of the scheme in original spirits.

Developing farmer as resource person for promotion of Farmer Led Extension

National Commission on Farmers (NCF) indicated that farmer-to-farmer learning and technology transfer is most frequent and is found to be reliable. Farm schools at the farms operated by farmer-achievers should be established in large number in different agro-climatic zones and farming system regimes.

Farm School

In the midst of the hunger and distress 'hot spots' there are numerous agricultural 'bright spots' in the country. The 'bright spots' covering crops, fruit trees, farm animals and fisheries indicates how we can shape our agricultural future. These bright spots are the results of the work of innovative and hard working farm women and men. It is proposed that farm schools may be established in the fields of such innovative farmers, in order to spread their messages and methods. A cadre of grass root Farmer Trainers can be built up through such farm schools. Farm Schools can also be powerful instrument for participatory research and knowledge management. The host achiever farmer may be designated as Farmer Scientist / Farmer Professor in the respective crops / enterprises considering his area of expertise. Similar attempts in a few districts proved to be encouraging. This would facilitate development of farming situation / system specific packages. The farm schools will help to impart a sense of grass root realism to the capacity building programmes.

Farmer Field Schools

Farmer Field Schools (FFS) consist of groups of people with a common interest, who get together on a regular basis to study the 'how and why' of a particular topic. The topics covered can vary considerably from Integrated Pest Management (IPM), organic agriculture, animal husbandry, and soil husbandry, to income-generating activities such as bio-agents production. The purpose of FFS would be to produce a healthy crop in a sustainable way duly understanding the fundamentals of eco-system.

Recognizing the outstanding farmers through Awards

Services and achievements of farmers as national builders is not adequately recognized through institutional mechanism at various levels. It is important to have

such institutional mechanism so that farmer achievers are recognized, rewarded and motivated. They are also projected as role model in agriculture development and used extensively in agricultural extension activities by various organizations at various levels through traveling seminars. Several states have already made an attempt to recognize the services of outstanding farmers by Awards. Awards to farmers at block, district and state levels need to be instituted.

***National Commission on Farmers (NCF)** has observed The social prestige and status accorded to farmers are also low. Farmers seldom receive recognition through Padma Awards on Republic Day – an index of the low recognition given to the contributions of 650 million farm women and men not only to food and livelihood security, but also to national sovereignty. Lal Bahadur Shastri's slogan "Jai Kisan" is yet to be converted into public policies which recognize the pivotal role of farming communities in national well-being and security.*

Padma Awards are provided to citizens who make outstanding contributions in different areas. Unfortunately farmers contribution for ensuring food security of the country is not acknowledged through existing mechanism. Hence, farmers with outstanding contribution may also be considered for Padma Awards. It is noted in this regard that the Department of Agriculture & Cooperation (DAC), Ministry of Agriculture, Govt. of India is in the process of launching Krishi Ratna awards at the national level.

Provision of adequate quality manpower

Indian Agriculture is passing through a phase of reforms, owing to its shifting emphasis towards diversification, intensification, commercialization and sustainability, which has posed newer challenges before the extension functionaries. Understanding and appreciating the information needs of different clients (farmers, farm women, labourers, youth, etc.) and providing quality extension services is central to its success, which necessitates quality manpower at different levels. Among extension services, training is a key input for human resource development and contributes substantially to face the challenges by all concerned. This should aim at systematic analysis of training needs of the target groups, optimal use of training resources, institutional capacity

building, equal opportunity for all the functionaries to upgrade their extension skills, quality bench marking of training institutions, effective utilization of international experiences and above all quality manpower is required for knowledge empowerment of farming community. Although there are significant efforts made during the past decade to improve the quality of extension manpower, still there is a greater scope for further improvement since the situation in extension is dynamic like need assessment, group formation, negotiation, conflict resolution, social mobilization, management of Common Property Resources (CPRs), Use of IT, Documentation of success stories and replication would assume greater significance. This could be achieved through continuous capacity building of all the stakeholders to improve the effectiveness of the delivery system. Since private extension service providers also play a major role in technology transfer, it is essential to improve the capacity of all the service providers in agriculture like Input dealers, Agripreneurs, NGO personnel, Program producers of Private TV channels and print media on continuous basis.

***National Sample Survey Organisation (NSSO)** revealed “over 50 per cent of farmers who received farming related information from sources like Radio, TV and Newspapers actually ‘tried’ the information or adopted the recommendations, whereas over 80% of those who obtained the information from ‘input dealers’ or ‘other progressive farmers’ tried or adopted them. About 65 per cent of farmers who accessed information from extension workers or the ‘Krishi Vigyan Kendra’ actually tried or adopted”.*

***National Commission on Farmers** stressed the importance of training to the input dealer as..... “Recognizing the input dealers and suppliers were second most common source of information, regular trainings of the dealers / suppliers / retailers should be organized not only to update their knowledge but also to improve their communication skills and attitudes to empower farmers with new information on inputs use and farming operations”.*

Promoting farmer organizations

The challenge before extension agency is to involve and motivate more than 74% of the resource poor farmers with a holding size below one hectare to take command of their situation and reduce the innovation adoption period. The other area of concern is the meager marketable surplus at individual farmer level. The emphasis should be to organize the farmers around the commodity for getting them the benefits both mutually within the community and in interaction with external agencies supporting the development process. As such developing farmers' organizations and federating them at block/district/state level and linking the economic activities and market assumes greater significance to attain the power of scale of economies and collective bargaining in the present context to sustain the developmental efforts.

Integrating Research-Extension-Farmer-Market linkages

Research-Extension Farmer and Market Linkages are being undertaken in a routine manner in the present context. Though, there is interaction between extension and farmers seldom there is interaction between research and extension; and between research and farmers. This area demands greater focus, as technology generation has to take into account the farmers' needs, context and the opportunities available. The integration of Research, Extension, Farmer and Market linkages, need to be addressed by undertaking research and extension activities through the participatory technology development mode, creating a Research-Extension-Farmer and Market coordination committee at state level to take necessary policy initiatives to enable and establish linkages.

At Zonal level institutions like Zonal Research Stations and line departments need to prepare a Zonal Agricultural development strategy through consultative approach.

At district and below level, the key institutions like KVK, ATMA and farmers organisations need to have a close linkage with each other for technology assessment, refinement and to create a platform between farmers' organization and market opportunities. The research and extension agenda of the district is set by multi-

disciplinary team involving scientists, extension workers, farmers and other stakeholders which would ensure R-F-E-M linkage.

National Commission on Farmers stressed the relevance of linkages as*"Farmer participation and feedback should become an integral part of agricultural resource and technology transfer. Considering that majority of our farmers are small and resource poor and depend heavily on public good technologies and information, the public sector agricultural extension men and women should be empowered and sensitized to meet the demands particularly by forging research-extension-education-farmer-market linkages".*

Farming system approach

The recommended technology should include not only production practices of single crop but also should take into account of components like soil, water, crops, livestock, labour, capital, energy and other resources, cropping system and post – harvest technologies etc. The farming system approach would emphasize the research and extension agenda determined explicitly by farmers' needs through an understanding of the existing farming systems rather than perceptions by research scientists and extension functionaries.

