

**Suggested inclusions  
are bold and underlined**

# Andhra Pradesh State Policy on Organic Farming

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## *The changing trends of Agriculture*

Organic Agriculture is the oldest form of agriculture on this earth. In ancient times the farming was not only a process of food production or source of income, but it was essentially a way of life. In India, the traditional knowledge of agriculture which was essentially organic, was nurtured and groomed by millions of farmers over several hundreds years and continued to grow systematically without any adverse impact on soil and environment. The traditional system allowed perfect harmony between man, animals, plants and nature. The farming till the green revolution period was mostly without the use of petroleum-based products (Fertilizers & Pesticides).

The modern industrial input based agriculture introduced during sixties, to feed the ever growing population of the country changed the entire scenario. The green revolution gave tremendous boost to the agriculture production in India. The gains of modern agriculture were impressive and practically transformed Indian agriculture from subsistence to surplus generating enterprise. During the era of green revolution, introduction of HYV, extension of irrigated areas, use of high analysis NPK fertilizers and increase in cropping intensity propelled our food production.

The modern agriculture farming practices and irrational use of chemical inputs over the last four decades resulted in loss of natural habitat balance, loss of soil health and caused many hazards like soil erosion, decreased ground water level, soil salinisation, pollution due to fertilizers & pesticides, genetic erosion, ill effects on environment, reduced food quality and increased the cost of cultivation, making the farmer poorer from year to year

The consumers' fears triggered by food scares and technological developments such as genetic modification and food irradiation have been translated into serious concern about food safety and quality. In addition, public awareness of the irreversible damage done to the environmental by practices that lead to soil and water pollution, the depletion of natural resources and destruction of delicate ecosystems has led to calls for more responsible attitude towards our natural heritage. Nature provides us with very essence of life. However, the world is increasingly taking recourse to synthetic and toxic materials, which is polluting the soil, subsoil, water and the atmosphere and curtailing human longevity. It is about time we shift the accent to nontoxic, nonpolluting and eco-friendlier natural habits and habitats.

Against this background, organic farming once seen merely a fringe interaction, has come to the fore, as an agricultural approach that cannot only sustainable system, but is environmentally sound too. Organic farming is gaining movement all over the world as it offers viable alternative to the ill effects of modern agriculture. Organic farming is practiced in more than 100 countries, and more than 31 million hectares of area is under organic farming in the world and the market of organic food is to touch \$ 31 billion by 2005.

Organic farming aims at sustainable development of food production alongside conservation of finite resources and protection of natural environment so that the needs of people living to day can be met without compromising the ability of future generation to meet their own needs.

#### The concepts in Organic agriculture

- ❖ Avoiding usage of chemical inputs viz., fertilizers and pesticides there by not polluting the soil, environment and ground water with chemical residues
- ❖ Increase/maintain biological diversity and heterogeneity among plants and animals.
- ❖ Utilization of available farm resources duly recycling them.
- ❖ Depends largely on environment and the local farming system for controlling pests & diseases
- ❖ Organic farming requires less financial and external inputs and places more reliance on natural and on farm resources as inputs.

The Government at Central and State levels recognized the need of change in farming system approach, and initiated programs to promote Organic farming in a big way. GOI started National Project on Organic Farming (NPOF) for promotion of organic farming in the country. GOI also launched the National Programme for Organic Production (NPOP) to provide an institutional mechanism for the implementation of National standards for organic cultivation, accreditation of certification agencies, inspecting agencies etc.

## *Principles of Organic Farming:*

Organic agriculture is defined as "holistic food production management systems, which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity. It emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, agronomic, biological and mechanical methods, as opposed to using synthetic materials, to fulfill any specific function within the system." (FAO/WHO Codex Alimentarius Commission).

