

STATE AGRICULTURE POLICY - 2013

INTRODUCTION

The Government of Odisha declared a State Agriculture Policy in 1996. After more than a decade, in 2008, the State Agriculture Policy was revised and its scope widened to cover many other aspects of the State's agriculture. The State Agriculture Policy 2008 served Odisha well, and stimulated the growth of private lift irrigation and agro industries. More than 1,00,000 lift irrigation points were established and the State saw the growth of many new agro based industries. Farm mechanization reached new heights; the number of tractors sold to the farmers increased from less than 200 tractors in 1999 – 2000 to more than 5000 in 2011-12. Odisha became the largest consumer of power tillers. A sustained and vigorous growth was maintained in agriculture.

The State Agricultural Policy - 2013 is another step in the same direction. It will further the renaissance of the agriculture seen in the last decade and it aims to inspire a fresh generation of farmers who will look forward to face the challenges of the new century with confidence.

Odisha is an Agrarian State. Almost 70 per cent population of the State is dependent on agriculture. The agriculture sector contributes only about 16 per cent of the Gross State Domestic Product (GSDP), with more than 70% population dependence resulting in low per capita income in the farm sector. Consequently, there is a large disparity between the per capita income in the farm sector and the non-farm sector. Therefore, it is essential to deal with those issues which impact the income level of farmers.

Considering the high growth of GDP in the recent past, a major reorientation in the policy is necessary to make this growth more inclusive. The decline in agriculture growth coupled with declining profitability in the agriculture sector, in the face of rapid growth of non-farm sector, is one of the major concerns. The National Policy for Farmers, 2007 has envisaged focusing more on the economic wellbeing of the farmers, rather than just on production.

More public investment in agriculture is the present requirement as private investment in agriculture would take time because of the slow evolution of appropriate policies. Investment can spur up the productivity and capital formation which is so very crucial to the agriculture sector. Considering that nearly 70 per cent of India still lives in villages, agricultural growth will continue to be the engine of broad-based economic growth and development as well as of natural resources conservation, leave alone food security and poverty alleviation. Accelerated investment is needed to facilitate agricultural development. This would lead agriculture sector on a better path and resurrecting its importance across the sectors will go a long way in making farming a respectable profession.

There have been many significant changes in the recent times in the realm of agriculture development, more so in the post-WTO regime. Therefore, it is essential to take note of the changing situation and bring out a policy to meet the present challenges in the sector.

A wholesome policy framework for the benefit of the farmers of the State is in place since 2008 with a focus more on the economic well-being of the farmers, rather than just on production and growth. It has helped the State to achieve a consistent growth in agriculture during the Eleventh Plan. The new State Agriculture Policy will serve the State following the same broad contours laid down in the State Agriculture Policy – 2008.

AGRICULTURE IN ODISHA

The State has about 64.09 lakh hectares of cultivable area out of total geographical area of 155.711 lakh hectares, accounting for 41.16 percent. Total cultivated area is about 61.50 lakh hectares. About 40.17 lakh hectares of cultivable area has acidic soil and approx. 4.00 lakh hectares of area suffers from salinity. That apart, nearly 3.00 lakh hectares of cultivable area suffers from water logging. Agriculture sector contributes about 16% of the Gross State Domestic Product (GSDP). About 65% of the workforce depends on agriculture for employment / livelihood.

The average size of land holding in the State is 1.25 ha. Small and marginal farmers constitute about 83% of the farming community. The State is divided into 10 Agro-climatic zones on the basis of soil structure, humidity, elevation, topography, vegetation, rainfall and other agro-climatic factors. The average rainfall in the State is 1452 mm, of which about 80% is confined to monsoon months (June-September). The total irrigation potential created is 30.89 lakh hectares in Kharif and 15.01 lakh hectares in Rabi.

Rice is the main crop of the State. The total rice production in the State during 2012-13 is estimated to be 94.29 lakh tons. This is the highest ever achieved in the State. The previous high was in 2007-08, at 76.55 lakh tons. Agriculture in Odisha is characterized by low productivity on account of various factors. These factors include problematic soil (acidic, saline & waterlogged), lack of assured irrigation, low seed replacement rate, low level of fertilizer consumption (63 kg/ha. against national average of 140 kg/ha.), low level of mechanization etc. Huge gaps in yield potential and the technology transfer provide an excellent opportunity to the State to increase productivity and production substantially.

Horticulture is becoming popular in the hilly districts. Odisha has immense potential in horticulture, particularly in vegetable cultivation and micro irrigation. Onion is the most important horticulture crop, followed by vegetable. Commercial

floriculture is also increasing; the recently established flower growers' market in Ganjam is the precursor of the growth of this rising sector. Commercial dairy farming is also growing in importance. Fresh and salt water fisheries, especially prawn cultivation, play a vital role in the economy. Odisha's agriculture exports mainly derive from prawn farming.