Convergence of extension services

There are many extension service providers in the field, providing different kinds of useful services like information and service support to farmers. They are state, central government agencies, agri-business companies, agri-preneurs, input dealers, manufacturing firms, NGOs, farmers' organizations and progressive farmers. There is duplication of efforts with multiplicity of agents attending extension work without convergence. There should be coordinated attempt to synergise and converge these efforts at the district and below to improve the performance of various stakeholders. It is essential to route all the state and Central Government extension fund through single agency like ATMA for effective utilization of crucial resources.

Decentralised decision making and coordination at Zonal level

Centrally sponsored scheme on Macro Management of Agriculture has been operationalised for supplementation / complementation of state government efforts through work plans by integrating 27 schemes and approved pattern of assistance under agriculture, horticulture etc. A system may be put in place for effective coordination, monitoring, concurrent evaluation, corrective measures and decentralized decision making at Zonal level. This would also help in dovetailing Agro-climatic Zonal Planning with operational working plans and strengthening Research-Extension-Farmer-Market (R-E-F-M) Linkages, which may conceptually be similar to the KVK Zonal Coordination Institutions.

Training as strategic tool focusing on demand driven and farmer oriented training strategies

National Sample Survey Organisation (NSSO) survey indicates that 60 percent of the farmers do not access any source of information for advanced agricultural technologies. As a result, there is a wide adoption gap among farming community to achieve the vertical increase in production through optimum resource utilisation. The function of agricultural extension, essentially, is helping farmers to progressively improve their efficiency in farming. For this purpose, it has to relate useful, practical technology to the needs and opportunities of the farmers, on one hand, and encourage them to consider, try and adopt such technology if found acceptable, on the other. Hence there is a greater chance now for extension to bridge the gap between technical know-how and farmers' do-how among large section of farming community who do not have any access to information so far. Therefore, Training as strategic tool would focus on demand driven and farmer oriented training Programmes. Also, farmers need to be drawn around a commodity or on common interest and imparted training through commodity interest groups for effective dissemination of technology.

National Commission on Farmers emphasized the need for training as
“The ‘problem population’ can thus be converted into a valuable ‘human resource’ through activity-oriented training and skill improvement, helping to develop entrepreneurship and facilitating self-employment by using new technologies”.

Synergy between public and private sector extension service providers

The public sector dominance in agricultural extension has been criticized on grounds of efficacy, accessibility and economic service delivery. Increasing restraints on government finances and emergence of new extension arrangements offered by the private and voluntary sector have accelerated the process for limiting the role of government in extension. It is becoming increasingly evident that public extension by itself can no longer respond to the multifarious demands of farming systems. Public funding for sustaining the vast extension infrastructure is also under considerable strain. Meanwhile, in response to market demand the existing public extension network is inexorably being complemented, supplemented and in some instances even replaced by private extension. Post Green Revolution period witnessed the emergence of strong private sector, especially in certain areas like marketing of inputs. At present, private sector has also diversified their activities and now they undertake a range of functions including value-addition, agriculture trade, extension advisory service etc., Considering the fact that public extension system alone will not be able to deliver the required services for farmers, private sector has also to be effectively utilized.

Public-Private-Partnership (PPP) in extension has to be promoted for convergence and sharing of resources. Horizontal expansion of private sector increases through partnership with public extension, while vertical expansion of public extension increases through partnership with private sector. The potential private extension service providers could be identified and made partners in PPP mode for effective management of services and for nurturing a plurality of institutions. Under Extension reform, minimum 10 percent of the fund allocation is made to undertake extension activities

through private extension agencies, this need to be continued by framing suitable guidelines.

National Commission on Farmers stated the PPP mechanism as....."Through PPPs including the synergies with KVKs, ATMAs, SHGs, etc., and with greater emphasis on facilitating transparent and timely adoption of various regulatory standards and guidelines to enhance access to quality inputs and markets".

Agro-Polyclinics and multi-purpose service centers at block level on PPP mode

Many private sector companies are involved in providing extension services to farmers as a part of their business strategy, namely e-Choupal of ITC, TATA Kisan Kendra, Haryali Kisan Bazar, etc. Many of these initiatives are moving towards providing multiple services, each catering to about 40-50 villages. Such private investments could be accelerated with fiscal incentives. Private sector could also be involved in implementation of extension activities with public funds. Another option for Public Private Partnership is private management of public infrastructure.

Each block has, on an average, about 20,000 farm holdings. It is, therefore, imperative that various services to the farmers are available at the block level or below. Agro-polyclinics at the block level are functioning in several districts. Agro-polyclinics/multiple service centres need to be promoted at the block level. These could be set up by the private sector either on their own or in PPP mode. Necessary incentives need to be provided to the private sector for the purpose.

Gender mainstreaming

It is reported that in overall farm production scenario, average contribution of women is estimated as 55-65% of the total labour, with percentages much higher in certain regions and farming systems. A study conducted by FAO found that women in developing countries contributed about 80% towards food production and received only

2 to 10% of the extension support. Understanding of the roles performed by the farmwomen and the needs and constraints they face in the field should be addressed appropriately. Agriculture situation demands targeted changes in the existing agriculture extension and support services through Gender Mainstreaming Practices. Gender Mainstreaming should be taken up holistically with its complete conceptualization. Appropriate structural, functional and institutional measures are inbuilt in the ATMA to empower women, build capacities and improve their access to extension support with 30% allocation of fund on extension activities exclusively for women to be continued. MANAGE has devised a training module on Gender for developing the Master trainers for undertaking the capacity building of extension functionaries across the country.

Extension interventions by private sector in project mode for better results and accountability

Any extension intervention by the private sector should be in a project mode with quantifiable results and ensuring accountability aiming at profit maximization for farmers. Such private initiatives may be supported by government schemes, fiscal incentives and tax benefits to the extent of 150% of investment on Agricultural Extension. It has to be ensured that such intervention should result in bridging knowledge gaps, enhancing yields, protecting yield gains, minimizing Post Harvest losses, augmenting value-addition, increasing income and promoting eco-technologies routed in the principles of ecology, economics, equity and employment. Project based funding with clearly defined outlay-outcome matrix on the lines of log frame option has to be promoted under Public Private Partnership for effective delivery of extension services.

Use of Information and Communication Technologies (ICT) for effective extension services

Extension is now becoming more diversified, technology intensive, knowledge oriented and more demand-driven. This requires the extension workers at the cutting edge level to be master of so many trades, which is neither practicable nor possible. Use of IT in extension enables the extension workers to be more effective in meeting

the information needs of farmers. The growing Information and communication technology is used widely in the entire developmental sector except in agricultural sector. Use of interactive multimedia and such other tools will help the extension workers to serve the farmers better.

Similarly, extension systems have to utilize the existing print and electronic mass media for faster dissemination of information to farmers. The technological advancement in telecommunication and space technology has to be fully tapped for devising appropriate programs for farmers. Capacity building Programmes were taken up for mainly public media personnel. There is need for capacity building for both Public and private programme producers on delivery of agricultural information for farmers through TV and Radio. Though there are about 300 TV Channels in India, but none for agriculture. A dedicated TV channel on agriculture may be launched, if feasible, to focus on farmers' issues and technology transfer.

The DAC had launched on 21.01.2004 Kisan Call Centres (KCC) initiative to utilize significant advancement in telecom infrastructure. The evaluation of this initiative by ASCI, Hyderabad has shown very encouraging results. This initiative needs to be strengthened. Some of the areas requiring strengthening are – (i) Level-I agents; (ii) linkages between Level-I agent and Level-II experts, etc. Greater awareness should also be created about KCC facility.

