MANAS RURAL DEVELOPMENT INSTITUTE

ACTIVITY REPORT

YEAR - 2023-2024

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MANAS RURAL DEVELOPMENT INSTITUTE

Annual Activity Report for the Year 2023-2024

Manas Rural Development Institute (MARDI) has pleasure to present this 19th Activity Report for the year ended 2023-2024. The Company is registered under the provisions of Section 25 of Company Act, 1956. The provisions depict the Company as "Non Profit Company".

Manas Rural Development Institute

Thought Behind…

Aim

- To train and equip farmers with the intention of giving them a sustainable life in the village.
- To develop Eco-friendly partnership between consumers and farmers.

Objectives

- To have a systematic utilization and integration of the available natural and human resources for their socio economic development in rural areas.
- Spreading awareness about organic farming using ancient organic technology. Adopting Gandhian philosophy of 'Panchkroshi'.

Philosophy

- Gandhian Philosophy of 'Panchkroshi'.
- A cluster of nondescript villages that unify in order to form a 'Panchkroshi'.
- The philosophy identifies and encourages an Ideal Village Community.

Thesis

Raising Funds by selling the agricultural produce to educate the farmers about environmentally viable methods of farming to eventually increase the socio-economic status and standard of living of the farmers.

Approach

For quite some time now, India has continuously been projected and stamped as a country of the poor. And truly so…!

The picture is now gradually changing due to the active participation by enthusiastic number of NGOs and dedicated countrymen. Working on the principles of sustainable agriculture,

The Beginning…

- Purchased land in 1994 for establishment of Manas Krushi Farm at Sajivali in Shahapur Taluka of Thane District.
- Up to 1998 conventional methods of farming was followed which was base on usage of chemical fertilizers and pesticides.
- It was observed that the conventional method of farming was not profitable due to heavy input expenses on external inputs.
- Hence, during 1999, the entire farm was brought under Organic methods of farming under the guidance of Shri Deshpande, Promoter of Rishi Krushi system of organic farming.
- Homa Therapy for agriculture was also implemented under the guidance of Gurudev Paranjape
- In 2001, Manas Krushi Farm got Certified Organic Status.
- The cost of cultivation was reduced to great extent and the farm produce was chemical free.
- Our survey indicated the farmers in the near by villages were following conventional methods of farming.
- We noticed that more than 70 per cent of the farmers from the adjoining villages were mainly cultivating paddy and other crops during the kharif season which were mainly rain fed.
- Dependence on use of external farm inputs was prominent resulting into input cost escalation.
- The marketing arrangements were also haphazard like conventional.

- The crop yield was low resulting low farm income
- On an average per acre income from the paddy crop was Rs. 8000/-
- Informally we started spreading message of organic farming amongst nearby villages from 2001 onwards.
- It was with the primary focus to augment the farm income of the farmers as a whole and improve their socio-economic status.

Programmes Implemented

- **Educational Activities:**

  We undertook multipronged approach by training

  1. Pre-school children with an objective to prepare and develop the learning habits of children and make a strong foundation for their formal education.
  2. Youth who are acting as a community representative for undertaking implementation of the various developmental programs undertaken by the Organization.
  3. Women: Promotion of self help groups, vocational training, income generating activities, health and nutrition etc.

- Vocational training, environmental awareness, organic farming practices, preparation of bio-enhancers and bio-pesticides etc.
- Tree Plantation Programme:
- We have promoted tree plantation on large scale by involving school children, members of women SHGs youths and farmers.
- Plants and seedlings were distributed for plantation.
- We have also conducted environmental awareness camps and rallies on Environment Day
- Health check up camp
- Milk distribution program: For the proper nourishment of the children of the weaker section from Sajivali Village We distribute milk obtained from our Goshala to free of cost daily.
- Drinking Water Facility: We have also provided drinking water facility to the residents of Sajivali village by Tap Water System.

- Community Hall: We have constructed community hall for the people of Sajivali village for under taking various social activities.
- Promotion of Sports: We are promoting sports activities in the adjoining villages by sponsoring the sports activities.

The Enhanced Programmes

- MARDI realized that organic farming to make sustainable, required backward and forward integration of services & financial stability of farmers.
- This was complied with, seed supply, Vermi-compost supply and further produce was purchased at fixed price for entire season.
- We started undertaking various training programs on the subjects like
  - Seed bank, planting material and nursery development
  - Vermi-composting and other bio-inputs
  - Irrigation systems
  - Watershed development
  - Shed net and Green Houses
  - Micro-finance
  - Marketing support

Road Map

- Development of rural agriculture infrastructure that will support value addition and marketing of farm produce
- Cluster based Installation of cold chain and warehousing facilities.
- Value addition processes to be adopted at village level by group of farmers.
- Processes like making Atta from wheat, hand polished rice, cold pressed oil, pulse milling, spice pounding, etc by traditional processed but with modern machinery.
- Further enhancement of value addition till packaging and distribution.
- Optimum logistic support to reduce carbon footprints.