Odisha's productivity norms are comparatively low, due to a dearth of irrigation and inputs, insufficient investments by the farmers, outdated agronomic practices and want of marketing facilities. It will be the endeavor of the State Agriculture Policy to create an enabling environment in all these spheres.

OBJECTIVES

Agriculture in Odisha still depends on the small and marginal farmers. It continues to be characterized by low productivity due to traditional agricultural practices, inadequate capital formation and low investment, inadequate irrigation facilities, low water use efficiency, uneconomic size of holding, etc. The agricultural development plan in today's context has to be holistic, well-defined and focused towards overall well-being of the farming community. With this backdrop, the Agriculture Policy is designed to be futuristic, flexible enough to anticipate and address emerging trends, identify potential areas for development and chalk out a clear agenda for agricultural development. The main objectives of this Policy are as follows:

- To bring in a shift from the present level of subsistence agriculture to a profitable commercial agriculture;
- To promote sustainable agricultural development;
- To enhance productivity of important crops by enhancing seed replacement, availability of quality planting materials, INM, IPM, water management, farm mechanization and technology transfer;
- To encourage crop substitution particularly in uplands and medium lands;
- To focus on horticultural crops including dry-land horticulture;
- To focus on poultry, dairy and fisheries to augment the income of the farmers;
- To encourage modern farming system approach;

- To encourage organic farming;
- To enhance water use efficiency through peoples' participation;
- To facilitate increased long term investment in agricultural sectors (on farm as well as off farm) both by private sector, public sector and private & public partnership (PPP), particularly for post harvest management, marketing, agro processing and value addition, etc;
- To encourage contract as well as compact farming;
- To increase access to credit for small and marginal farmers;
- To facilitate appropriate market linkages for agricultural produce with respect to which the State has competitive advantages;
- To improve the marketing facilities and access to market information;
- To implement integrated watershed development programs in watershed areas for Natural Resource Management (NRM), increased crop production as well as on-farm and non-farm income;
- To create appropriate institutions / facilities to undertake regulatory, enforcement and quality assurance activities matching to the emergent needs.
- To redefine the roles and responsibilities of the agricultural extension machinery by suitably restructuring the field extension set up.

INPUT MANAGEMENT

(i) Seeds

Seed is one of the most important inputs that play a key role in boosting agricultural productivity. Keeping other inputs of production constant, the quality seeds alone can increase the production to the extent of nearly 20%.

According to many agricultural scientists, one of the main reasons for the low productivity of many food crops in Odisha is the poor Seed Replacement Rate (SRR). The SRR refers to the percentage of area of crop in which quality seeds are used in a given crop season. The SRR as per Govt. of India stipulation is as follows.

1. In self pollinated crops - 33%
2. In cross pollinated crops - 50%
3. In hybrids – 100%

The SRR in paddy, the most important crop of Odisha is of 22%. In order to achieve SRR at the stipulated rate,

- Steps will be taken to produce 12.00 lakh quintals of certified seeds in the State, emphasis on seed village schemes will be given.
- Private seed entrepreneur will be promoted and suitably encouraged to increase production of seeds to the desired extent.
- Private players will also be given the responsibility to take up seed production including hybrid seeds in the State as per suitability of the varieties.
- The Odisha State Seed Corporation (OSSC) will be suitably strengthened and restructured to play a vital row.
- Seed processing plants along with storage go-downs will be established in every district, 5 existing seed processing plants will be developed into de-humidified chambers for storage of groundnut seeds.

- The Odisha State Seeds and Organic Products Certification Agency (OSSOPCA) will be strengthened with manpower and infrastructure. More offices at district level will be established so that there will be at least one office in each district.
- Besides the three existing State Seed Testing Laboratories in the State, the new district offices of OSSOPCA will also have SSTL.
- Farmers taking up hybrid seed production with the help of seed companies and other private players will be encouraged.
- Hybrids will be promoted in different crops at appropriate Agro Ecological Situations (AES) through private seed companies and through State sector.
- In order to facilitate easy availability of seeds to the farmers, seed sale centres will be opened in each Gram Panchayat through a network of private seed dealers.
- Primary Agricultural Cooperative Societies (PACS) and Large Area Multipurpose Co-operative Societies (LAMPS) will take up seed distribution alongwith the distribution of other inputs.
- Sale of seeds through departmental sale centre will be discontinued.
- Private seed growers will be encouraged / promoted to produce and sell certified seeds in Odisha. To ensure a level playing field between the OSSC and the private seed growers, the seed subsidy will be directly transferred to the farmers.
- Subsidy on Seeds will be opened to both public and private sector agencies for the seeds produced and consumed within Odisha.
- There are more than 2000 indigenous varieties/races of paddy in the State.
- A gene bank is being established at the State Seed Testing Laboratory, Bhubaneswar, to protect these varieties. Farmers will be supported to get these varieties registered under the Protection of Plant Varieties and Farmeres' Rights Act 2001. Sincere attempt will be made to maintain germplasm of these indigenous varieties and to establish geographical indicators for improvement of these varieties supported by a branding exercise, especially for certain special indigenous aromatic rice varieties.
- The linkage between the Research Institutions producing the Breeder seeds with the Department will be strengthened for introduction of better varieties.
- Scientifically bred, drought / submergence / salinity tolerant and pest resistant high yielding and environmentally safe varieties will be promoted.
- Only after assessing the risks and benefits associated with Genetically Modified (GM) crops as per existing rules and procedures, such crop varieties would be promoted.