Organic Farming is the farming with twin objectives of being sustainable in production and eco-friendly. The important principles in organic farming are -

1. To work with natural systems rather than seeking to dominate them.
2. Conservation and judicious use of natural resources like soil, biomass, animal husbandry and water.
3. Treating soil as living entity and maintain the soil health i.e., structure, fertility, productivity etc.
4. To encourage and enhance the biological cycles within farming system involving microorganisms, soil flora, fauna, plants and animals.
5. Resources should be used in an organized way by recycling them to mobilize organic matter and nutrient elements within a closed system.
6. To maintain genetic diversity of agricultural system and its surroundings including the protection of plants and wild life habitats.
7. Integration of animal husbandry with the farm for co-ordination between the two systems such as provision of proper living conditions to the livestock and utilization of its dung and urine as raw material for production of organic manures and bio-pesticides.
8. To allow agricultural procedures those are less expensive to yield adequate return.
9. To preserve and enhance the traditional and indigenous knowledge in farming besides seeds and crop varieties.

The philosophy of organic agriculture is to feed the soil rather than the crops to maintain soil health and is a means of giving back to the nature what have been taken from it. Organic farming is not a technology but a system close to nature where in problems of farming are managed using local resources alone.

## OBJECTIVES OF THE POLICY ON ORGANIC FARMING

Govt. of Andhra Pradesh is giving emphasis for promoting organic farming in the State with the following objectives.

- ❖ To improve the soil fertility & productivity.
- ❖ To make the farmers less dependent of supply of inputs and take up crop cultivation with available local resources and thus making the farming less expensive and profitable.
- ❖ For judicious use of water which is very precious.
- ❖ To improve the depleted soils of rain fed areas by addition of organic manures to make them input responsive and better performing even in drought conditions.
- ❖ To reduce the debt burden of farmers and enable them to attain sustainable status and self-respect.
- ❖ To prepare the farmers to face the WTO through production of quality produce and also to improve the farmers income.
- ❖ To increase rural employment opportunities and prevent migration to urban areas.
- ❖ To facilitate 'Self Help Groups' among farmers to meet their requirements.
- ❖ To make the environment safe and pollution free and also to protect health of human beings and animals.
- ❖ To bring about suitable institutional changes in teaching and research on organic farming.



# STATUS & OPPORTUNITIES FOR ORGANIC FARMING IN THE STATE

Andhra Pradesh is a state with very diverse agricultural production systems exposure to long coastal line, varied agro-climatic zones, existence of different types of soils, natural vegetation and blessed with farmers who are hard working and innovative mind and thus possess unlimited possibilities for adoption of organic farming practices without affecting the present food grain production. The state is having full potential to adopt organic agriculture and Govt. is planning carefully to exploit the existing opportunities.

- ❖ In Adilabad, Karimnagar, Nizamabad districts certain farmers are growing Organic cotton. In Srikakulam, Krishna districts mango is being grown organically in some areas. Similarly Coffee in Visakhapatnam district, Soapnut, Amla & medicinal plants in Prakasam districts are grown through organic methods.
- ❖ In Andhra Pradesh, the tribal and forest areas are the areas where already the cultivation is in practice without application of chemicals and Govt. is aiming to turn them as Organic Areas and planning to produce medicinal, aromatic and plantation crops there organically as a part of the farming system of the area.
- ❖ Organic agriculture can be promoted in a big way in rainfed areas where the yield potential is still to be expressed and soil fertility is to be improved.
- ❖ The Govt. is aiming to promote organic farming to ensure that quality and safe food is available to the agri - rural communities, our urban areas and left over, if any, for export of the following
  - Fruits - mangoes, bananas, citrus etc
  - Spices like chillies etc
  - Food grains - Rice, Pulses
  - Plantation crops - Cashew, Coconut
  - Medicinal & Aromatic plants
  - Cash crops like cotton.
- ❖ The production of vegetables in organic way has good potential as it has good local market and demand from people.

## STRATEGIES FOR PROMOTION OF ORGANIC FARMING

Agriculture in Andhra Pradesh is the mainstay of livelihood of over 60% of population. Around 19% of the state GDP is from Agriculture. The Govt. took the commitment to formulate comprehensive package and policy changes vital for increasing the farm income and for making the sector nationally and globally competitive. In this connection, Govt. of Andhra Pradesh plans to promote low cost input agriculture in the state gradually in a stage wise manner.

In Andhra Pradesh, 60% of cultivated area is under rainfed farming but contribution of production from this area is less than 40%. This is because of natural vagaries and the soils are also poor in fertility. Most of the farmers are small and marginal. Organic agriculture would be promoted in rainfed areas where there is a big gap between actual and potential yield.