Expected outcome

- With the support of technical guidance, finance and agriculture infrastructure the substantial revenue enhancement is envisaged.
- We propose the receipt of farmer to be enhanced in two phases Rs. 25,000 and Rs. 50,000 in view of creation of infrastructure, value addition process involved and remunerative prices.
- This will be achieved through processing and value addition of the farm products like hand polished rice, pulses, oilseeds, vegetables and supplementary income from the milk production.
- We expect the farm income of the farmers to be enhanced to Rs. 70,000 plus in the span of five years.
- For this requisite infrastructure of cold chains, common cow housing, logistics, electricity generation etc will be developed in the cluster of villages with the marketing support.

Testimonials

- Research & Demonstration site (200 + Acres) is certified as Organic Farm since 2001 by Indian, EU and USDA Organic standards.
- Seed production program since 2005, supported by Maharashtra State Seeds Corporation (Mahabeej) in Thane district.
- Accreditation as Facilitator for Organic Horticulture Promotion program by National Horticulture Mission (NHM), Govt. of India.
- Recognized as official Training Agency of Organic farming by National Center of Organic Farming (NCOF), Ghaziabad.

Major Programmes implemented during the year 2023-24

1. Soil Management:

- **Soil Health:**

  Reports would detail how the farm maintains and improves soil health, including practices like.

- **Crop rotation:** Alternating different crops to prevent nutrient depletion and pest build-up.
- **Cover cropping:** Planting non-cash crops to protect and improve soil.
- **Composting:** Utilizing organic matter to create nutrient-rich compost for soil amendment.
- **Minimum tillage:** Reducing soil disturbance to maintain soil structure and organic matter.
- **Nutrient management:** Using natural fertilizers like animal manure, compost, and green manure to replenish soil nutrients.

2. Organic Farming Training Centre : Crops selected 2023-24

Crop Details

➢ **Green Chilly:** Chillies can be grown both as Kharif and Rabi crop. In addition to this, they are also planted at other times. Sowing months are May to June for Kharif crop, September to October for Rabi crops. If they are grown as summer crops then January-February months are chosen.

➢ **Lady's Finger:** Lady finger is an important vegetable crop of India. It is grown in kharif (June-August) and Zaid (January-March) season. It is grown in tropical and sub-tropical region.

➢ **Colocasia:** June – July and February – March are the suitable season for cultivation. Cormels weighing about 20-25 g form good planting material. Seed rate of 800 kg/ha is required. Plough the field to a fine tilth and form ridges and furrows at a spacing of 45 cm.

➢ **Ginger:** The planting season for ginger is from March-April, with the onset of the monsoon. The crop duration is generally around 8-9 months (April/May to December/ January). Ginger is planted in rows, 30 cm apart at distances of 20-25 cm within the row.

➢ **Long beans:** Green beans are high in vitamin and they and also continue a decent amount of calcium. The asparagus bean is a legume cultivated for its edible green pots containing immature seeds, like the green bean. It is also known as: yard long bean, pea bean, long potted cow pea, Chinese long bean, snake bean. The fresh long beans can be harvested in 70 to 90 days from planting the fine and extra fine beans can be harvested everyday

➢ **Field pumpkin:** Cucurbita pepo is a cultivated plant of the genus Cucurbita. It yields varieties of winter squash and pumpkin, but the most widespread varieties belong to the subspecies Cucurbita pepo subsp. pepo, called summer squash. They have a wide variety of uses, especially as a food source and for medical conditions. C. Pepo seems more closely related to C. Fraterna, though disagreements exist about the exact nature of that connection, too

➢ **Tomato:** The tomato is the edible berry of the plant Solanum lycopersicum, commonly known as a tomato plant. The species originated in western South America and Central America.Tomato plants typically grow to 1–3 meters (3–10 ft.) in height. They are vines that have a weak stem that sprawls and typically needs support.

We have beautifully established Manas Rural Development Institute to facilitate the training on organic farming. The training establishment includes one spacious Training Hall which can accommodate more than 300 audiences at a time, Two Class rooms with the sitting capacity of 30 each with the high quality benches and one spacious office and Directors chamber for Resource Faculties.

