MISSION ORGANIC FARMING$_{NE}$

Anand Pattern in Organic Farming

"Putting the tools of development in the hands of the farmers"

Introduction

Global concern for environmental degradation, consumer anxiety for safe and healthy food, growing populations and needs for higher agricultural productivity have come together to support the creation of sustainable rural livelihoods through organic farming in India. *Organic Farming is a system, which avoids or largely excludes the use of synthetic inputs such as fertilizers, pesticides, hormones, feed additives and to the maximum extent feasible, relies upon crop rotation; mixed cropping; recycling crop residues and off-farm organic waste; integrating animal husbandry and animal manure; promotes fodder availability; incorporates mineral grade rock additives; and adopts biological systems of nutrient mobilization and plant protection*. Pictorially, it may be represented as below:

Sustainable crop production practices can lead to higher yields over time, with less need for expensive and environmentally damaging inputs. In the case of organic farming, there are significant differences in agronomic practices, integration of animal husbandry in the process, use of antibiotics or hormones, scale of farms, and the decisions relating to packaging, market locations and methods of access to markets which bear relation to the total energy consumption in taking food from farm to fork as against the energy of the food produced. The following tabular comparison sets out some of these differences.

No.	Aspect	Sustainable Agriculture	Organic Agriculture

1	Certification	Not required. More a way of life.	Official certification essential
2	Sustainability	Ecological, Economic	Not required
3	Farm size	Small, farmer self-managed	Can be large, corporate-run.
4	Use of chemical fertilisers, pesticides	Not permitted.	Not permitted.
5	Integrated farming	Natural foraging by animals except in bad weather, night	May be always confined
6	Animal treatment	Humane. No legal restriction on antibiotics, hormones but usually not used and if antibiotics are used, time is allowed for full elimination from animal body.	Legal bar on use of antibiotics and hormones for animals. No compulsion on humane treatment of animals.
7	Markets	Usually local, minimal packing.	Not relevant.
8	Energy, GHG emissions and Water Conservation	Aims at energy efficiency, renewable energy use, low emissions, and high water conservation.	Irrelevant to certification.

Organic farming in India: Organic farming in India differs from conceptions around the world in the smaller size of farms managed by each household which, therefore, includes greater levels of own labour, the farmer's more intimate knowledge of field conditions and fewer animals managed per household which bring it closer to environmentally sustainable agriculture.

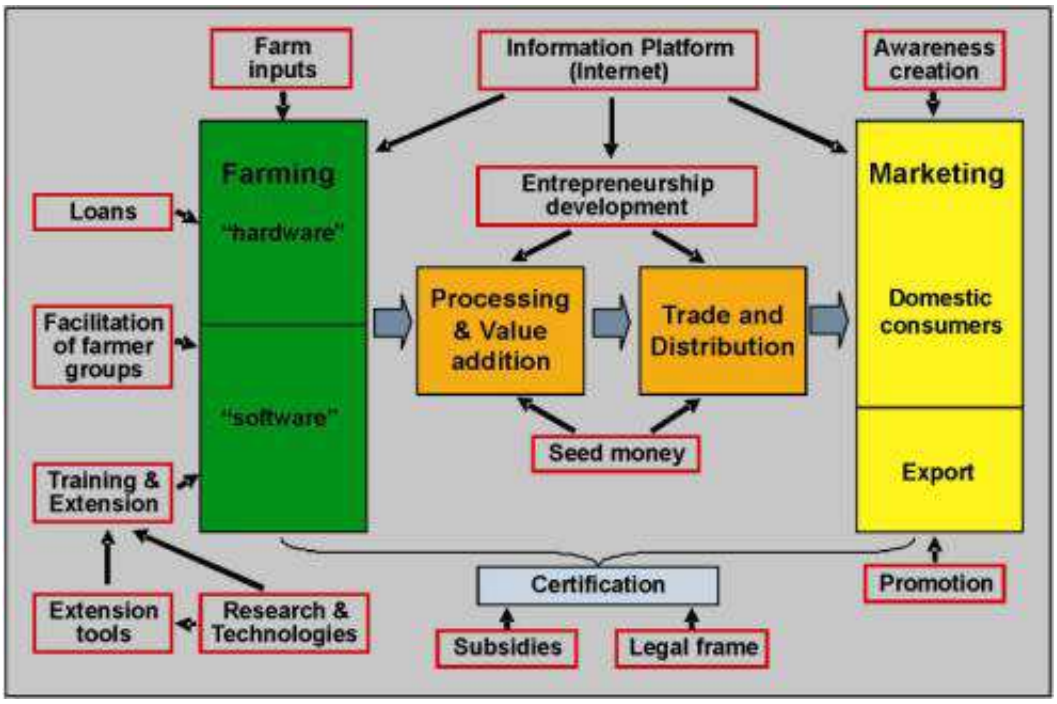
As per the statistics compiled by the IFOAM and FiBL (2014), world over 37.5 million ha land (0.87% of total agricultural land) is being managed organically by 1.9 million producers in 164 countries. Besides this there is another 31 million ha certified for wild harvest collection. Global sales for organic products have reached 75 billion US$ with US and Europe being the largest consumers.