The Department of IT, Government of India has taken up several initiatives for reaching the benefit of ICT to people at large. These include State Wide Area Network (SWAN), State Data Centres (SDC) and Common Service Centres (CSC). The CSCs along with FIACs being promoted by ATMAAs provide a very important infrastructure for accessing knowledge by farmers using ICT. The content of Agriculture and allied sectors need to be digitized by SAUs / ICAR in a time bound manner particularly in the context of the Village Knowledge Centres (VKCs) being set up so that the VKCs will have adequate Agriculture content accessible to the farmers.

Often information is disseminated without understanding the needs of the farmers, or the contexts in which they can access and use information. For information to empower farmers, it must bring into focus the need to improve farmers' capacities to analyse and understand information and act on it by communicating their views. Of all the means of mass communication, community radio has several advantages. The power of community radio lies in its participatory nature, as both its content and technology are people-oriented. It is an affordable means of communication, where the people themselves raise issues and identify their own priorities. Therefore the potential of this medium should be used effectively for location specific and need based information in agriculture. Effective use of Mass media and ICT could be one of the possible means for bridging knowledge deficiency among farmers at a faster rate.

National Commission on Farmers indicated the need for ICT as
"ICT should be effectively harnessed to empower rural men and women through the **Every Village a Knowledge Centre Movement** with farming system and season specific information as well as market and price information".

It has also stressed the importance of IT as follows. "Village Knowledge Centres or Kiosks should be established at appropriate and accessible-to-all sites, such as at Gramsabha's or Panchayat's premises or at agriclinics following public-private-partnership approach. Capacities of Panchayat Raj institutions should be strengthened by training concerned personnels, including women, at each center / kiosk whose connectivity with Sub-divisional, Tahsil, District and State levels should be ensured".

..... "Effectively implement the Every Village Knowledge Centre Movement and manage Gyan Choupals to empower rural men and women by promoting and enhancing literacy and awareness at grassroots level especially on new and appropriate farming systems and season specific technologies, prices and marketing of inputs and agricultural produce and products and on disaster management and mitigation

"Create virtual networks and partnerships to rapidly share information and knowledge and increase use of mobile phone, which could operate in local languages to facilitate information diffusion and awareness rising. New ICT technologies, such as e-agriculture, whereby agricultural information can be presented in multimedia formats to improve knowledge sharing in local cultural context, should be promoted"

Farmers commission recommended "the Government to review its policy towards Community Radio, since a combination of the Internet / cell phone and community radio will help to take timely information to farmers even in the remotest parts of the country and judiciously harness ' air waves or frequencies which are public property.' It suggests that the extension and provision of community radio licenses should be streamlined and operationalised so as to reach the target community in the shortest period

Sustainability of extension programs

To sustain any programme the receiving end need to participate actively. Many of the extension programmes were not successful due to poor participation of farmers. Hence, in the extension reforms scheme there is a provision for participation of concerned state government and farmers through minimum 10% financial contribution. This ensures the ownership of programme which may lead to sustainability of the Programmes.

Focus on Market led Extension

It has become absolute necessity to shift extension focus from production-orientation to market-led extension resulting in increasing farm income by adopting end-to-end approach. Market-led extension help the farmers to minimize the production costs, improve the quality of farm produce, increase the product value and marketability resulting in increasing of income to the farmers.

2. STRATEGY FOR OPERATIONALISATION OF RECOMMENDATIONS

Six sub-groups have deliberated in detail on operationalisation of recommendations made. The broad approach is categorized into two components i.e. Strengthening and Up scaling of On-going schemes and launching of new initiatives.

A. Strengthening and Up scaling of On-going Schemes

2.1. Support to State Extension Programmes for Extension Reforms

The support to State Extension Programmes for Extension Reforms launched in May, 2005 is under implementation in 268 districts across the country and is in take off stage, however certain constraints in implementation are observed which are as follows:

Major Constraints

- Lack of convergence in Operationalisation of extension reforms
- Lack of provision for dedicated manpower at various levels

- Inadequacy of funds
- Lack of infrastructural support below district level
- Inadequate support for promotion of Farmers Organizations and their federation

Strategy to overcome the constraints

1. Lack of convergence in operationalisation of extension reforms

- Convergence is one of the key guiding principles considered in operationalizing extension reforms. It is evident from the initial experience that the convergence has not taken place at various levels satisfactorily. Hence, it is proposed all the central and the state government funds earmarked for extension activities in agriculture and allied activities should be routed through ATMA for convergence and synergy.

Further, the extension activities such as large scale demonstrations, exposure visits, trainings, activities of farmer field schools, farm schools and development of farmer scientists should be addressed through District level extension activities under Extension Reforms.

2. Lack of provision for dedicated manpower at various levels

- It is observed that almost all the positions associated with extension reforms are made on adhoc basis or given additional charges. As the extension reforms envisage radical changes in the process and institutional mechanism of the existing extension system, dedicated manpower is a necessary condition. Initial experience shows that, dedicated Project Directors contributed significantly to the success of ATMA whereas, the performance of Project Directors with additional charges was quite unimpressive. Hence, it is proposed to make financial provision under the scheme to appoint dedicated officers at various levels.
- State Level – Director, core faculty and supporting staff of SAMETI.
- District Level – Project Director, Dy. Project Director and supporting staff.

3. Inadequacy of funds

It is found that the funds are quite inadequate for undertaking extension activities at State/District/ block levels for operational expenses as well as manpower. Hence, adequate fund provision may be made to support extension activities and manpower.

4. Lack of infrastructural support below district level

The NATP experience proves that Farm Information and Advisory Center (FIAC) is an effective platform of ATMA at block level for the interface among and between members of Block Technology Team (BTT) and Farmer Advisory Committee (FAC). The infrastructure like training hall, teaching aids viz., OHP, TV, LCD, computer, internet connectivity and furniture found to be very useful for carrying out various extension activities at block level and below. The connectivity at FIAC will provide the market related information, weather forecast, inputs availability and other updated technological information to the farming community on day-to-day basis. FIAC will be grass root level nodal point for consultation for large number of farmers where large-scale digitization of agriculture information can be channelized.

There is no alternate infrastructure facility is available to BTT and FAC at block level to access such information. The FIAC would become single window delivery mechanism for information on agriculture and allied sectors at block level and below. It is envisaged that FIAC will be a forum for delivery of technological options besides being facility for training and accessing agriculture content on the net.

At present under Extension Reforms only 10% of the blocks are provided with infrastructural support at FIAC level with limited funds only for connectivity. In order to make use of FIAC for training and other extension activities, it has to be strengthened with a training hall, furniture and training aids. Hence, it is proposed to establish FIACs in all the developmental blocks with adequate infrastructural support. The infrastructure also may be created on Private-Public Partnership mode. The fiscal incentives may be

provided to the private sector in such initiatives. Operationalisation of FIACs on Public-Private Partnership may also avoid the future financial liability on the state government.