All audio-video requirements for professional learning such as Slide projector, Mike system, CDs, DVDs, Laptops etc, are effectively fulfilled. Residential quarters for stay of Resource Faculties and Dormitory for the participants have been constructed.

3. IMPORTANCE OF ORGANIC FARMING FOR HUMAN HEALTH

Organic farming is crucial for human health as it provides a pathway to reducing exposure to harmful chemicals and enhancing the nutritional quality of food. By eschewing synthetic pesticides and fertilizers, organic farming minimizes the risk of pesticide residues in crops, safeguarding consumers from potential health hazards such as neurological disorders and cancer. Additionally, organic produce often contains higher levels of beneficial nutrients like antioxidants and vitamins, contributing to overall health and well-being. Furthermore, organic livestock farming prohibits the routine use of antibiotics and growth hormones, ensuring that meat and dairy products are free from antibiotic residues and promoting the responsible use of antibiotics in both animal and human health. Overall, organic farming offers a holistic approach to food production that prioritizes human health, environmental sustainability, and ethical considerations.

1. Reduced Exposure to Pesticides and Chemical Residues: Organic farming avoids the use of synthetic pesticides, herbicides, and fertilizers, which can leave residues on crops and contaminate soil, water, and air. By consuming organic produce, individuals can significantly reduce their exposure to potentially harmful chemical residues, thereby lowering the risk of pesticide-related health issues such as neurological disorders, cancer, and reproductive problems.

2. Nutritional Quality: Research indicates that organic fruits, vegetables, and grains often contain higher levels of certain nutrients, such as antioxidants, vitamins, and minerals, compared to conventionally grown counterparts. Organic farming practices, such as soilbuilding techniques and reduced chemical inputs, can enhance the nutritional content of crops, leading to potentially greater health benefits for consumers.

3. Food Safety: Organic farming standards include rigorous regulations and certification processes aimed at ensuring food safety and quality. Organic certification requires compliance with strict guidelines regarding soil and water management, pest and disease control, and processing practices. By adhering to

these standards, organic farmers help minimize the risk of foodborne illnesses and ensure that organic products meet stringent safety criteria.

Organic farming offers numerous benefits for human health by reducing exposure to harmful chemicals, enhancing nutritional quality, promoting food safety, and supporting sustainable and ethical food production practices. Embracing organic agriculture can empower individuals to make informed dietary choices that promote both personal well-being and environmental sustainability

4. Educational and Environmental Awareness Visits

Plantations at Manas Krushi farm…

We are successfully growing crops organically as under:

Cereal crops like Paddy, Maize, Oilseeds crops like Sunflower and Groundnut, Floriculture like Sonchafa on large scale, Horticultural plantations like Mangoes, Cashew nuts, Guava, Chiku, Coconuts, Jamum etc and vegetables like chilli, Bhendi, Brinjal and other leafy vegetables so also fodder for dairy animals. The total area under such plantations is more than 100 acres.

Environmental education (EE) connects us to the world around us, teaching us about both natural and built environments. EE raises awareness of issues impacting the environment upon which we all depend, as well as actions we can take to improve and sustain it.

Whether we bring nature into the classroom, take students outside to learn, or find impromptu teachable moments on a nature walk with our families, EE has many benefits for youth, educators, schools, and communities.

5. Agro-Eco Tourism:

Our farm site is of unique presentation by Nature for its beauty by forest, mountains, lakes and perennial rivers with plenty of water which is also paradise of wild animals and birds. Number of visitors enjoy educational trip to our farm especially

school children and college students. We also conduct consumer awareness programs by arranging their visits to our farm with serving organic food to them.

Agro–ecotourism is a new value–added agricultural industry that may help small farms and rural communities increase their earnings and economic viability. Agro–tour- ism may take numerous forms, such as roadside stalls or farm–direct sales, which may provide tourists with farm–fresh goods as well as opportunities to engage with the producers. Farmers' seclusion is broken through agroecotourism, which allows them to meet new people and strengthen their ties with the community. Social skills, as well as a picturesque, clean and appealing farm, are essential for agroecotourism success.

6. CHALLENGES OF ORGANIC FARMING

1. Higher Production Costs: Organic farming often requires more labour-intensive practices, organic certifications, and expensive organic inputs, leading to higher production costs compared to conventional farming.

2. Limited Access to Resources: Farmers may face challenges in accessing organic seeds, fertilizers, and pest control methods, especially in regions with limited availability or high costs of organic inputs.

3. Pest and Disease Management: Organic farmers have limited options for pest and disease control compared to conventional farmers, leading to potential yield losses and crop damage.

4. Transition Period: Converting from conventional to organic farming involves a transition period where farmers must adhere to organic standards without receiving the premium prices associated with certified organic products, leading to financial challenges.