As one of the world's largest producers of rice, tea, fruits and vegetables, various spices, pulses, medicinal plants, and cashew nuts, India's first internationally certified organic products emerged in the mid 70's, supported by UK's Soil Association. India has evolved a rich history of agricultural practices and continues to adapt technologies like biodynamic and other systems into its organic practices. India's organic farmers have been at the forefront of developing field based technologies ranging from vermicomposting to integrated livestock practices that facilitate their ability to improve soil fertility even in semi-arid or barren areas. Different parts of India have developed their own local or regional systems for ecological agriculture such as agnihotra and panchakavya that are now gathered in one umbrella term: '*Jaivic Krishi' or* '*Jaivik Kheti*'.

Overcoming early doubts on the potential of organic systems to meet growing needs including in experiments conducted in ICAR'S Network Project on Organic Farming, it has been established that in appropriate technologies in hill areas and rain-fed

tracts with poor and marginal soils and relatively virgin soils, organic farming system is superior to conventional agriculture in productivity, resource use efficiency and profitability.This opens the scope for transforming these areas from subsistence approaches to a culturally acceptable level of commercial

The complexity of this process is depicted by the following illustration.

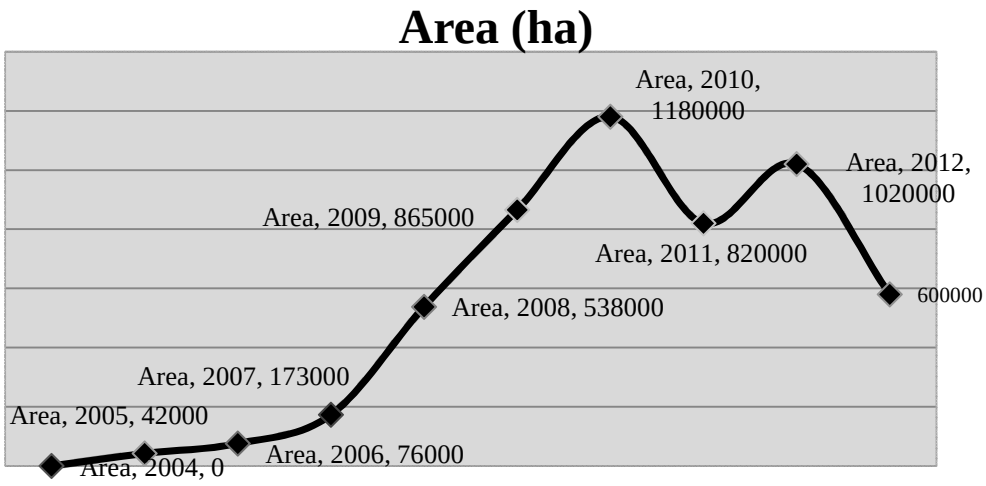


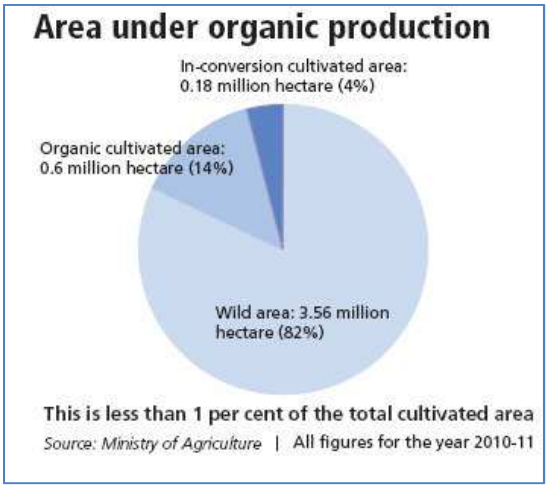
Civil society organisations and farmer groups have played a major part in India's organic sector. They have helped to evolve basic cultivation practices in poorer and remote areas where extension services and improved agricultural technologies have rarely reached. They have served a vital role in disseminating information and knowledge as well as in facilitating access to markets. With the rapidly emerging business opportunities in the organic field, private companies have entered and helped grow the sector.