5. Inadequate support for promotion of Farmers Organisations(FOs) and Farmer Led Extension

The role of farmers' organization in promotion of farmer-to-farmer extension and market linkages is evident from many studies. However, the present guidelines and financial provisions are insufficient to cover even a small portion of farming community. Hence, there is a need for increasing the financial outlay substantially to promote Farmers Organizations and Farmer led extension through massive expansion of farm schools, farmer field schools and organizing and capacity building of farmers in Agriculture and allied sectors.

Promotion of Farmers Organisations and their federation includes three activities namely, i) organizing farmers around commodities; ii) Capacity Building of Farmers in Agriculture for Farmer led Extension (CAFE) and (iii) Accreditation and involvement of NGOs / Private Sector in implementation of Developmental Programs

i. Organising Farmers around commodities

The experience from various spheres emphasizes the need to organize farmers for getting them the benefits both mutually within the community and in interaction with external agencies supporting the development process. It is proposed to organise the farmers around commodities and federated at block/district/state level. Linking these groups to economic activities assumes greater significance in the present context to sustain the developmental efforts.

National Commission on Farmers also stressed the importance of Commodity Based Farmers Organizations in its reports
.....Commodity-based farmers' organizations like Small Cotton Farmers' Estates, Small Farmers' Horticulture Estates, Small Farmers' Poultry Estates and Small Farmers' Medicinal Plants estates should be promoted to combine the advantages of decentralized production and centralized services, post harvest management, value addition and marketing, for leveraging institutional support and facilitate direct farmer-consumer linkage.

The main objective of promoting the Farmers Organizations is to create a mechanism at the village level among the farmer members to empower them for their own problem solving. This would also help in providing techno-economic support to the groups, enhance scale of operation, improve performance, promote infrastructure, improve access to resources, technology and markets, build the capacity of farmers and ultimately improve the economy of the farmers. Emphasis would be given to involve women farmers in the process of development.

The whole process will be oriented to develop the capacity of farmers to plan, draw support from all the related organizations to undertake technological, production, processing or marketing activities based on their needs and resources.

Farmers Organizations can effectively bring about a client driven agriculture research and extension system and can be an important mechanism in articulating specific research and extension needs accelerating technology dissemination and also in improving technical, managerial and marketing skills of member farmers. They enable the resource poor farmers the capacity to reach-up and pull down the research and extension services and exert influence to make the policies more relevant. FO s mobilize local resource and regulate their use to maintain a long term base for productive activity and put available local resources to their most efficient use. Farmers Organizations exhibit better bargaining power in emerging market scenario like contract farming and future markets.

There are some successful cases of Farmer Organizations (FOs) acquiring advanced technology and professionalising agriculture. The Farmers Organizations in their collective endeavour make necessary arrangements for proper inputs supply, extension support, credit, collection of produce, processing and marketing in integrated manner to maximize returns on the investment. Establishment of a sustained linkage between the Farmers Organizations and agencies engaged in inputs and credit are most likely to reduce the cost of inputs, credit and storage. Similarly, establishment of linkages between producers through Farmers Organizations and the market would shorten the supply chain resulting in better realization for the farmers.

Commodity Interest Groups would be encouraged to federate at Block, District and state levels. The federations may undertake additionally the activities of marketing, processing and market oriented services to Farmers Organizations. The members from these organizations on the various committees like Farmer Advisory committee at block level, Governing Board at ATMA, State level coordination committees and other forums would reflect farmers need better.

It is proposed to promote at least one Commodity Interest Group per village. Based on the potential, another group will be also promoted on a different commodity / enterprise in the same village. These groups would be promoted in a phased manner.

ii. Capacity Building of Farmers in Agriculture for Farmer led Extension (CAFE):

One farmer from each Commodity Interest Group would be selected and provided with necessary capacity building support on end to end basis. The knowledge of the trained farmer would be available to other members of the group.

iii. Involvement of NGOs / Private Sector in implementation of Developmental Programs

NGOs have potential to make significant contribution in implementation of extension activities with public funds. With a view to ensure quality implementation, steps need to be taken to identify and encourage NGOs having high performance. NGOs, agri-preneurs, etc. need to be provided some service charge for implementation of extension activities with public funds.

Budget proposed for Promotion of Farmers Organisations and Federations

Sl. No.	Particulars	Amount (Rs. in crores)
1.	Social mobilization and nurturing of groups (10 lakh groups x Rs.5000)	500.00
2.	Capacity Building of Farmers in Agriculture for Farmer Led Extension (CAFÉ) (10 lakh groups x Rs. 4000)	400.00
3.	Revolving fund (10 lakh groups x Rs.10000)	1000.00
4.	Support to Farmers Organisations and their federations at various levels for formation, revolving fund, capacity building, market linkage, honorarium to farmer resource persons and accreditation and involvement of NGOs	429.24
5.	10 percent of administrative cost of Rs.2329.24 crores	232.92
	Total	2562.16

It is proposed to upscale the Farmers Organizations (FOs) as part of the Extension Reforms by providing adequate funds as given above.

Strengthening and Upscaling of Extension Reforms

The success of ITD-Component of NATP was the basis for launching extension reforms in 252 districts covering all the states. The extension reforms scheme was well received by all the states. Further, the new institutional arrangements are in position in large majority of states. Around 210 Strategic Research Extension Plans (SREPs) are prepared and submitted to the Ministry of Agriculture. The State Extension Work Plans (SEWPs) based on SREPs have also been approved and funds released. The initial success of the extension reforms has triggered the states to expand the scheme to other districts, but, constrained by inadequate funds, infrastructure and manpower.

The basis for success of the reforms scheme depends upon the formation of Farmers Organizations (FOs) around a commodity at grass root level. At present, the promotion of Farmers Organizations is at low key due to paucity of funds. Further, Extension Reforms imbibed process and institutional mechanism of NATP. But, similar provisions for manpower, funds and infrastructure were not made available. Hence, it is

felt necessary to provide adequate manpower, funds, infrastructure facilities and provision for capacity building of extension functionaries. These provisions are expected to enhance the acceptability of the scheme by the states and successful implementation of the scheme.

In view of the above, it is proposed to upscale the ATMA to all 588 development districts simultaneously addressing constraints.

The implementation of the Innovations in Technology Dissemination (ITD) component of NATP was monitored and evaluated (M&E) by an independent agency, the Indian Institute of management (IIM), Lucknow. It has documented the following impacts of the ATMA approach on the cropping systems and farm income across the 28 projects districts during the four-year period from 1999-2003.