5. Weed Control: Organic farmers face difficulties in controlling weeds without synthetic herbicides, often relying on manual labour, mechanical cultivation, and cover cropping, which can be time-consuming and labour-intensive.

6. Yield Variability: Organic farming practices may result in lower yields initially as the soil undergoes transition, leading to variability in crop yields and potential income instability for farmers.

7. Market Access and Pricing: Organic farmers may encounter challenges in accessing markets that value organic products and paying premium prices, particularly in regions with limited consumer demand or competition from conventional products.

8. Certification and Compliance: Obtaining and maintaining organic certification requires adherence to strict standards and regulations, which can be time-consuming, costly, and bureaucratic for farmers.

9. Knowledge and Training: Organic farming requires specialized knowledge and skills in soil management, crop rotation, pest control, and organic certification, necessitating ongoing education and training for farmers.

10. Consumer Perception and Education: Some consumers may be unaware of the benefits of organic farming or sceptical of its effectiveness, leading to challenges in marketing organic products and building consumer trust in organic farming practices.

Organic Agriculture: Promotional Publications

Books Published in Marathi

1. **Sendriya Sheti : Shaswat Sheti Ani Pramanikaran**
   (Organic farming and Certification)
2. **Mazi Gir Gai (Gir Cow)**

Dr Kshirsagar, our Chief Coordinator, Rural Development actively participated as an Guest Speaker in the workshops, seminars and training programmes arranged by Agriculture Finance Corporation Ltd, Mumbai on the subjects of Joint Forest Management, Promotion of Self Help Groups for development of forests, Global Warming, Climate Change and Eco-tourism in the States of Maharashtra, Gujarat and

Goa. He has been visiting Professor at YCMOU, Nasik for the subject of Agro-journalism

He has developed the following Training Material essential for Organic Certification

- A Booklet on Organic Certification
- A Training Manual on Internal Control System (ICS) for Group Certification

Books to be published in Marathi:

- Why Organic Agriculture and its Certification
- Organic cultivation of Cereal, Pulses and other Cash Crops
- Organic Cultivation of Vegetables
- Organic Fruits Plantations
- Bio-dynamic farming and Homa Jaivik Krushi
- Organic Manures and Bio-pesticides

The drafts of the books have been finalized and the printing of these booklets is in progress.

IMPORTANCE OF ORGANIC FARMING ENVIRONMENTAL SUSTAINABILITY

Organic farming is paramount for environmental sustainability as it fosters practices that prioritize soil health, biodiversity conservation, and reduced chemical inputs. By eschewing synthetic pesticides and fertilizers, organic farming minimizes the environmental pollution associated with conventional agriculture, safeguarding water quality and protecting non-target organisms. Furthermore, organic farming techniques such as crop rotation, cover cropping, and composting enhance soil fertility, structure, and carbon sequestration, contributing to long-term soil sustainability and mitigating climate change. The promotion of biodiversity through diverse crop rotations and habitat preservation supports ecosystem resilience, reduces pest and disease pressure, and enhances natural pest control and pollination services. Overall, organic farming embodies a holistic approach to agriculture that harmonizes with natural ecosystems,

promotes environmental stewardship, and fosters the long-term health and resilience of agricultural landscapes.

Organic farming, also known as ecological farming or biological farming. Organic farming is an agricultural approach that emphasizes sustainability, environmental conservation, and the avoidance of synthetic inputs such as pesticides and fertilizers. Instead, organic farmers rely on natural methods and techniques to enhance soil fertility, control pests and weeds, and promote biodiversity.

Acknowledgement

MARDI is very happy to place on record its heartfelt thanks and appreciation to everybody and every organization which have helped us in organizing various programmes and activities throughout the year most successfully. We are also equally thankful to various dignitaries, valued visitors and students from various educational establishments from the State of Maharashtra for their visits to our farm and institute and appreciating our efforts and making valuable suggestions for further improvement. We really owe a lot to them for this act of kindness and sure to receive same help and patronage in our future endeavors too.

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Visit of Shri Sunil Khairnar, Chair Person, ISAP and Founder & Director of Indigram Group New Delhi

Visit of Shri Regiset Monica Pignal, Farmers couple from France

Educational Trip of Agri.College Students to our Organic Vegetable Producion Demo Unit

Educational Trip of Udyogbharati EDP participants from Nashik

Students of Agriculture School to our Tetrabed Vermi-composting Unit

Our Organic Training Centre of MARDI

Visit of Social MBA students of Unnat Bharat Abhiyan Team Mumbai

Educational Trip of Skill India Participants