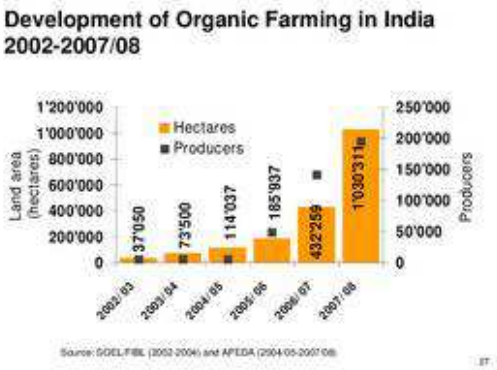
To drive area expansion and technology transfer, Ministry of Agriculture launched a National Project on Promotion of Organic Farming (NPOF-DAC) with funds for setting up of organic including vermicompost and biological input production units and encouraged organic adoption and certification under various schemes such as NPOF, NHM (now MIDH), NMSA and RKVY. In order to facilitate, organic certification, the PGS-India programme was launched to permit a farmer group centric organic guarantee system. To augment research, ICAR launched in 2004, a Network Project on Organic Farming (NPOF-ICAR) under Project Directorate of Farming System Research with thirteen collaborating centres across the country. Organic packages of practice for some important crops have been developed in the project. Further, to support exports, Ministry of Commerce initiated in 2001, the "National Programme on Organic Production" (NPOP) defining National Standards

for Organic Production (NSOP) and setting out a procedure for accreditation and certification. India now has 26 accredited certification agencies for facilitating growers' certification.

As on March 2014, India has brought 4.72 million ha area under organic certification process, which includes 0.6 million ha of cultivated agricultural land and 4.12 million ha of wild harvest collection area in forests. Growth of area under organic farming during different years is presented in fig. 1a-c. During 2012-13, India exported 1,65,262 MT of 135 varieties of organic products valued at USD534 million (INR3300 crores). In the same period, the domestic market grew annually at 15-25%. A survey conducted by ICCOA (www.iccoa.org) found the domestic market in 2012-13 to be worth INR600 crores.







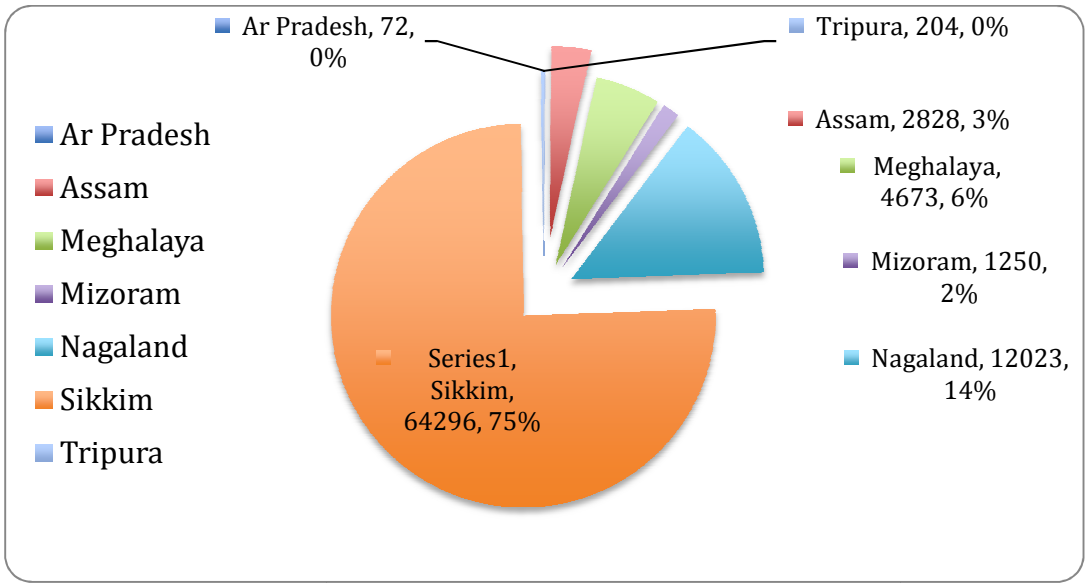
Organic agriculture in the North Eastern Region

The hill areas of the North East, that houses the poorest segment of the region's population and could not participate in the region and countrywide processes of economic development, now offers immense scope for leveraging their low external input traditional organic systems. Therefore, the present scheme, "Mission Organic

Farming North East" is expected to reduce their levels of relative deprivation and poverty. This is also compatible with the precautionary approach critical to resource management in the fragile environment of the northeastern region where climate change effects are also expected to be significant. Yet, there is a need to reach markets, which will predominantly be pan-Indian and local. Exports markets can yield significant profits to farmers but compel procedural compliance for certification and the development of marketing capabilities, a major alteration in hitherto insular behavior.