(ii) Irrigation

Irrigation plays a significant role in increasing the yield from the land. Non-availability of timely and adequate water for irrigation is now becoming a serious constraint in achieving higher productivity and stability of farming. Therefore, assured irrigation is the need of the hour. Though, the total rainfall in our State is satisfactory, its distribution over time and space is highly uneven. So, rain water harvesting and improving the efficiency of water use are important. It has been assessed that even 10% increase in the present level of water use efficiency in irrigation projects may help to provide life saving irrigation to crops in large areas. The concept of maximizing yield and income per unit of water would be used in all crop production programs. Water Users' Associations are being encouraged to maximize the benefit from the available water.

- There are a number of irrigation projects at various stages of completion in the State. Adequate resources would be provided for speedy completion of the ongoing projects.
- Participatory Irrigation Management (PIM) will be promoted among the farming community through the Pani Panchayat system. Pani Panchayats (Water Users' Associations) will be adequately

strengthened. Steps will be taken for capacity building of Pani Panchayats which will bring about awareness on their rights, roles and responsibilities in efficient utilization and monitoring of water allotted to them.

- Rotational Water Supply System will be adopted for more efficient use of water.
- The spread of the benefit of major and medium irrigation projects being confined only to a few districts of the State, it is necessary to take greater interest for developing rain water harvesting structure, ground water recharge, traditional water bodies, farm ponds, etc as well as exploitation of ground water in all feasible locations.
- Assured irrigation will be provided to at least 35% of cultivable land in each block. This will be achieved by a suitable combination of flow irrigation and lift irrigation duly supported by micro irrigation.
- Irrigation tanks will be renovated / dug in every village having such potential.
- Individual tube wells and bore wells will be promoted under the Jananidhi program with maximum subsidy upto 75% of the project cost.
- Community Lift Irrigation projects with subsidy upto 80% of the project cost in the non-TSP areas and non-KBK districts and upto 90% of the project cost in the TSP areas and KBK districts will be continued under Biju Krushak Vikas Yojana (BKVY).
- For large-scale community lift irrigation projects 90% subsidy is available if they are executed by OLIC/ OAIC.
- Subsidy will be provided for community-based mega lift irrigation projects covering not less than 40 hectares irrigated area, if the community forms a registered society that will execute the project and also run the project later. The subsidy will be to the extent of 90% excluding the cost of land.
- Micro irrigation (drip and sprinkler irrigation) helps farmers in saving water, increasing yields, supporting new technological packages and increasing employment in rural areas. Therefore, micro irrigation will be promoted in a big way in the State by providing subsidies for drip and sprinkler irrigation maximum up to 90% of the cost. Micro irrigation campaign will go a long way in creating efficient water use in the State. A center of excellence on Micro-irrigation will be set up in the State.
- Drawing of electric line for electrification of dug well / private L.I. points will be subsidized under Biju Gram Jyoti Yojana (BGJY).
- Subsidy will be provided to the extent of 75% limited to 50,000 per deep borewell for the purposes of electrification.
- The cost of electrification of a cluster of Shallow tubewells, not less than 10 per cluster, will be borne by the Government, subject to a limit of 4,00,000 per cluster.
- Supply of irrigation water through underground conduits in place of over ground canals will be encouraged to minimize transmission loss.
- Farm ponds will be executed free of cost in the field of BPL farmers in the State under MGNREGA and State plan.
- About 3 lakh hectares of cultivable area in Odisha remains waterlogged due to poor drainage. Integrated development of these areas will be attempted through appropriate engineering and land / crop management interventions.

(iii) Fertilizers

To increase agricultural production, it is necessary that chemical fertilizers as well as organic manure are used adequately and in a balanced manner. Presently, fertilizer consumption in the State is 63 kg/ha only as compared to the national average of more than 140 kg/ha. Hence, there is a lot of scope

for increasing fertilizer consumption in the State. While suitable measures will be taken to increase fertilizer consumption in the State, emphasis would be laid on 'balanced fertilization'.

Balanced fertilization is defined as an accurate fertilizer application equal to the plant need considering the soil nutrient content. To achieve balanced nutrition for sustainable crop production, Integrated Nutrient Management (INM) is very important.