- *Horticultural cropping area increased from 12% to 16%*
- *Oil seed crop area increased from 3 to 11%*
- *Herbs, medicinal and aromatic crop area increased from 1% to 5%*
- *Planted area of cereals (wheat and rice) declined from 55% to 47%, but yield increased 14% resulting in no appreciable loss in staple food crop production.*
- *Average farm income in project districts increased 24% during this four-year period, in contrast with only 5.5 in non-project district.*

It has also revealed that there is a remarkable achievement of institutional and operational reforms. In addition it has documented the following project impacts:

- *More than 10,800 crop or product –based FIGs had been organized at village level, with 85 Farmers' Associations (FAs) or Farmers' Federations (FFs)*
- *Approximately 7,00,000 farmers including over 1,00,000 women farmers, directly benefited from these new extension programs through training courses, on-farm trials, demonstrations and so forth. In short, about 15% of all farmers in the ATMA project districts were directly touched by this reorganized extension system.*
- *More than 250 successful farmer-led, market-based innovations were implemented and documented with in the ATMA districts*
- *Many ATMAs, such as those in Maharashtra, developed strong partnerships with private sector firms, ranging from poultry marketing; organic farming; production, processing and marketing of medicinal and aromatic crops; and the exports of specific commodities (basmati rice, baby corn, snow peas, etc.); to jointly operating information Technology (IT) kiosks in collaboration with block level FIACs.*
- *Finally, ATMAs have promoted eco-friendly, sustainable agricultural technologies, such as Integrated Pest Management (IPM), Integrated Nutrient Management (INM), Organic farming, and the use of water conservation practices, including well recharging, converting from water – intensive crops such as paddy and wheat to water extensive crops, such as vegetables, floriculture, maize, oilseeds and pulses. Also all ATMAs have promoted the use of micro-irrigated systems.*

I. Budget proposed for strengthening and up scaling SAMETI & ATMA during 11th Five Year Plan

1. SAMETIs Manpower and operational cost / State Nodal Office

Sl. No.	Activity	Amount in Rs.Lakhs
1.	(1 Director, 6 faculties, 2 IT specialists, 1 Accountant, 1 Peon) (Rs.4.51 lakhs x 12 months)	54.16
2.	Training Programmes: (24 programmes per year @ Rs.1.25 lakhs per programme)	30.00
3.	Third party monitoring and evaluation	10.00
4.	Success stories documentation and dissemination	5.00
5.	Support to state M & E unit (one time)	1.20
6.	Review Workshop/Interfaces	2.00
7.	Expenses of IDWG	1.00
8.	Exposure visits	5.00
9.	Exhibitions / Kisan Melas	5.00
10.	Krishi Expo	1.50
11.	Award to ATMAs	1.00
12.	Operational Expenses	10.00
13.	Vehicle hiring	5.00
14.	Non – Recurring (One time)	11.00

	Total fund outlay for SAMETI	Rs crores
A	Total SAMETIs Manpower and operational cost (1.321 crores x35 states/UTs x5 years)	231.18
B	(*) Capacity building of Extension Functionaries (40000 participants x Rs 10000)	40.00
C	One time investment for SAMETI @ Rs 1 Crore/ SAMETI for 35 SAMETIs	35.00
	A+B+C	306.18

(*) Adequate trained manpower is necessary to promote farmer field schools. Required fund provision is made at SAMETI to train 40,000 master trainers. SAMETI's will make use of expertise from SAU's, KVK's, NGOs and private sector to develop master trainers who in turn promote farmer field schools.

2. District Level Extension Activities

Sl. No.	Activity	Amount in crores
1.	Preparation of Strategic Research and Extension Plan (588 districts x 2.5 lakhs)	14.70
2.	Promotion of Agri-preneurship through ATMA (588 districts x 2.5 lakhs x 5 years)	73.50
3.	Support for District Level Training Institutions (320 new districts x 2.5 lakhs)	8.00
4.	* Extension Activities (5880 blocks x 23 lakh x 5 years)	6762.00
5.	Promotion of Farmers Organisations and their federation***	2562.16
6.	** Capacity building of extension functionaries through Distance learning mode	75.00
7.	Non Recurring (320 new districts x 6 lakhs)	19.20
8.	Recurring cost - District Level (588 districts x 10 lakhs x 5 years)	294.00
	Recurring cost - Block Level (5880 blocks x 4 lakhs x 5 years)	1176.00
	Total:	10984.56

* The existing centrally sponsored schemes are supported with mainly of inputs, leaving extension aspects to the state governments. In most of the states, though the manpower is available, funds for grounding the extension activities are inadequate. The fund earmarked for extension activities under ATMA is only for gap filling mode and the per capita availability of extension fund is very low. Therefore it is proposed to allocate Rs 23 lakh/block, extension to reach large sections of small and marginal farmers.

** About 90,000 Extension Functionaries are working in various states in different capacities at district and block level in the field of Agriculture and allied sectors. Out of these 90,000 extension functionaries nearly 50,000 functionaries are with requisite qualifications having an experience of 10-15 years. It has been felt necessary to update their knowledge and skills in the field of agricultural extension with latest developments taking place in agriculture and allied sectors. Hence a Post Graduate Diploma in Agricultural Extension Management on Distance Learning Mode is proposed.

*** At present the promotion of Farmers Organizations (FOs) under extension reforms is at low key due to paucity of funds. The reforms process envisages group approach to extension as such it is necessary to promote Farmers Organizations in a large scale (about 10 lakhs) around the commodities and their federation. Hence, adequate fund provision (as indicated in Page 30 of the report) for promotion of Farmers Organization is included under district level extension activities of ATMA under Extension Reforms.

3. Total fund outlay for Extension Reforms proposed for 11th plan period

SI.No.	Particulars	Amount (Rs. in crores)
1.	SAMETIs Manpower and operational cost / State Nodal Office	306.18
2.	District Level Extension Activities	10984.56
3.	Strengthening Manpower at district level (1 PD, 1 DPD, 1 Accountant, 1 IT expert & 1 Peon)	451.50
4.	Strengthening of FIAC (Rs.6 lakhs x 5880 blocks)	352.80
	Total	12095.04

It is important to mention here that enhanced financial outlay is due to cost earmarked for dedicated manpower, increased extension activities and implementation of extension reforms in remaining 320 districts of the country.

2.2. Mass Media Support to Agricultural Extension

Over the last few years mass media has seen a phenomenal growth in the country both in terms of reach and advance in technology. This medium has not been exploited to its full potential for the purpose of agricultural extension. A concerted and well-coordinated effort now needs to be made to use the electronic media in the Extension strategy by strengthening infrastructure facility, capacity building of the program producers and to increase quality and quantity of agriculture programs. Some of the major constraints perceived are as follows:

Major Constraints

- Inadequate capacity building for program producers of Doordarshan and All India Radio.
- Lack of dedicated TV channel for agriculture.
- Lack of convergence and sharing of resources of mass media and ICT attempts in agriculture by public, private and NGO sectors.
- Absence of orientation in agriculture for program producers of private TV channels.

- Lack of orientation in agriculture for professionals of print, ICT and traditional media.
- Lack of digitization of real time information.
- Lack of expertise in content development for agricultural programs.
- Inadequate broadcasting and telecasting facilities to cover large number farmers
- Limited time available for agricultural programs

Strategies

- Capacity building for program producers of Doordarshan and All India Radio have to be strengthened. Expertise in content development may be developed based on SREPs.
- Increased frequency of telecast of success stories of farmers
- Capacity building program for professionals of private TV channels and print media may be organized
- Community radio stations may be established in villages linking KVKs or other such institutions.

Upscaling

Doordarshan programmes are being telecast currently from DD National, 18 Regional Kendras and 36 Narrowcasting Centres. Narrowcasting programmes are being repeated by, on an average, 5 HPTs/LPTs. There is a scope to increase Regional Kendra programmes to 28 Kendras. The narrowcasting programmes would need to be produced from 32 centres. 96 FM Stations of All India Radio may continue to broadcast programmes as at present. 24-Hour TV channel on agriculture may also be launched, if feasible. The total requirement of funds for release of Mass Media during the XI Plan period is Rs.902 crores.