Many North Eastern State Governments have promoted organic agriculture in the region. Sikkim has aimed to make the entire state 100% certified organic by 2015 and has already brought 64,296 ha area under certification process. Nagaland and Mizoram have also drafted and adopted policies to promote organic farming, but they are yet to implement necessary strategies to bring their traditional organic areas under certification. State-wise details of total area under organic certification process in NER states during 2013-14 are given below:

Area under Organic Certification Process in NE States



Learning from the past experience in the North Eastern States

High price realizations from exports have been the main driver to the past efforts in organic farming and the NPOP certification system incentivized this process, despite continuous growth in demand in export and domestic markets, growers faced several difficulties and some critical areas are listed below:

1. Non-availability of quality inputs;
2. Absence of technologies for production optimization and pest management;

3. Difficulties in aggregation at affordable costs due to thinly distributed growers each with low quantities (lack of scale economies);
4. Limited access to market, and lack of marketing support and linkages;
5. Growing complexities in management of documentation for certification; and
6. Lack of organically compatible value addition and processing facilities.

New Initiative launched for Promotion of Organic farming in the NER

Keeping the various opportunities in view and the priority for facilitating the North Eastern areas to make efforts to achieve a quality of life on par with the rest of the country as quickly as possible and under their own leadership, Government of India through Ministry of Development of North Eastern Region (DoNER) has launched a "Scheme for Organic Farming in the North Eastern Region" with an initial outlay of Rs 100 crores for the year 2014-15. The scheme will be accordingly follow the principles inherent to the Anand pattern for milk development in the country and make the tools for development including the knowledge of scientists, etc available to the farmer-participants for them to integrate with their knowledge systems and lead the professionals required to ensure best possible outcomes for the village communities and their natural environments.

a. Objectives

To promote, in a mission approach and with a view to reduce risks associated with climate, disease, and markets, mainly the women farmers and landless villagers of the North Eastern Region, to take charge of their lives and future prospects by being enabled to produce in an environmentally sustainable manner and to sell, conveniently marketable volumes of organic produce, from contiguous clusters organized on micro-watershed basis, village councils, and federations of councils that will also involve the participation of agronomists, scientists, technologists, and marketing professionals in the production of organic inputs and for establishing and operating value added production centers from cluster to federation.

b. Implementation Strategy

- Baseline survey and formation of contiguous clusters organized on micro-watershed basis, council of clusters and federation of councils to form multiple commodity specific production, processing and marketing enterprise.

- Each council of clusters shall comprise of minimum 300-500ha cultivable/plantation areas with adequate numbers of micro to small animal husbandry units.

- Federation of councils shall comprise of 4-6 or more councils and shall be a common hub for aggregation, processing and marketing of produce generated by clusters and councils.

- Integration of farming system (IFS) approach with emphasis on 2-4 main commercial crops in combination with other crops under multi- cropping, rotational cropping, inter-cropping, mixed-cropping practices with allied activities like horticulture, livestock, animal husbandry (diary, goaterry piggery, poultry, duckery), apiculture, sericulture etc.

- Development of dedicated seed production clusters under each council/ federation and facilitating high quality and true-to-type seed material for further multiplication and farmers' production purposes.

- Identification of infrastructure and facilities available and infrastructure and facilities need to be developed such as water harvesting structures, manure/ vermin-composting production units, cattle shed development with urine and dung collections, liquid manure producing/fermentation tanks (Panchkavya tanks/ drums), etc in clusters and councils.

- Support/ subsidy for off-farm external inputs such as lime, dolomite etc for soil pH correction, pheromone traps, bio-fertilizers, bio-pesticides, micronutrients, for purchase of quality seeds etc shall be facilitated through the councils.

- Capacity building of growers, clusters and councils on organic management protocols, input production and certification requirements

- Installation of institutional network in the form of resource agencies for continuous handholding with community participation under the supervision of experts and continuous trainer's trainings.

