

## BOARD for COMMUNITY DEVELOPMENT through EDUCATION

GOVERNMENT OF ANDHRA PRADESH

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### NATURAL FARMING

**Introduction:** Andhra Pradesh is an agricultural state with a predominantly agrarian economy. However, conventional farming practices have led to environmental degradation, soil depletion, and health hazards due to the use of chemical fertilizers and pesticides. Natural farming is a sustainable and eco-friendly alternative to conventional farming, which promotes the use of natural resources and reduces the dependence on chemical inputs. This project aims to promote natural farming in Andhra Pradesh and support farmers in adopting sustainable farming practices.

#### **Objectives:**

- Create awareness among farmers and the public about the benefits of natural farming.
- Train farmers in natural farming techniques and provide them with the necessary resources and support to adopt natural farming practices.
- Develop and implement a certification program for natural farming to promote the production and consumption of organic produce.
- Establish a network of natural farming practitioners and organizations to share knowledge and resources and provide technical support to farmers.
- Monitor and evaluate the impact of natural farming on soil health, crop yield, and environmental sustainability.

#### **Methodology:**

- Conduct awareness campaigns and outreach programs to promote the benefits of natural farming among farmers and the public.
- Provide training to farmers on natural farming techniques, including composting, natural pest control, crop rotation, and soil management.
- Provide necessary resources and inputs such as seeds, natural fertilizers, and pesticides to support the adoption of natural farming practices.
- Develop and implement a certification program for natural farming to promote the production and consumption of organic produce.
- Establish a network of natural farming practitioners and organizations to share knowledge and resources and provide technical support to farmers.

- Monitor and evaluate the impact of natural farming on soil health, crop yield, and environmental sustainability.

Expected outcomes:

- Increased awareness among farmers and the public about the benefits of natural farming.
- Increased adoption of natural farming practices by farmers, leading to improved soil health, crop yield, and environmental sustainability.
- Development of a certification program for natural farming, leading to the production and consumption of organic produce.
- Establishment of a network of natural farming practitioners and organizations to share knowledge and resources and provide technical support to farmers.
- Improved livelihoods for farmers and increased economic benefits for the state through the promotion of natural farming.

**Conclusion:** Natural farming is a sustainable and eco-friendly alternative to conventional farming, which promotes the use of natural resources and reduces the dependence on chemical inputs. This project aims to promote natural farming in Andhra Pradesh and support farmers in adopting sustainable farming practices. By creating awareness, providing training and resources, and developing a certification program, we can promote the production and consumption of organic produce, improve soil health, and ensure environmental sustainability for future generations.

### **Benefits of Natural Farming to various stakeholders of community**

Natural farming offers several benefits to various stakeholders in the community. Here are some of the benefits:

1. **Farmers:** Natural farming helps farmers to reduce the cost of inputs such as fertilizers, pesticides, and herbicides. As a result, they can save money on purchasing these inputs, and the money saved can be used to improve their livelihoods. Also, natural farming practices can improve soil health, leading to increased crop yields and reduced dependence on external inputs.
2. **Consumers:** Natural farming provides consumers with safe and healthy food that is free from harmful chemicals. Organic produce has higher nutrient content and is free from pesticide residues, making it beneficial to human health.
3. **Environment:** Natural farming practices promote the conservation of natural resources such as soil, water, and biodiversity. By reducing the use of chemicals, natural farming helps to maintain the ecological balance and reduce environmental pollution.

4. Local communities: Natural farming promotes sustainable agriculture and the production of organic food. This can help to create a market for locally produced food, providing economic benefits to local communities.
5. Government: Natural farming can contribute to the achievement of sustainable development goals, such as food security, environmental sustainability, and poverty reduction. The promotion of natural farming can also help to reduce the dependence on chemical inputs, leading to a reduction in the import of chemical fertilizers and pesticides.