Budget proposed for Mass Media Support to Agricultural Extension

Sl.No.	Item	Amount in crores (Rs.)
1.	Budget Proposed for Mass Media Support to Agricultural Extension	902.00

2.3. Agri-Clinics and Agri-Business Center Scheme

The Agri-Clinics and Agri-Business Centres Scheme was launched in 2002 with the objective of better farming by every farmer and to supplement public extension by providing services of unemployed agricultural graduates by imparting training in entrepreneurship development and agri-business. With the experience of more than four years in implementation, certain constraints have come to the surface, which are detailed below:

Major Constraints

- Lack of awareness about the scheme
- Non cooperation from the banks in promoting agri-ventures
- Lack of seriousness and attention bestowed on the program by the training institutes
- Poor handholding support by the training institutes
- Absence of dedicated nodal officers at the training institute level for coordinating the scheme
- Inadequate funds for training and handholding activities
- Lack of support from state governments in implementation of the scheme.
- Absence of participation of Agri-business companies in implementation of the scheme
- Unattractive credit package for the agripreneurs for starting agri-ventures
- Complicated procedures for obtaining license for sale of inputs.

Strategies

- Create awareness about the scheme through electronic media, print media, ATMs, Banks and Agricultural Universities. Adequate fund may be provided for the scheme for advertisement and publicity.

- Continue the scheme with credit-linked subsidy to complement the public extension system.
- Fund allocation for training and handholding may be increased. Active involvement of ATMA, SAUs, Banks, Agri-business companies and state departments in handholding activities may be strengthened. Operational guidelines are enclosed.
- The upper ceiling limit of credit may be removed. Full interest subsidy should continue to be provided for the first two years.
- The certificate obtained under the scheme by agripreneurs may defacto be treated as license to sell the inputs.
- Involve Agripreneurs in extension delivery of the Government extension programme

Proposal for Strengthening Agri-Clinics and Agri-Business Centres Scheme

The scheme aims at supplementing the efforts of public extension, to provide specialized extension services to the farmers and to generate self-employment opportunities to unemployed agriculture graduates. The present scheme has provision for training and handholding activities. Total budget provision is Rs.49.5 crores for training 13437 graduates. Up till December, 2006, more than 11500 graduates have been trained resulting in establishment of 3750 Agri-Clinics and agri-Business activities in various parts of the country spread across 36 categories of agri-ventures. The impact study conducted by MANAGE (2006) revealed that an agripreneur with 32 months of business experience earns average monthly income of Rs.7950/-, covering 38 villages and 3013 farmers through services. Impact of services provided by agripreneurs resulted in increase in yield by 17.4 percent and income by 28.8 percent. The response from banks in terms of advancing loans is found to be encouraging.

In view of this backdrop, it is proposed to continue the scheme.

The scheme would bridge the manpower inadequacy at grassroot level besides making available quality extension services, diagnostic facilities and infrastructure support. The scheme would help the state agriculture and line departments in

providing better services to the farmers. Considering long-term benefits of the scheme, more active support of the state governments will help establishment of Agri-Clinics in rural areas.

Banks play significant role in establishment of agri-ventures. Their involvement during training especially for project preparation would strengthen the acceptability of the projects for credit purpose. Wide network of banks may be used in credit disbursement in definite timeframe.

ATMA's and SAUs can create awareness about the scheme. ATMA may prefer Agripreneurs in channelizing 10 percent funds available under Extension Reforms to carryout extension activities at district and below level. This would not only strengthen agri-ventures but also professionalise the extension services.

Considering the long term benefits on agricultural extension, it is proposed to continue the scheme with strengthened training, handholding besides credit linked back ended capital subsidy and coupled with interest subsidy. Recently cleared subsidy may be continued to support establishment of agri-ventures and complement extension.

Considering the present response, it is proposed to train 15,000 candidates in plan period with an outlay of Rs.45 crores @ Rs.30,000/- per candidate for training and handholding etc., purpose. Feedback and experiences from the field indicate the necessity for increasing the fund allocation for training and handholding purposes which has been considered while proposing the budget. Proposed subsidy component would be Rs.255 crores. Hence, total fund required for continuation of the scheme for 11th plan period would be Rs.300 crores.

2.4. Agro-Polyclinics and multi-purpose service centers

As already stated in foregoing paragraph conscious efforts should be made to promote Agro-Poly Clinics on PPP mode. Private sector / Agripreneurs may be encouraged with suitable fiscal incentives for setting up and / or operation of such service centers.

2.5. Kisan Call Center (KCC)

The purpose of Kisan Call centers is mainly to respond to the issues raised by farmers instantly in the local language on a continuous basis. The Department of Agriculture & Cooperation, Ministry of Agriculture has launched this scheme during April 2002 with a view to leverage the extensive telecom infrastructure in the country to deliver the extension services to the farming community. The experience of implementing this scheme across the country in last four years indicate certain major constraints, which need to be addressed. The constraints are as follows:

Major Constraints

- Lack of awareness among farmers about Kisan Call Center (KCC) due to low publicity.
- Lack of experienced agricultural experts at Level-1.
- Weak linkages between L-I agent and L-II experts.
- Weak technical support at the State level.
- Slow procedures for increasing number of KCC seats.

Strategies

- Each state may be provided with a KCC premises, preferably attached to the concerned SAU's.
- Strengthening of L-I and L-I to L-II linkages.
- Greater initiative by State Level Monitoring Committees on connectivity and other issues.
- Launch Kisan Knowledge Management System.
- Operationalize MoU with SAUs for providing technical backstopping for KCC.
- All communications of Agriculture and line departments, SAUs, ICAR organizations should invariably publicize toll free number of KCC. Also may exhibit in publicity material (posters, charts, banners etc.) of toll free number in all programs viz., training, demonstration etc.

- Some States are having more than one KCC Helpline. These need to be integrated. KCC Helpline require greater technical back-stopping at the State level.
- SAUs may be made as nodal agencies. Feasibility of handing over of the scheme to the state may be examined.
- Feasibility of taking on board mobile telecom service providers

Budget proposed for Kisan Call Centers

Sl.No.	Activity	Amount in Crores
1.	Strengthening and promoting Kisan Call Centres	107.00
	Total	107.00

2.6. Extension Support to Central Institutions

Ministry of Agriculture, Govt.of India provides extension support to various institutions in the country like MANAGE, EEI, etc., besides supporting state Governments in HRD activities. The constraints identified support system are listed below:

Constraints:

- No mechanism to review and accreditation of extension training institutions in the country.
- Absence of international networking in the field of agricultural extension management.
- Extension Education Institutions (EEIs) not adequately addressing the role expected of a regional extension management institute.
- Lack of core faculty and Director at SAMETI level.
- Generation of 30% funding support by training institutions.
- Inadequate fund for central institutes.
- Lack of support mechanism for national level organisations in non-governmental sector engaged in Agricultural Extension.
- Inadequate use of print media.

Strategies:

- Additional financial support for central institutions keeping in view the needs of the institutions.
- MANAGE may be given additional task of reviewing and quality bench marking of national / state level extension institutions to promote excellence in extension education.
- MANAGE may be strengthened as a International Center for Excellence for undertaking joint ventures in extension research studies, collaborative academic / training programs and exchange of experts.
- Restructuring of EEI for effective functioning
- Core faculty provision for SAMETIs.