The net irrigated area in the state is around 36 lakhs ha (40%) and is a major contributor of State food grain production. Govt. is adopting here integrated approach in agriculture, which will not disturb the state food production capacity. It is the agriculture with rational use of inputs as per the need of soil and recommendations besides taking care of soil health by application of on farm inputs and adoption of other organic practices in these areas.

Further organic agriculture would be strengthened in identified patches where the agriculture is by default organic since years, to take advantage of production of organic produce which is having demand in domestic as well as export market.



The Government contemplated the following strategies for promotion of organic farming in the state.

### **Andhra Pradesh Organic Development Board**

Andhra Pradesh Organic Development Board (APODB) will be set up with the main objective of promoting organic farming system in the state. The APODB with adequate human resources would coordinate, bring under one roof the dispersed organic activity and it will spearhead the organic agriculture movement in Andhra Pradesh. The APODB shall link up with all the stakeholders for overall promotion of organic farming.

The objectives of Andhra Pradesh Organic Development Board are

- To promote organic farming in the state.
- To bring under one umbrella all organic initiatives of the state.
- To work as bridge between farmers and Government.
- To provide a single window access to market, industry and other stake holders.
- To co-ordinate with national and international organization in all matters relating to organic farming.
- To access funds, grants and other finances for the different organic activities.

### **Farmers groups / Associations**

The State Government would encourage formation of farmers groups ( Producer companies – PCs) exclusively for promotion of organic farming in all the districts and these PCs will be the centre of all activities related to organic farming viz., production of organic inputs, processing, Certification, marketing etc. The group will be compact, manageable and based on area approach/crop approach. In the first year 5 farmers groups will be formed in each district and they will be linked to a service provider identified for this purpose. The service provider will involve in technology dissemination in coordination with departmental officers. Gradually the number of farmers groups will be increased every year depending on the resource availability and women SHGs will also be encouraged to become organic producer companies. The following criteria would be followed while selecting the villages or farmers for conversion to organic agriculture.

- In traditional rainfed agriculture (with low external input) organic agriculture has shown the potentials to increase yields. Under drought conditions, crops in organic agriculture system produce significantly and sustainably higher yields than comparable conventional agriculture crops. Hence rainfed and drought prone areas are the priority areas for conversion to organic agriculture.

- Tribal areas are the other priority areas for undertaking organic farming. Tribal areas are to be given special status and declaring them as organic.
- Inclination of the farmers towards organic agriculture.
- Low level of chemical fertilizers/pesticides use.
- Availability or source of organic inputs.
- Existing farming system comprising Agriculture, Horticulture, Sericulture, Animal Husbandry, Piggery, apiculture etc.
- The current level or organic farming systems adopted by farmers.
- Food security, quality and safety for the local rural and urban population of the state.
- Export potentiality

### Bio diversity

Bio diversity is both instrument and aim and natural ecological balance below and above the ground is the key for success in organic agriculture. Tree crops, on farm - forestry, crop rotations and diversified production help bio-diversity and when integrated into the system provides food, income, fuel and wood. Diversity of plants and animals on land prevents pests, disease outbreaks. Soil bio-diversity reflect variability among living organisms in the soil ranging from the myriad of invisible microbes, bacteria and fungi to the more familiar macro fauna such as earthworms and termites. These diverse organisms interact with one another and various plants and animals, forming complex web of biological activity, which is critical to the functioning of natural ecosystems and for sustaining agricultural productivity. A healthy soil with good bio-diversity is the base for food production.

The Government will support activities to create bio diversity on the farm such as

- Local farming systems
- Crop rotations, multiple cropping, intercropping.
- Green manuring
- Composting (Vermicompost, NADEP, BD compost, Coir pith composting etc.)
- Bio fertilizers
- Tree crops and on farm forestry.

## Forestry

Forests occupy 23% of geographical area in Andhra Pradesh. Conservation of these natural resources through sustainable ecosystem management and development is the key to our secured future.