- Resource agencies shall also be responsible for soil sample collection, getting soil tests done from state STLs, issue of soil health cards and recommending suitable agronomic packages as per soil health.

- Integration of diversity plantation/ nitrogen fixation trees plantation

- Internal control system management and certification facilitation either under Third party certification system or under PGS to be facilitated by resource agencies.

- Setting up of service centers for custom hiring of equipments, pest management solutions, soil testing services facilitation etc under the control of councils and federation.

- Continuous handholding for implementation of technologies on field for proper farming system management as per standard requirements.

- Continuous handholding and capacity building for operationalization of councils and federations and management support for 3 years.

- Setting up of collection, aggregation, washing and grading facility, one at each council. This may also include storage for local produce.

- Setting up of dedicated organic value addition and processing park under the ownership and management control of federation. Such federations can also be supported with small pickup truck, packaging items, plastic crates etc for aggregation of produce.

- Apex body of the federations at state level shall be responsible for brand development, common packaging development, publicity etc

- Exposure visits to other model bio-villages, buyer-seller meets, participation in national and international trade fairs and exhibitions

- Organization of seminars, conferences, trade fairs, exhibitions, and buyer-seller meets etc.

- Setting up of ICT network for effective coordination, on-line data management, monitoring and for hosting marketing portal. This need to be developed at interstate level for all northeastern states with hardware and software to all processing parks and mobile connectivity to all clusters and councils.

- There will be specific component to promote continuous innovation and piloting.

C. Organization Structure for Implementation

- A Project Management Unit consisting of professionals will be set up at Guwahati by the Ministry and placed under the administrative control of the NEC. The PMU led by a Project Director will be responsible for project proposal appraisal and for processing fund needs of State Societies. The PMU will identify support organizations and prepare Manuals for Training of Trainers and a Trainees' Hand book including a reference book for farmer clusters.

- The State Governments would set up a State-level Society under department of Planning to oversee the implementation of the program as per the program guidelines. Respective State Governments will be the implementation agency for the program and would be required to execute an MOU with the Ministry after the set out the detailed roles of the Ministry, NEC and the State in executing the program.

- The State Level Society led by a Project Officer would be responsible for execution of MOU with Councils and Federations as and when they are formed for rapid execution of works and facilitation, provide detailed maps for the micro-watershed and watershed covered by each proposed council (village) areas and support the District team in conducting PRA and baseline resource

survey in identified villages, organize Clusters, Councils and Federations, conduct detailed baseline survey of resources including animals in Council areas, organize collection of soil samples as per protocols for individual farms, micro-watershed level samples for microbial testing and for full soil testing, coordinate the issuance of Soil Health Card by agricultural department, assist PMU in initial appointments of District Managers & Extension Coordinators. The training Manual for Training of Trainers, Trainees' Handbook and farmers manual will be translated in the local language by the State Level Society.

- At district level, District Management Committee (DMC) headed by the District Collector or Deputy Commissioner would supervise the district level project implementation. A professional will be placed as District Manager in every district who will directly support and facilitate the Federations/Councils to ensure implementation of the programme as designed. District Project Manager will be selected in consultation with the Project Officer and PMU. The district management committee would include officers of agriculture, horticulture, forest, fisheries, animal husbandry and rural development (livelihood mission) departments in addition to representatives of support scientific and identified resource organizations. The DMC may review the design of agronomic packages for the participating areas, coordinate financial support needs with bankers and other financial institutions. The DMC shall also plan and review the training activities necessary to support the programme and coordinate with the State Level Society. The DMC would also review the activities of the District Manager and his staff, operate as the first level Arbitration Authority for contracts executed between Federations/Councils and buyers, identify other Government schemes for convergence with this Organic Farming scheme.

- The key responsibilities of the District Manager would be to identify appropriate areas for clusters, to take up institution building, capacity building, organize PRA exercises, resource survey, soil testing and formation of cluster, council and federation in consultation with State Society and PMU. He would also be responsible for the capacity building of the extension workers recruited by the Councils and Federations by developing leaflets for agronomic package of practices related with the scheme. He would ensure that technical support is provided to the farmers in a time bound manner.

- **Support Organizations as implementation partner**

  The Ministry would identify a pool of resource organizations at the national level to support in Institution Building, Capacity Building, Organizing farmers into activity based groups, watershed management, implementing sustainable agriculture and/or organic farming programs with CBOs, organic certification, developing farming protocols for organic farming suitable for the specific agro climatic zone etc. Each state society can draw expertise from this pool of resource organizations.