Budget proposed for strengthening and continuing the Extension support to Central Institutes**A. Budget proposed for On-going Extension Schemes on support to Central Institutes**

Sl. No.	Activity	Amount in crores
1.	Extension Education Institutions (EEIs)	9.00
2.	National Institute of Agricultural Extension Management (MANAGE)	32.50
3.	Training Abroad	5.00
4.	Human Resource Development (HRD) Programmes	3.75
5.	Gender Resource Centers (GRC)	3.25
6.	Central M & E	2.50
7.	Print Media Publicity	50.00
8.	Exhibitions	12.50
9.	National Productivity Awards	1.40
10.	Innovative Activities	10.00
11.	Support to Directorate of Extension (DoE)	7.70
	Total	137.60

B. Developing MANAGE as an International Center for Excellence in Agricultural Extension Management

MANAGE is the unique institution having resources and competency in the field of agricultural extension management operating at national level. Further, financial support is essential to develop infrastructure and professional competency of faculty at international standards. Hence, additional fund provision is proposed for the following activities.

Budget proposed for Developing MANAGE as an International Center for Excellence in Agricultural Extension Management

Sl. No.	Activity	Amount in crores
1.	International Study Center (Conference hall, Accommodation, E-learning facilities, Syndicate Rooms)	7.00
2.	International Collaboration / networking	2.00
3.	Capacity Building of MANAGE faculty	4.00
4.	Research / Training / Seminar / Workshops / Conferences / Library / Publications	2.00
	Total	15.00

C. Accreditation of Extension Management Institutes

Accreditation of Extension Management Institute based on the infrastructure, quality, manpower and effectiveness on delivery mechanism is necessary for the purpose of allotment of funds and to assign the specific responsibilities. Specific activities proposed and fund required is as follows:

Budget proposed for Accreditation of Extension Management Institutes

Sl. No.	Activity	Amount in crores
1.	Development of facilitators in Accreditation	0.50
2.	Accreditation process and certification	1.00
	Total	1.50

Budget proposed for strengthening and continuing the Extension support to Central Institutes

Sl. No.	Activity	Amount in crores
A	Continuation of on-going Extension Schemes on Support to Central Institutes	137.60
B	Developing MANAGE as an International Center for Excellence in Agril. Extension Management	15.00
C	Accreditation of Agril. Extension Management Training Institutes	1.50
	Total	154.10

B. Proposed New Initiatives

2.7. Promotion of Farm Schools

Fifty thousand village based Farm schools will be promoted through out the country on the farms of achiever farmers. This would benefit large number of farmers in improved dissemination of technology by demonstrating advanced agricultural production practices on farmers fields in the village. An amount of Rs.750 crores is earmarked for the plan period as recommended by the National Commission on Farmers (NCF)

Farmer Field Schools (FFS)

Farmer-to-Farmer education through FFS will become an important vehicle for Integrated Crop Management (ICM) expansion. Farmers as Facilitators will have many advantages due to their rich farming experience and they can easily communicate to fellow farmers. Trained farmer will act as FFS facilitator to conduct FFS in a village of his block / Mandal to establish ownership among farmers and thereby contribute to sustainable ICM system, leading to increase farm income by effective decision making. At present, this programme is implemented in majority of the states in the country. In addition to organizing FFS. one demonstration per season per crop for selected crops will be organized for the benefit on an average, 50-100 farmers.

By enhancing the fund provision for extension activities at district / block level under extension reforms scheme, it would adequately accommodate extension activities such as demonstrations, exposure visits and trainings for organizing the FFS.

2.8. Recognizing the outstanding farmers through Awards

In recognition of the contributions made by the farming community in ensuring the food security of the country, it has been proposed to honour the outstanding farmers by awarding them at various levels regularly. Budget proposed for implementation of the scheme is Rs.250 crores for plan period.

Budget proposed for Recognizing the outstanding farmers through Awards

Sl.No.	Particulars	Amount (Rs.in crores)
1.	Krishi Ratna at National Level for 10 farmers carrying cash award of Rs.one lakh each (Rs.one lakh per farmer)	0.1
2.	State level awards for 20 farmers (20 farmers x 35 states x Rs.50000)	3.5
3.	District level awards for 10 farmers (10 farmers x 588 districts x Rs.25,000)	14.7
4.	Block level awards for 5 farmers (5 farmers x 5880 blocks x Rs.10000)	29.4
5.	Operationalisation, documentation and dissemination of success stories	2.3
	Total	50.0
	For Plan Period (Rs.50 x 5 years)	250.0

2.9. Capacity building of Input Dealers

There is a large network of about 2.82 lakh Agri-Input Dealers in the country, who are the important sources of agriculture information to the farming community. Nearly 90% of the Agri-Input dealers operating in our country do not have any formal agricultural education. They seldom realise the implication of various “laws” related to handling agricultural inputs. They are basically businessmen who are fully aware about different market forces. If they are transformed as para-professionals by providing required knowledge, they can make Market Led Extension a reality and thereby can bring a paradigm shift in Indian Agriculture. With this objective in mind, National

Institute of Agricultural Extension Management (MANAGE) has designed Diploma in Agricultural Extension Services for Input Dealers (DAESI), a One Year Diploma Course on distance education mode with class room interaction and field visits on Sunday (Market holidays) for 48 Sunday's approximately. This course imparts formal agricultural education to the dealers. By undergoing the course, they can couple their business with extension services besides discharging regulatory responsibilities effectively. The course is successfully pilot tested in Andhra Pradesh as a self-finance scheme.

Considering the acceptability of the program as experienced in Andhra Pradesh and its entry to other states like Tamil Nadu and Maharashtra, the program requires to be upscaled for wider coverage throughout India.

In this context, it is quite appropriate to note what National Commission on Farmers indicated, "Today the farmer depends on the input dealer who sells seeds, pesticides and fertilizers for technical advice. In many 'suicide hot spot' areas, the input dealer is also the money lender, the scientist, agricultural expert, counselor and buyer, all rolled into one".

While input dealers have such an important role in the technology transfer and the farmers depend more on them than the extension personnel, their technical knowledge needs to be strengthened to enable them to provide appropriate information to the farming community.

- It is proposed to cover about 50,000 input dealers during XI Plan period in the country in about 1250 batches @ 40 participants in each batch.
- The expenditure is estimated at Rs.20,000/- per participant of which 60% is proposed to be met by the participant, 20% is from state Govt/Agribusiness companies and the remaining 20% by the central Government. In the event of State Government / Agri-Business Companies not contributing 20% share, the balance will have to be borne by the Input Dealer taking his share upto 80% as the outer limit.

- As an encouragement, for the input dealers of hilly and NE regions (Approximately 5000 Nos.) the Central Govt. may extend an additional assistance of 20% of the total cost of programme (Rs 4000/Participant).
- MANAGE is apex institution to provide over all supervision and guidance in implementation of the programme. MANAGE will organize trainers' training programme and take the responsibility of evaluation and certification including handling of finances.
- MANAGE will identify suitable institutions with infrastructural facilities and availability of sufficient number of input dealers with in the radius of 20-30 kms to run DAESI. The institutes may be colleges, research stations of state agricultural universities, training institutions of state departments, KVKs and NGOs etc.
- The institutions so identified will send one of their faculty members to MANAGE to attend training programme on conducting of DAESI.
- The institutions will enroll dealers by collecting the fees net of subsidy and register the batch with MANAGE by remitting the amount.
- MANAGE will take up mid term evaluation and release the subsidy portion to the conducting institution.