The goal of INM is to integrate the use of all natural and man-made sources of plant nutrients required for high agricultural productivity besides ensuring the sound health of soil. State will endeavour to promote INM practices in a big way through suitable programs and incentives. Prolonged and over usage of chemical fertilizers on soil results in soil health deterioration, human health hazards and pollution of the environment. Hence, it is necessary to switch over to an alternate source of nutrient supply to the crops which is ecologically protective of farming. The State will promote use of bio-fertilizers in a big way through suitable incentives and effective extension.

The State will take steps place the necessary infrastructure to enable direct transfer of fertilizer subsidy to the farmers. The State will also take steps, using IT, to monitor the sale of fertilizers to ensure that it is not diverted for illegal purposes. Farmers will be able to learn about the stock position of the dealers in a transparent way.

(iv) Plant Protection

- Integrated Pest Management (IPM) concept will be promoted.
- State level experts will recommend pesticides and bio pesticides for subsidized sale under different schemes.
- Seed Treatment will be promoted in a big way. ATMA like agencies and other schemes like RKVY will take up such programs.
- Pest surveillance will be streamlined.
- Pest monitoring devices will be promoted.

(v) Farm Mechanization

Farm Mechanization brings a significant improvement in agricultural productivity in a number of ways. The timeliness of various agricultural operations is crucial in obtaining optimal yield, which is possible only through mechanization. Secondly, the quality and precision of the operations are equally significant for realizing higher yield. The various operations such as land leveling, irrigation, sowing and planting, use of fertilizer, plant protection, harvesting and threshing need a high degree of precision to increase the efficiency of the inputs as well as to reduce the losses. Farm Mechanization also goes a long way in reducing the drudgery of agricultural operations. With mechanization, there are good chances to reduce the cost of production resulting in higher margin of profit.

In our State, level of mechanization is very low. Farm Mechanization will be promoted in a large scale, by ensuring easy availability of appropriate farm machineries at substantially subsidized rates. Pattern of assistance on farm machineries, implements and equipments is given in (Annexure-I).

- Farm machinery suitable for different types of soil and operation for important crops will be developed.
- A State level Training and Testing Centre of Farm Machineries approved by the Govt. of India and registered under NCVT is being established, which will supplement the workings of the Odisha Farm Machinery Research and Development Centre (OFMRDC).
- Technical know-how will be provided to the farmers about appropriate farm machineries suitable for their situation.
- Training relating to farm machineries and equipment shall be imparted to the farmers, mechanics and artisans.
- Women-friendly farm equipments will be promoted.

- Integrated Pest Management (IPM) and use of bio-control agents will be encouraged in order to minimize the indiscriminate and injudicious use of chemical pesticides. Subsidy will be provided for plant protection equipments.
- Agro Service Centers will be promoted in all the Blocks / fully irrigated GPs to provide door-step services for farm mechanization.

SKILL DEVELOPMENT

Training on agronomic practices, farm machinery, post harvest management, food processing, etc. will be imparted to the farmers and the youths under Odisha State Employment Mission Society and National Rural Livelihood Mission. The private sector will be encouraged to establish training units at the district level and at the block level. These training units, called Agricultural Technology Parks/ Green Technology Parks will be established in every district.

A Centre at the district level should have minimum of 10 acres of land, accommodation for 150 persons (dormitories), five classrooms and one or two laboratories. They will be eligible for 80% Capital Investment Subsidy (C.I.S.) subject to a ceiling of 50.00 lakhs. Similarly, the block level Green Technology Park should have at least 5 acres of land, accommodation for 50 students and two classrooms. They will be eligible for 80% C.I.S. subject to a ceiling of 25.00 lakhs.

It will be the responsibility of private investor to provide adequate trainees / staff in these Technology Parks. The Agriculture Department and other Departments in the allied sector will sponsor candidates for training at these Technology Parks at the approved norms of OSEMS/ NRLM. Private enterprises, KVKs and various industries (through their CSR activities) may be involved in large scale for this initiative.

These training centers will impart trainings on farm mechanization, agronomic practices, plant protection, post harvest technologies, post harvest practices, food processing and agricultural marketing. Training courses will be of short and medium duration and designed with a practical orientation to produce self employed entrepreneurs rather than trainees who have to depend on public and private employment.

HORTICULTURE

Odisha is bestowed with varieties of agro-climatic conditions favourable for the development of horticultural crops. Horticulture provides an excellent opportunity to raise the income of farmers in rainfed areas and dry tracks. Since income derived from horticulture per hectare of land is generally higher than in cereals and pulses, the State will utilise the field potential for expanding the area under horticulture. The area under horticulture can be at least doubled with appropriate promotional policies and cropping patterns. Dry land horticulture will be promoted as a supplementary source of income to the farms particularly in the TSP areas / rainfed areas of the State.