The field level execution will be supported with Support Organization in the areas of training of trainers, training farmers and for assisting the Extension Coordinator in his work.

Type of institution	Location	No of members	Size (Ha)	Role
Cluster	Micro-watershed as unit	10-25 farmers	10-15	Organize farmers, support in farming practices, planning, primary aggregation, value addition
Council (Registered Society)	Village as unit	50-250 Farmers (5-10 clusters)	50-150	Providing input support, other technical support, secondary aggregation, storage, value addition, market linkages
Federation (FPC)	Sub-district/District	50-200 Councils (2500-10000 farmers)	2,500-10,000	Training and capacity building of farmers and farmers' organization, Production and supply of necessary inputs, higher level of resource and technical support, market linkages

The District Manager in consultation with the Federation (if available), DMC and Project Officer with the guidance of the PMU shall appoint Extension Coordinators on contractual basis who will draw salaries from the federation and who would work closely with farmers in clusters for group action, saving & credit planning, interaction and for regular meetings for which she shall maintain a record of proceedings. The extension coordinator would also help the cluster and Council Secretaries to maintain their books of accounts.

- Growers will be organized first at village level into contiguous clusters organized on micro-watershed (as cluster unit) basis comprising of 10-25 farmers having total cultivable/plantation area of about 10-15 ha.

- 5-10 or more clusters within a village as unit of grouping shall be organized into the Councils. Councils can be legally registered under the Societies Act. All financial assistance and support services shall be facilitated through such councils.

- Several Councils within a district or subdivision of a district, depending on size shall be federated into a Federation which may be a Farmer Producer Company/Society and shall be responsible for creation of value addition and

processing infrastructure, market development and handling of inputs and outputs.

- Entire implementation strategy shall focus on growers participation through weekly/ fortnightly meetings (at cluster and council levels), facilitated by Extension Coordinators with a Secretary employed by the Council. All infrastructure for input production, animal upkeep, dung/urine collection, manure making, aggregation, grading, drying and storages etc will be created by the farmers under participatory approach. Financial support under the programme for infrastructure creation, input procurement, seed production etc will be routed through the Councils who will maintain accounts for their member-Clusters.

- States need to develop Clusters, Councils and Federations in such a way that locally appropriate multiple commercially saleable commodities can be grown to yield large volumes at Federation level. Each Council is expected to cover about 50-150 ha area coterminous with an entire village and about 50-200 such Councils are to be eventually federated into a Federation as FPC/Societies.

- While investing in a Council of Clusters, efforts shall be made to integrate other central and state schemes for overall development and better funds utilization for left over components. Schemes of water management, water conservation, irrigation (sprinkler/ drip), organic adoption and certification etc can be availed and integrated (if available) with the proposal under this scheme.

Investment Break up (For a Typical Proposal covering 5000 farmers)

Level	Budget Item	Amount	Remarks
Cluster (of 15 farmers)	Institution Building and Capacity Building	50,000	Cost for training, exposure visit to farmers, books and records maintenance etc. Para professional cost.
	Revolving Fund	30,000	Revolving fund to be placed with each cluster for on lending to members for purchase of inputs, implements, animals. A micro plan to be done by every cluster for this.
	Tool Bank	25,000	A tool bank will be established at cluster level. The tool bank will give implements on rent to cluster members.
	Inputs to members	7,500	Inputs like improved seed, vermin composting worms, bio pesticides, bio-fertilizers would be provided to members. This will be one time supply to each member.
	Total	**1,12,500**	**Per farmer investment is about Rs. 7,500 for cluster level activities.**
Council (village level – About 10 clusters with 150 members)	Institution and Capacity Building	3,00,000	Council Secretary remuneration, maintenance of books and records etc.
	Community Infrastructure	4,50,000	Sheds, purchase of crates etc., weighing scale, moisture meters etc.
	Total	**7,50,000**	**Per farmer investment Rs. 5000 for council level activities.**
Federation (about 5,000 farmers	Institution and capacity Building	1,00,00,000	For setting up the organization, engaging resource organizations, engaging professionals, for training of community members and staff etc.
	Community Infrastructure	1,00,00,000	For setting up processing and value addition infrastructure etc.
	Piloting and innovative project	50,00,000	For taking up some piloting and innovative projects
	Total	**2,50,00,000**	**Per farmer investment is Rs. 5000 for federation level activities.**
Project Administrative cost to State Society (@ 5%)		46,00,000	**Rs. 921 per farmer**
TOTAL BUDGET		**9,21,00,000**	**Rs. 18421 per farmer**