- There is a huge potential of production of compost with organic raw material available in the forests. Gradually replace chemical fertilizers and synthetic pesticides with environmentally friendly organic manures, bio fertilizers and bio-pesticides in forest areas. VSS members can be involved in the production of compost generating employment
- In Social Forestry schemes promotion of Neem and Gliricidia plants which serve as inputs in organic farming.
- Taking up of SMC works and application of organic manures is proving to be quite helpful in improving the forest growth increasing the success rate of the plantations. This eventually improves the biodiversity of the local areas.
- There is a great scope in implementing organic forestry especially in the area of raising nurseries of Non Timber Forest Produce (NTFP), Medicinal plants etc. The raising of plantations in the Reserve Forests as well as outside the Reserved Forests on community lands, wastelands, revenue lands, farmlands, homestead, avenue plantations and institution plantations have ample opportunities of using it.
- Reforming the VSS structure in order to make them the enterprise hub of production and marketing of the value added forest products.
- Linking the collection of biomass in the forests for making compost to one of the on going employment generation programmes.
- Supply of compost produced by Forest dept. to the farmers at subsidized rates.
- Financial assistance to improve logistic facilities for organic farming

### Organic farming "in installments"

Typically, farmers' experience, some loss in yields after discarding synthetic inputs and converting their operations to organic agriculture. Before restoration of full biological activity (e.g. growth in beneficial insect population, nitrogen fixing from legumes), pest suppression and fertility problems are common. One strategy involves converting farms to organic production "in installments" so that entire operation is not put at risk.

## Mixed Farming

Livestock and livelihoods are very intimately related in our country and that crop livestock integrated farming is the pathway for farmers well being.

Live stock play major role in organic agriculture as the intermediary between the utilization of crop residues or the fodder produced at the farm and the return of nutrients as manure. Organic farming requires production of Bio-mass on farm. Livestock in the farming system will ensure the required compost production. Integrating livestock into the farming system adds income through organic meat, eggs and dairy products, as well as draught animal power. Crop live stock mixed farming also ensures household nutritional security. It should be noted that suicides by farmers are less in areas where there are multiple livelihood opportunities through a farming system approach.

Since the live stock rearing is important pre-requisite of organic farming, the govt. will support the following activities under animal husbandry.

1. Promotion of fodder & Pasture development to enhance the availability of biomass.
2. Nutritional support to the productive livestock.
3. Support to supply cattle/buffaloes on subsidy basis where ever required.
4. Support for awareness building among farmers/ Livestock owners.
5. Provision of health care support to livestock
6. Promotion of gosadanas in villages for taking care of old and unproductive animals for dung and urine, which contribute for organic farming

### Soil & Water Conservation Practices:

Various Soil and Water Conservation Practices such as contour bunding, leveling, trenching, scooping, water harvesting, cultivation across the slope, mulching etc., are extremely useful in conserving the nutrients at site. Not following such practices in to the detriment of organic farming in the sense that naturally available nutrients are allowed to be lost and crop production in eroded soil is bound to suffer. These measures help in water conservation too. Conserving the soil moisture help in higher microbial activity, which in turns helps in building up of organic carbon.

Hence, the practice of organic farming would be combined with various soil and water conservation practices. Government would encourage organic farming in all the watershed development areas and extend financial assistance to the soil and water conservation measures through on going watershed development programmes.

## **Support for Organic Inputs:**

Organic farming systems rely on the management of soil organic matter to enhance the chemical, biological and physical properties of soil. One of the principles of soil fertility management in organic system is that plant nutrition depends on "biologically derived nutrients." This requires release of nutrients to the plants via the activity of soil microbes. Improved biological activity is also known to play a key role in suppressing weeds, pests and diseases.

The addition of organic matter through crop residues, animal dung, green manures, BD formulations, bio-fertilizers and bio-solids from agro industries improves and enhances the biological activity. The basic requirement in organic farming is to increase input use efficiency at each step of farm operation. Development of several compost production technologies like vermicomposting, Microbe mediated, Phospho composting, N-enriched Phospho composting etc., improves the quality of composts through enrichment with additives.

In organic farming the pest management is done by adopting cultural or agronomic alternatives, mechanical alternatives, biological alternatives or organically accepted chemical alternatives. The biological or organically accepted inputs in organic farming in general are on farm Bio formulations, Bioagents, Botanical formulations, traps & lures etc.