- Most of the horticulture crops being perishable, facilitates for storage, processing and marketing need to be organized carefully for ensuring remunerative returns for the farmers. This will require that such crops are grown on a sufficient scale instead of scattered cultivation by individual farmers. A cluster approach will therefore be adopted. This will make it possible to have adequate storage, processing and marketing arrangements made on a viable scale.
- Horticulture crops are also ideally suited for contract farming. The Government will actively encourage private entrepreneurs and food processing companies to enter into marketing contracts with farmers growing horticulture crops.
- Absence of cold storage facility with sufficient capacity has constrained the development of Horticulture sector in the State. The State Government will promote cold storage facilities by providing subsidy and other incentives.
- Electricity tariff for Cold storages will be at special rates (Agro industrial consumers) instead of Industrial / Commercial rates.

- The production of quality planting materials and seeds on a sufficient scale is a major pre-condition to the promotion of horticulture crops in the State. In order to increase production of quality planting material at least one Model (big) Nursery will be set up in each district and one Small Nursery will be set up in each block. The horticulture farms of the State Government can be made available to private entrepreneurs on payment of suitable rent/fees for setting up mega production centres which can produce planting materials in large number by using modern method of technology and bio-technology. Such mega production centres can also be set up in PPP mode. These centres can also take up training of farmers in the cultivation and post harvest management of horticulture crops.
- The State will promote venture by private farms for setting up cold storages and processing facilities on a large scale in every district by providing subsidy up to 60% of the capital investment excluding the cost of land.
- In urban areas, home gardens and nurseries would be encouraged. That apart, avenue plantations and greening the landscapes would be part of the developmental agenda of the urban local bodies.
- The unit cost of components of various schemes will attract the established Govt. of India benefits and revisions made thereof from time to time will also be applicable.

Floriculture

Odisha's soil and climatic conditions are suitable for successful cultivation of flowers like rose, tuberose, marigold and gladiolus. Demand for flowers is also growing rapidly in the State. Though floriculture in the State is in infant stage, an increasing trend in cultivation of flowers is marked. Though there is a huge potential of floriculture in the State, farmers are reluctant to take up floriculture, mainly due to marketing problems. Information about prices and floriculture technology is also not readily available to small producers.

Growers' Co-operatives will be encouraged and wholesale markets exclusively for flowers will be developed. Contract farming of flowers will be encouraged with suitable forward linkage. Suitable financial incentive will be provided not only for cultivation of flowers but also for post harvest management including marketing.

Cashew nut

One of the most important commercial crops grown in the State is cashewnut. Odisha is the third largest producer of cashew-nut after Maharashtra and Andhra Pradesh. Presently, the area under cashew-nut is 1,50,000 ha, with production of approx. 90,000 M.T. Though the average productivity in the State is higher than the national average, there is ample scope to substantially increase the productivity. Plantations over 40% (Approx.) of the area are old, senile and uneconomic and varieties are also traditional. A special program will be launched for replacement of the old, senile and uneconomical plantations with clones of High Yielding variety in a time bound manner. Cashew processing in the State will be given priority.

Coconut

Odisha is the 5th largest producer of coconut after four southern States. However, the productivity in the State is much below the national average. Main reason of low productivity is existence of large number of old and senile plants in the State. A definite, time-bound program will be taken up for replacement of old & senile plants with new high yielding variety plants. That apart area expansion will be attempted in locations more conducive for raising coconut crop and while doing so, more remunerative hybrid varieties will be introduced in a systematic manner.

WATERSHED DEVELOPMENT

Watershed Development is one of the priority areas for the State. Odisha has been one of the pioneers in demonstrating successful watershed development program. The focus of this development program is to conserve soil and moisture as well as to put lands to the best use according to their capabilities

to improve the overall productivity of the catchment in a holistic manner. The process of watershed development involves co-ordinated multi-disciplinary activities of and expertise from several Departments. In order to achieve better co-ordination in planning, implementation and supervision in watershed program, State Government have set up a separate mission called Odisha Watershed Development Mission (OWDM).

Under the DFID – assisted Western Odisha Rural Livelihood Project (WORLP), “Watershed-plus” approach has been successfully adopted wherein, in addition to area development, livelihood component has also been implemented. Livelihood component of the ‘Watershed-plus’ approach will be extended to all watershed projects in the State under the scheme “Jeebika”. Community based organizations such as Self- Help Groups (SHG), User Groups (UG) and Common Interest Groups (CIG) evolved under Watershed Development Program will be suitably strengthened. Watershed Associations will be entrusted with suitable responsibilities such as distribution of seeds and other inputs in the project area.

Farm ponds will be dug in the farms of individual farmers through the Watershed Associations. The small and marginal farmers will avail the facility free of cost while the other farmers will have to contribute 50% of the cost of such pond to the Watershed Association.