Budget proposed for Transforming Input Dealers into Para-Professionals in Agricultural Extension

Sl. No.	Activity	Amount in crores
1.	Capacity Building of Input Dealers (50000 dealers x Rs. 4000)	20.00
2.	Additional Support to the Input Dealer Trainees of North-Eastern and Hill states (5000 dealers x Rs.4000)	2.00
3.	20 percent administrative cost of Rs.22 crores	2.20
	Total	24.20

Note: Cost of training per input dealer = Rs.20,000/-

- | | | |
|-----|---|-------------------|
| i. | Central assistance | = Rs.24.20 crores |
| ii. | State / Agri-Business company / Input Dealer
Contribution 80 percent | = Rs.96.80 crores |

2.10. Establishment of Community Radio

Community radio is a vibrant community broadcasting system to enhance pluralism and diversity by understanding the needs of the users, brings into focus the need to improve people's capacities to analyze and understand information and act on it by communicating their views. A truly people's radio perceives listeners not only as receivers and consumers, but also as creative producers of media content. Non-profit making, community ownership and management and participation are the important principles of community radio. It is characterized by its limited reach, low power transmission, and program content that reflects the educational, developmental and cultural needs of the specific community it serves.

Some of the NGOs have been successful in initiating the community radio in various parts of the country. The pastapur initiative of the Deccan Development Society of AP is one that uses the rich oral tradition of the community, and is managed entirely by Dalit women in narrowcasting mode. The Kutch Mahila Vikas Sangathan is an initiative in Bhuj using the medium wave broadcast channel of AIR. Alternative for India Development, Bihar, which has a radio initiative in Daltonganj, in the Palamau District of Jharkhand, uses purchased air-time from a local AIR channel. Namma Dhvani, the VOICES initiative in Budikote, Karnataka, cablecasts programmes, made by the community members themselves. Some of the most recent initiatives includes Charkha's Pechuwali Man Ker Swar in Ranchi, SEWA's 'Rudi no Radio' in Gujarat and Agragamee's 'Ujjala' in Jeypore, Orissa etc.

Presently, there are 533 KVKs functioning in the country. Among them, 359 KVKs are under SAUs, 36 under Indian Council of Agricultural Research (ICAR), 89 under NGOs, 2 under PSUs, 30 under state governments and 17 under Central Agricultural University / Central University / Deemed University. The KVKs are bestowed with the mandate of technology assessment and refinement and on farm testing to identify the location specific technologies apart from providing real time information to farmers and

extension personnel in the frontier areas of technology development in agriculture and allied sectors.

With the backdrop of having customized technology and technical personnel, it is appropriate to make KVKs play a major role in radio and ICT initiatives. The community radio centers may be established at each KVK so as to provide location specific and customized information to the local farmers. Funds for the purpose are to be routed through ATMA. ATMA should also perform the necessary oversight function. Infrastructure and expertise existing under the private sector would be considered while establishing Community Radio. The existing staff of KVK can be provided with short-term training in operating and maintaining the community radio stations.

Budget proposed for Establishment of Community Radio Stations

Sl. No	Item	Cost per one Station in Rs	No. of stations to be established / operated	Amount in crores
I. Establishment of Community Radio				
1.	Establishment of Community Radio Stations	15,00,000	300	45.00
II. Operational cost of Community Radio Station				
1.	Cost for operating the established Community Radio Stations at KVKs	6,00,000 x 5 years	300	90.00
Total (I + II)				135.00

Establishment and Operation of Community Radio Stations = Rs.135 crores/-
(Rupees one hundred thirty five crores only)

2.11. Dedicated TV Channel for Agriculture

There are more than 300 channels in India from film to fashion and from sports to spirituality, but none for agriculture. Mass media, especially Television has the unique characteristics of both audio and visual which persuade the farming community for better technological adoption as evidenced in the case of other areas. Utilization of this most powerful medium is very much limited in agriculture sector though the rate of

penetration of Television in the rural area is increasing. An Exclusive DD channel on agriculture to focus on farmers issues and technology transfer would supplement the efforts of extension functionaries and could reach the large number of farming community in a shorter period of time with cheaper cost.

Fund proposed for dedicated TV Channel for Agriculture is Rs.150 Crores, However, a feasibility study will be conducted before launching the channel.

2.12. Support programme for women in agriculture

Through the ongoing nation wide promotion of micro credit and micro enterprise Programmes, large number of rural women are under taking group based agribusiness income generating activities. The major constraints of these women groups are lack of marketing facilities and managerial support. Programmes for setting up village level infrastructure and entrepreneurial capacity building are thrust areas of programme intervention for supporting these women in agribusiness is proposed though appropriate structural, functional and institutional measures are inbuilt in the ATMA to empower women, build capacities and improve their access to extension support with the 30% allocation of fund on extension activities exclusively for women.

Objective of this program is setting up of village based Facilitation and Marketing Centre for promotion of women groups engaged in agribusiness

Activities:

In selected Village Panchayat, a Facilitation hall will be built and attached to the agricultural extension office/ Panchayat office :

- Facilities for display and sale of the products of women groups on rotation basis will be provided (one week each- in the pattern of Dilli *Hat*, New Delhi).
- Training hall/ demonstration facilities for women entrepreneurs.
- One Facilitator to look after and co-ordinate the activities of the facilitating center

- An apex body of all women groups, agricultural department and Panchayat will manage the Facility.

Budget proposed for Support programme for women in agriculture

Sl.No	Activity	Amount in Crores
1.	Display huts and facilitation / demonstration halls / maintenance	20.00
2.	Man power (facilitators)	8.00
3.	Activities (training, services, demonstrations & mahila gostis etc.	14.00
4.	Monitoring and Evaluation	8.00
	Total:	50.00

**3. Budget Estimates for Agricultural Extension during
XI Five Year Plan**

SI.No	Activity	Amount in Crores
Part – A: Strengthening and up-scaling of Central Sector on-going schemes		
I. Extension Reforms		
	SAMETIs manpower and operational cost	306.18
	District Level Extension Activities	10984.56
	District Level Manpower	451.50
	Strengthening FIAC at block level	352.80
II. Mass media Support to Agricultural Extension		
III. Agri-Clinics and Agri-Business Centres Scheme		
IV. Kisan Call Centres		
V. Extension support to Central Institutes		
	Developing MANAGE as an International Centre for Excellence in Agril. Extension Management	15.00
	Accreditation of Agril. Extension Management Training Institutes	1.50
	Continuation of on-going Extension Schemes on Support to Central Institutes	137.60
Total (Part A)		13558.14
Part – B Proposed New Initiatives		
I. Promotion of Farm schools		
II. Recognition of outstanding farmers through Awards		
III. Mass Media support for Agricultural Extension		
	Establishment of community radio (300 Nos.)	135.00
IV. Promotion of Public – Private Partnership		
	Transforming Input Dealers into Para-professionals in agricultural extension	24.20
V. Gender Mainstreaming in Agricultural Extension		
	Support programme for women in agribusiness	50.00
Total (Part B)		1209.20
Total Budget Proposal for XI plan – Agricultural Extension		Rs. in crores
	A. Strengthening and up-scaling of ongoing Schemes	13558.14
	B. New initiatives proposed	1209.20
Grand Total:		14767.34