The Government will support for on farm production or for local production of inputs (by the PCs) required for organic farming.

## **Certification of organic production**

Organic agriculture is promoted not only because, as it is sustainable and environment friendly but it also ensures residue free food for consumers and better livelihood for its producers. Certification is a system by which the consumer is assured for the quality of the product.



Participatory Guarantee System (PGS) and/or Group certification will be encouraged to cut down the prohibitively high certification charges. Agriculture Technology Management Agencies/Krishi Vignan Kendras/NGOs/PCs will be promoted as service providers who undertake internal control system under group certification. Financial assistance will be provided to service providers for keeping farm production records and for ensuring internal control. The service providers act as link between farmers groups and certification agency. Establishment of local certification agency will be encouraged. The Government would also bear part of certification charges during initial three years.

### Market Development (Domestic)

Consumers are becoming health conscious and as a result the demand for organic foods is increasing at a faster rates both in domestic and overseas markets. The demand for organic foods is increasing steadily both in developed and developing countries with an annual average growth rate of 20-25%. The Government, Private sector and producer association each have necessary role to play in promoting and facilitating marketing of organic produce. The following initiatives will be taken to develop domestic market for organic produce.

1. Developing supply chain system
2. Direct marketing of organic produce from organic farmers groups (PCs) shall be facilitated.
3. Encouraging to set up exclusive organic marketing centers.
4. Rythu Bazars will be involved in marketing.
5. Facilitation for organizing weekly organic bazzars
6. The large number of super market chains will also be involved in marketing the organic produce and opening of Outlets of organic products on commission basis
7. Arranging producers and buyers meets regularly.
8. Linking up of the Market with the producers (farmers): Public - Private partnership to enhance the market size and enables a better value capture for both the producers (farmers) and the marketers.
9. Purchase of organic produce by Government departments Viz. Social Welfare, Medical, Prisons etc.
10. Organisation of melas/exhibitions.



11. Involvement of Girijan co-operative Corporation in marketing organic forest produce.
12. Set up agro industrial complexes near major towns for linking production, processing and marketing in the form of integrated system.
13. Wide publicity will be made through mass media like television, radio, newspaper, and posters to create awareness among public on organic farming systems. The propaganda aims towards spreading the message of quality, nutritious and safe food, clean environment , nature conserving system and to create demand for organic produce.
14. Reliable market information is difficult to obtain, whether the intent is to sell organic market product domestically or abroad. Creating of system for collection and sharing of information on availability and prices of organic produce.
15. Incentives in prices over & above the MSP rates for agricultural commodities produced through organic farming

#### Export Promotion:

Government will provide assistance for processing, packing and storage of organic products for export purposes. The Andhra Pradesh Organic Development Board (APODB) will take all initiatives for promotion of exports of organic products viz.,

- Development of processed and value added items for the export market.
- Listing and documenting commodity wise traders, agencies, terminal markets & export agencies.
- To provide information on export potential of different products to the producers.
- Arrange producers & International Buyers meet.
- Participation in International Fairs & Exhibitions.
- The export potential of organically grown horticulture crops like Mango, Sweet orange, Banana, Cashew, Coconut, Chillies, Turmeric, Vegetable crops will be tapped besides other crops.

#### Rural employment:

Most studies have found that organic agriculture requires significantly greater labour input than Conventional farms there by increasing employment opportunities

and reverse migration to urban areas. The diversification of crops typically found on organic farms, with their different planting and harvesting schedules may distribute labour demand more evenly, which could help stabilize employment.

By adopting organic agriculture farmers are challenged to take on new knowledge and perspectives, and to innovate. This leads to increased engagement in farming which can trigger still greater opportunities for rural employment and economic upliftment. Organic agriculture, often termed as knowledge based rather than input based agricultures and it contributes to the empowerment of farmers and local communities.