RAINFED AGRICULTURE

Odisha has vast areas under rainfed agriculture and therefore, rainfed farming technology will be the fulcrum of the future development in the agricultural sector. These regions are also the backward regions where poverty is more pronounced. It is, therefore, imperative to initiate a program of inclusive development for rainfed agriculture in the State. Location specific recommendations for soil and moisture conservation and crop practice for dry lands are available, but these are not fully adopted by the farmers due to various constraints.

There is need for more vigorous efforts for development of dry lands on a watershed basis with wider adoption of the recommended practices to enhance crop yields.

Crops and varieties which are suitable for these regions will be identified and specific research efforts will be made to direct research towards short duration and drought tolerant varieties. More thrust would be given for rain water harvesting and watershed development.

Paddy is grown in about 8 lakh hectares of highland in the State which is not remunerative as well as subject to the vagaries of nature. Farmers would be persuaded to raise light duty crops like oilseeds, pulses and horticultural plantation crops on such lands. Suitable incentives shall be provided for crop substitution.

ORGANIC FARMING

The chemical approach to productivity augmentation followed since mid-sixties has depleted the natural resource base for sustainable agricultural growth. Unless the disturbed natural resource base equilibrium is restored, sustainable agricultural growth with competitive edge will not be possible. Restoration of soil health and fertility through appropriate organic package would be crucial. Specifically, the following policy steps will be implemented:

- The State will frame a dedicated policy for Organic Farming.
- Suitable incentive for Organic Farming will be provided to farmers harvesting organically certified crops. To encourage organic farming, Government will bear the cost of certification. Each farmer can get certified up to 4 hectares of land under organic cultivation free of cost.
- A drive will be launched for augmenting production and use of non-chemical fertilizer suited to different farming situations. This would need appropriate thrust on research and extension programs.
- Organic Farming will be included in the syllabus as a subject at school level. It will also be introduced as a compulsory subject at degree level as well as Post Graduate level in the State Agricultural University.

- Organic Farming Systems will be identified for each agro-climatic region, scientifically analyzed and recommended through a special publication entitled Organic Package of Practices.
- Organic Seed Banks will be opened.
- Organic Farmers Association will be promoted in order to facilitate certification of the products.
- Blocks by default organic and areas in other blocks suitable for organic farming will be identified and organic farming can be promoted.
- Steps will be taken to promote green manure, composting, vermi compost, more of bio-fertilizers, bio-pesticides and NPOP approved products for organic farming.
- SRI (for paddy) and SSI (for sugarcane) will be promoted organically through NGOs and farmers organisations.

INTEGRATED FARMING

Traditionally, Indian farmers adopted Integrated Farming System approach for their livelihood. With industrialization, farmers were forced to become commodity farmers. Though, agro-climatic conditions are primarily responsible for the existence of particular crops and cropping pattern, industrialization, commercialization and mechanization have also played a major role in farmers' decision making for growing particular crop or adopting a particular farming system. Dairy farmers, poultry farmers, vegetable growers, fruit growers, bee keepers, mushroom farmers etc. became independent entrepreneurs, particularly around cities to explore the market potential to some extent. Farmers' fortune thereafter started fluctuating with the market trends for a single commodity and their dependence for external inputs also increased.

In the commodity oriented market scenario, the focus is usually on a singular production system. Integrated approach, however, has several distinct advantages such as security against complete failure of a system, minimization of dependence for external inputs, optimum utilization of farm resources, efficient use of natural resources etc.

In order to minimize the risk of the farmers, integrated farming or farming system approach will be encouraged in the State. A proper combination of different farm production systems namely, agriculture, horticulture, livestock, poultry, agroforestry, sericulture and pisciculture will be promoted.

AGRO-PROCESSING

Setting up of agro-processing units in the producing areas to reduce wastage, especially of horticulture produce, increase value addition and creation of off-farm employment in rural areas will be encouraged. Collaboration between the producer co-operatives and the corporate sector will be encouraged to promote agro-processing industry. An inter-active coupling between technology, economy, environment and society will be promoted for speedy development of food and agro processing industries and build a substantial base for production of value added agro-products for domestic and export markets with a strong emphasis on food safety and quality.

Odisha Food Processing Policy 2013 provides for rapid establishment of agro-processing units. Steps will be taken to ensure the synergy of two policies in promoting the food processing industries in the state in a big way.

AGRICULTURAL CREDIT

Expansion of the Cooperative Credit Network

The network of the Primary Cooperative Credit Societies in the tribal areas will be expanded, making agricultural credit more accessible for the tribal population and bringing the grass roots level Cooperative Credit Societies nearer to the farmers in the tribal areas taking into account the number of GPs in the existing LAMPS; population of different GPs; the number of agricultural households in the different Blocks / LAMPS and the situation of connectivity.