In summary, natural farming provides several benefits to various stakeholders in the community, including farmers, consumers, the environment, local communities, and the government. By promoting natural farming practices, we can improve the livelihoods of farmers, provide safe and healthy food to consumers, protect the environment, and contribute to sustainable development.

### **Process of Natural Farming, Awareness Content for Campaign.**

#### **Process of Natural Farming:**

1. Composting: Composting is the process of converting organic waste into a nutrient-rich fertilizer. Natural farmers use compost to enrich the soil and provide essential nutrients to plants.
2. Seed Treatment: Seed treatment involves treating seeds with natural substances such as cow urine and cow dung to protect them from pests and diseases.
3. Mulching: Mulching involves covering the soil with organic matter such as leaves or straw to retain moisture, suppress weeds, and regulate soil temperature.
4. Natural Pest Control: Natural farmers use natural pest control methods such as neem oil and garlic spray to protect plants from pests and diseases.
5. Crop Rotation: Crop rotation involves planting different crops in the same field to maintain soil fertility and reduce the risk of pests and diseases.
6. Soil Management: Natural farmers focus on soil management practices such as maintaining soil structure, preventing soil erosion, and promoting the growth of beneficial microorganisms.

#### **Awareness Content for Campaign:**

1. Natural Farming is a sustainable and eco-friendly alternative to conventional farming practices that promote the use of natural resources and reduce dependence on chemical inputs.

2. Natural farming promotes the production of healthy, nutrient-rich, and chemical-free food that is good for human health.
3. Natural farming practices can improve soil health, leading to increased crop yields and reduced dependence on external inputs.
4. Natural farming is beneficial to the environment, as it promotes the conservation of natural resources such as soil, water, and biodiversity.
5. Natural farming provides economic benefits to farmers by reducing the cost of inputs such as fertilizers, pesticides, and herbicides.
6. Natural farming practices can help to create a market for locally produced food, providing economic benefits to local communities.
7. Natural farming contributes to sustainable development by promoting the achievement of sustainable development goals such as food security, environmental sustainability, and poverty reduction.
8. By promoting natural farming practices, we can improve the livelihoods of farmers, provide safe and healthy food to consumers, protect the environment, and contribute to sustainable development.

In summary, the awareness content for a campaign to promote natural farming should focus on the benefits of natural farming to various stakeholders and the process of natural farming practices. By creating awareness, we can encourage farmers to adopt natural farming practices and promote the production and consumption of organic food, leading to a sustainable future for all.

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## AWARENESS – NATURAL FARMING

### What is Natural Farming (NF):

Natural Farming is a farming practice that believes in natural growth of crops without adding any chemical fertilizers and pesticides or any other external elements. The inputs used for seed treatments and other inoculations are prepared from the locally available materials like cow dung, cow urine and green manure.

NF practicing farmer has lower cost of inputs and thus has better efficacy to increase the net incomes. At the same time, crops helps in retaining soil fertility and are climate resilient.

Natural Farming is farming in harmony with nature. We believe that Mother Nature has all the solutions.

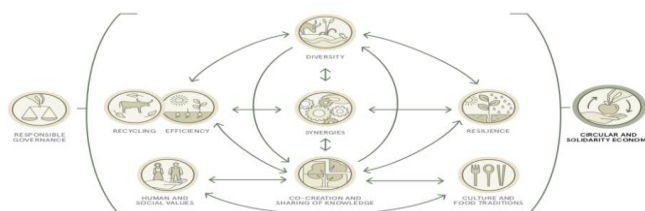
### What are the benefits of NF?