### Research and Education

“Soft” factors like research, education and knowledge transfer are very important for the development of organic farming. Current research is heavily based towards modern agricultural inputs and practices. The technology of ‘organic farming’ is different than the traditional agriculture in that it is a holistic (harnesses soil and water conservation methods and enhanced use of locally available natural resources) and based on farming system approach involving crops, animals, poultry and social and environmental aspects. Most importantly, it is a sustainable system and yield of practicing farmers is generally comparable to that of neighbor conventional farmers. There is, however, a need of validation by agricultural universities and research institutions. In addition, there is a need to characterize the biological inputs widely used by the practicing organic farmers for crop production and protection. Much of the research needs to be done on farmers fields for validation of resource conserving and natural resource recycling technologies.

The Agriculture & Veterinary Universities shall take up the following tasks.

- Development of organic farming systems suitable for each area of different agroclimatic zones of the state.
- Research on nutrition management aids, insect/disease management aids in organic farming.
- Formation of Committee to study, document the management practices of organic farming and replicate these practices in other areas.
- Research on agro ecosystem management

- **Work on Cost : Benefit ratio of organically grown crops**
- Introduction of course curriculum on organic agriculture in primary, secondary and graduate studies.
- Shall encourage farmer/ area specific approach.
- Shall identify, screen and develop native livestock breeds, which are locally adoptable and resistant to drought, parasites and diseases. They shall also screen herbal remedies for control of disease and parasites to livestock.
- Shall act as knowledge transfer centers for farmers and extension personals by starting modal organic farms in their Agriculture Research Stations and Krishi Vignan Kendras.
- Research on Agri-Horti-Sylvi-Pastoral fodder system to establish bio-diversity in the farming. Similarly work on identification, evaluation, improvement and preservation of native cultivars suitable for organic agriculture.
- Involving farmers closely in research design and implementation by working with them on their fields.

#### Credit

To promote organic farming, different schemes will be formulated in coordination with NABARD to assist the farmers. Incentives in the shape of concessional rates of interest to organic agriculture farmers are essential for its further development. The organic producer groups/farmers/farms would be brought under special crop/farm insurance coverage, so that risk to farmers is zeroed down/ minimized.

NABARD, National banks and other financial institutions will be persuaded and to provide special line of credit to the stakeholders involved in production, processing, marketing and exporting of organic produce.

#### Capacity enhancement

Society for Agriculture Management and Extension Training Institute (SAMETI) shall be the nodal agency for imparting training on organic farming for extension personnel, farmers, SHG groups etc., and other State institutes will also be identified depending on the need. The training curriculum should be developed in consultation with experts in the field with good exposure to the local areas in each of the agro climatic

zones of the state, covering **principles of organic farming, organic standards, nutrient management, Insect/disease management, farming systems and case studies.**

The model organic farms would be established in all the state Seed farms/selected livestock farms and they serve as learning centers of organic farming.

The organic on farm inputs demonstrations would be organized in the Krishi Vignan Kendras /Agriculture Research Stations/ State seeds farms/selected livestock farms and the farmers would be given training in on farm organic input production.

Farmers are the **best educators of other farmers** and so farmer to farmer extension will be given **importance** that can **greatly help** in information exchange and dissemination. Most common are farmer exchange visits, in which farmers are brought to the site of **successful innovation** or **useful practice**, where they discuss and observe benefits and costs with adopting farmers.

Exposure visits would be arranged for both departmental officers and farmers to **successful organic farming systems** inside and outside the state.

**Other strategies for promotion of organic farming in the state.**

- The organic farmers will be given preference in various Government schemes.
- Promotion of eco tourism in organic villages.
- Protection of areas rich with bio diversity.
- Promotion of Polambadi (Farmers field schools) as a step towards organic farming
- Establishment of Laboratories for quality control of Bio/Botanical formulations and pesticide residue testing.
- Encouraging renewable energy sources and financial assistance would be extended for installation of Bio gas plants, solar energy units, water harvesting and wind energy units in organic farms.
- Govt. will extend financial assistance for **farming processing activities** taken up by individual farmers or groups of farmers in the value addition of their produce.
- Suitable financial help will also be extended for storage facilities of organically grown produce.
- Incentives and concessions would be given for organic processing industries for development of infrastructure facilities. Incentives will also be extended for organic processing units for obtaining ISO and other International certification.
- Integrated approach by all the related departments towards promotion of organic farming.