The Kisan Credit Card (KCC) Scheme aims at providing adequate and timely credit support from the banking system to farmers for their agricultural operations in a flexible, hassle-free and cost-effective manner. The farmers use these Cards for the purchase of agricultural inputs such as seeds, fertilizers, pesticides etc. and also to draw cash for their production needs. All agricultural families in the State having no access to institutional credit will be brought under the fold of co-operative credit by providing Kisan Credit Cards to eligible farmers in the two years. The Cooperative Societies are being revived in order to make credit available to the farmers at the village level.

Multipurpose Digital Kisan Credit Cards

Digital magnetic all purpose Kisan Credit Cards (KCC) will be provided to each farming family. These KCCs will act as ATM cards thereby dispensing with the necessity of going to the Bank in every season to get a crop loan. These cards will also act as Farmer Identity Cards in the Paddy Procurement Centres (PPC). All the PPCs will have a POS machine in which these KCCs can be swapped to establish the identity of the farmer. In due course these KCCs will be used to identify the farmers in Direct Transfer of Fertilizer and other subsidies. The cost of the card will be reimbursed to the commercial banks at the same rate as NABARD's reimbursing KCCs of co-operative banks.

Agricultural Credit at Concessional Interest Rates

Government of Odisha has provided agricultural credit to the farmers at a cheaper rate of interest through the Cooperative Banks. The State Government is providing interest subvention support to the banks to enable them to finance crop loans to the farmers of the State at 5% interest rate.

AGRICULTURAL MARKETING

The Odisha Agricultural Produce Marketing Act was amended in June 2006 to allow 'Establishment of Private Markets' and 'Contract Farming' by any person or Company or a Cooperative Society. The OAPM Rules, 1958 in conformity with OAPM (Amendment) Act, 2006 have also been amended. The reforms in the legal framework for agricultural marketing will enable private sector investment in agribusiness and permit contract farming activities which will be immensely beneficial for the farmers of the State. Contract farming in Cotton has already started in the districts of Rayagada, Kalahandi, Nuapada, Bolangir, Ganjam and Gajapati. Contract farming in oilseeds has also started in the districts of Sambalpur, Deogarh, Sundargarh and Nuapada. Steps will be taken to extend it to other crops as well.

- Rural Producers' Organizations will be formed for specific commodities to enable them to have appropriate market linkages through Federations.
- The State Government is establishing two State of the Art Integrated Cotton Markets with Ginning & Bale Pressing Units at Digapahandi in Ganjam district and Paralakhemundi in Gajapati district. Upgradation of other existing Cotton Mandis will also be taken up by the State Government for providing cotton farmers good infrastructural facilities for selling their produce at remunerative prices.
- Maize is the main cash crop of Nawarangpur district and is grown abundantly by the tribal farmers. The State Government is establishing 2 Special Mandis at a cost of 150.00 lakh each for Maize at Umerkote and Raighar in Nawarangpur district for the benefit of tribal farmers.
- It has been decided that for the benefit of farmers, Market Yards will be established under the RMCs within the next three years covering all the 118 Blocks in the State which do not have Market Yards so far.
- Physical linkage of production centres to the markets by rural link roads shall be taken up in a phased manner to ensure that the farmers' produce can reach the markets.
- **Marketing facilities for horticultural produce:** In view of the thrust being given to the development of horticulture, the production of fruits, vegetables and flowers is likely to see a quantum jump in the near future. The high levels of production can be sustained only if there is adequate infrastructure for post harvest management and marketing. The present marketing system is characterized by

a long, fragmented supply chain and high wastages. The system is also deficient in providing a fair share of consumer price to the producer and in ensuring high quality and hygiene of the produce. This calls for an alternative marketing structure that provides multiple choices to farmers for sale of produce. With this in view, the Terminal Markets (TM) have been conceptualized.