- Cost of cultivation comes down drastically. Harvests from intercrop recover the cost of cultivation of the main crop.
- Earth worm population increases.
- Increase in soil porosity and hence infiltration is more.
- Chemical free food is quite healthy for the consumers.
- Beneficial insects population increases due to non use of chemical pesticides.
- Farmers experience no dizziness, skin allergy, nausea etc (which is usually accompanied with application of chemicals)

### Huge eco system benefits:

- Food, Nutrition and Health Security
- Employment
- Soil Health & water security
- Coastal eco-system regeneration
- Bio-Diversity
- Climate Resilience
- Has a critical role in soil carbon sequestration, apart from its all other benefits

NF incorporates all the recommended best practices for Climate Change Adaptation. It has a critical role in soil carbon sequestration, apart from its all other benefits. NF conforms to all Elements of Agroecology.



NF and

Comparative benefits between  
Non-NF farming:

Sl No	Particulars	NF Farming	Non-NF farming
	Crop Yield	At par with Chemical farming after 2 years	High during initial 4-5 years
	Cost of Agri inputs	Minimal	High
	Net Income of farmers	High	Lower
	Incidence of diseases & pests	Minimum	High
	Ratio between beneficial insects to harmful insects	High	Very low
	Hazard to benign animals like frog, snakes, birds	NIL	High
	Soil	Porous	Compact
	Earth worm population	High	Low
	Resistance to dry spell	High	Low
10	Health hazards faced by farmers	NIL	Many (nausea, skin allergy, dizziness etc)
11	Contamination of water, air, soil	NIL	High
12	Food	Healthy and tasty	Many health problems, even cancer due to residual toxicity; less tasty
13	Injury to farm animals	NIL	More
14	Keeping quality of produce	Longer	Shorter
15	Capital requirement	Low (it is knowledge intensive)	Capital intensive
16	Farming concept	Feeding the soil (living soil concept)	Feeding the plant (healthy plant concept)

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## **NF - its implications for Indian Agrarian scenario**

**IMPACTS:**(An Independent Assessment by Center for Economic and Social Studies(CESS)Kharif 2018-19)

- Cost of cultivation has shown significant differences with APCNF costs being lower than non-APCNF costs across all crops
- Yield differences are not significant between APCNF and Non-APCNF farms
- Significant increase in net income for APCNF farmers as a result of reduction in cost of cultivation
- APCNF farms reported better soil health, crop health, resilience, economic empowerment of farmers and dignity of labor.
- The report also mentioned that APCNF has higher potential for expansion of extension services by way of increasing Community Resource Persons (CRPs) at the village level.

### **The Four Wheels of Natural Farming:**

1. **Beejamrutham:** Microbial seed coating through cow urine and dung -based Formulations.
2. **Jeevamrutham:** Enhance soil micro biome through an 'inoculum' of cow dung, cow urine and other ingredients
3. **Achhadana:** Ground to be kept covered with crops and crop residues as mulching
4. **Waaphasa:** Fast buildup of soil humus through NF leading to soil aeration and water vapor harnessing.

### **Other Principles and Practices in NF:**

1. Use of 'indigenous' cow - for cow-dung and urine. One cow is enough for cultivation of 30 acres
2. Botanical extracts - for pest management
3. Minimal tillage - ground becomes soft and porous with APCNF practices
4. All inputs to be made within the village - nothing should be purchased from outside.

### **What is Seed- to- Seed (S2S) under NF practice?**

- Seed- to- Seed concept refers to the practice of crop raising without use of any chemicals (either fertilizers or pesticides) from sowing of seeds till harvest. The farmer uses no chemicals in any of his crop raising practices like seed treatment, plant protection, manuring, weed control etc , starting from seed sowing till the harvest (i.e. Seed-to-Seed). He uses Natural farming inputs only like Beejamrutham, Jeevamrutham, botanical extracts etc.
- It is further split into following categories:

S2S: Where the farmer has not used any chemicals for his entire land but covered only a part of his land.

S2S+W: Where the farmer has not used any chemicals in his whole land area.

S2S+Z: Where the farmer has used all the NF practices along with intercropping

S2S+M: Where the farmer has used all NF practices along with some crop models like SRI Paddy, SRI Ragi, Annapurna etc