- The Terminal Market Complex (TMC) would operate on a Hub and Spoke Format wherein the Terminal Market (the Hub) would be linked to a number of Collection Centres (the spokes).
- Three Terminal Market Complexes will be set up in the State, one each near Cuttack, Sambalpur & Berhampur. These TMCs will be set up over an area of 50-60 acres with investment of '60-70 crores each. These TMCs will be set up under Public-Private Partnership (PPP) mode.
- To enable farmers to get proper prices for their surplus paddy sold at the RMC Market Yards, facilities for cleaning and drying, grading, weighing and bagging will be provided at all those Market Yards / Sub-Market Yards/ Temporary Procurement Centres engaged in paddy procurement. The Primary Cooperative Societies (PACS / LAMPS) are being increasingly involved in procurement of paddy from loanee farmers. Sufficient facilities for cleaning and drying, grading, weighing and bagging etc. will be made available in these Market Yards / Sub-Market Yards.
- Production of high value crops will be provided with scope for various subsidies, grants and other concessions including financial support with low interest rates and other attractive opportunity for speeding up commercialization of agriculture through agri-preneurs and agri-business. Government will set up quality controls and testing systems to ensure consistently high quality of the products for domestic markets as well as for export.
- Agri-export Zones (AEZs) would be established in PPP mode for agricultural and horticultural produce having export potential. Consequent upon dismantling of quantitative restrictions on imports as per WTO Agreement on Agriculture, commodity wise strategies and arrangements for protecting the grower from adverse impact of price fluctuations in world markets and for promoting exports will be formulated. In order to protect the interest of farmers, a WTO cell at the State level has been established under the Directorate of Agriculture. This Cell is in contact with the Center for WTO Studies, IIFT, New Delhi, and the XIMB, Bhubaneswar. The WTO Cell will spread awareness among the officers to ensure that the Government schemes are not incongruous with the WTO regime. It will also take up the applications of geographical indicators, protect our IPR and explore new markets for our unique products.
- Products as per the geographical indicators will be promoted and facilities shall be provided with emphasis on networking for quality assurance, packaging and branding in order to increase agricultural exports as per the international standards/norms and facilities for patenting of technologies will be ensured.
- Minimum Support Price (MSP) mechanisms will be implemented effectively across the state so as to ensure remunerative prices for the farm produce.
- Effective linkages will be promoted with other rural infrastructure development programmes such as Bharat Nirman, MGNREGA, BRGF, PMGSY, RGGVY, etc.

WOMEN IN AGRICULTURE

Advocacy for women's rights and gender sensitization is at the very core of developmental approaches today. Communication for social mobilization therefore, should incorporate gender as an equity perspective.

- Women will be important project partners in agricultural development; emphasis will be laid upon capacity-building and empowerment of women to achieve the goals.
- Women friendly farm equipments will be designed, produced and promoted; wherever necessary, the cooperation of the Directorate of Research on Women in Agriculture (DRWA) will be sought.
- The creativity, productivity and entrepreneurship of women and their capacity for furthering their skills will be dealt with a special focus through gender-analysis and gender sensitization in all agricultural developmental approaches.

- Capable women SHGs will be given preference, if they come forward to deal in the agri-inputs.
- Adequate steps will be taken to provide agricultural credit to women farmers.
- Young women in the countryside will be provided suitable trainings in post harvest management and food processing, so that they can augment their income.

APPLICATION OF ICT IN AGRICULTURE

Application of Information and Communication Technology (ICT) holds great promise for facilitating the development of Agriculture and allied activities in several ways. The use of Internet and other electronic media can be the most cost effective and useful way of disseminating technology and commercial information to promote development of agriculture and allied activities. The Department of Agriculture is already ahead in bringing the advantages of the Internet age to the farmers. At present, permits for buying farm machineries, sinking shallow tubewells, borewells or dugwells, and buying pumpsets under subsidy are issued online on fixed dates every month.

The Department of Agriculture will operate Internet portals to disseminate information on the recommended practices for various crops. A special technical cell shall update the information on the portal on a daily basis giving advice to farmers on specific crops. The farmers would be encouraged to send their queries to the portal for which answers would be furnished through the portal within a day. Such an interactive portal will greatly enhance the relevance of technical advice to individual farmers.

A similar interactive portal will be operated by the Department of Cooperation or an independent agency dedicated to gathering market information for farmers. The information on prices of various commodities in different markets in the State will be posted on the portal on a daily basis. An e-commerce facility will be set up to facilitate online sale and purchase of agricultural produce. This would greatly reduce the transaction costs incurred by farmers in marketing their produce and enable them to secure reasonable prices.

The mobile phone technology has brought the farmers close to the cities and markets. To take full advantage of this revolution, the Department of Agriculture will exploit the potential of short message services (sms) fully; relevant messages regarding the availability of seeds, inputs, agronomic practices, weather and marketing will be sent at appropriate times to the farmers. The websites of the Department will be made compatible with mobile technology.

Small hand-held devices will be used in the Department for data collection, which will increase the efficiency of data transmission and decision making.

OPERATIONALISATION OF THE POLICY

Necessary Rules and Resolutions will be framed, amended or passed, as appropriate, by the Government to implement the State Agriculture Policy within six months. Operational Plans to address the problems of the farmers will be prepared at the district level with involvement of all stake holders including PRIs through participatory and bottom-up planning and such District Agricultural Plans (DAPs) will be integrated into a State Agricultural Plan (SAP). The Department of Agriculture at the state level will coordinate with other allied departments to evolve appropriate mechanisms and guidelines to implement this Policy.

This Policy is intended to help rejuvenating the agriculture sector of Odisha and bringing lasting improvement in the economic condition of the farmers. An integrated implementation of the intentions of the Government would definitely achieve the targeted annual growth rate and ensure food and nutritional security to all the citizens of the State.