

Executive Summary of SAMRUDHI- Agriculture Policy 2020.

Introduction

Odisha is largely a rural and an agrarian economy. Close to 83 percent of its people live in rural areas and about 61.8 percent of its workforce is employed in agriculture. This workforce contributes to about 18 per cent to the state's GDP. Odisha accounts for 3 per cent of India's agricultural GDP.

In the 16 years since the beginning of this century (2000/01 to 2016-17), Odisha's agricultural GDP nearly doubled in real terms, clocking an average annual growth rate of about 4.5 per cent, higher than the all-India average of 3.1 per cent.

Odisha produces about Rs.75,800 crore worth of agricultural and allied output. More than half this value is generated from four products: paddy, meat, milk and brinjal. Paddy accounts for 24.4 percent of the value, meat 11.3 per cent, milk 9.1 per cent and brinjal 6.8 per cent (total share of vegetables is 25.3 per cent)¹.

The average income of an Odisha farmer was Rs. 7,731 in 2015-16. The incomes were Rs. 1,062 in 2002-03. In the 13 years between 2002-03 and 2015-16, Odisha farmer incomes grew the fastest in the country² and even faster than the growth witnessed by the agricultural GDP of the state³.

SAMRUDHI- Agricultural Policy, 2020, Odisha aims to give thrust to this great momentum that the state has witnessed in the last few years. The Policy is focused on farmers',

¹ For triennium average 2015-16

² An average farmer in Odisha earned about Rs. 7,731 per month in 2015-16 (NABARD's NAFIS) and about Rs.1,062 per month in 2002-03 (NSSO). At all-India level these incomes were Rs. 8,931 and Rs. 2115 respectively. In the 13 years between 2002-03 and 2015-16, Odisha farmer incomes grew more than seven times or at a compound annual growth rate (CAGR) of 16.5 per cent in nominal terms and 8.4 per cent in real terms. During the same period, the all-India average income of farmers grew at a CAGR of 11.7 per cent in nominal and 3.7 per cent in real terms. Between all states, the growth rate emerges to be the highest.

³ Between 2002-03 and 2015-16, its agricultural GDP increased at a CAGR of 3.7 per cent and its farmers' incomes grew at more than double that rate at 8.4 per cent

sharecroppers' and landless agriculture households' social and economic well-being, aims to actualize the vast untapped potential of agriculture in Odisha while ensuring the growth process is environmentally, economically and technologically inclusive, scalable and sustainable.

Earlier Agricultural Policies of Odisha

The Government of Odisha (GoO) announced its first agricultural policy in 1996. The Policy accorded industry status to agriculture. The second Policy was announced in 2008 where the emphasis was on improving economic condition of farmers through sustainable agriculture development, integrated farming, organic farming, agro-processing and restructuring agriculture extension system for ensuring agriculture growth of 4 percent. The third policy was released in 2013 with high focus on increasing farmer incomes and their welfare. In 2019, the state releases its fourth Policy, SAMRUDHI-2020 that outlines the Department of Agriculture's five-year strategy.

Vision of the Policy

To harness the potential of Odisha's agricultural sector in a sustainable manner, aimed at continuously raising farmers' incomes and welfare while ensuring nutritional security.

Objective of the Policy

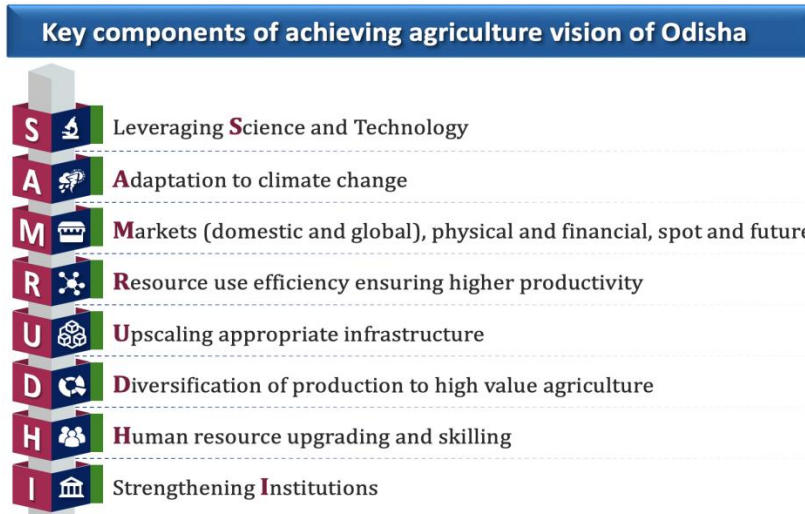
This policy will focus on farmers'⁴ well-being and aim is to achieve the following objectives in the next five years:

1. Ensuring continuous growth in farmers' income.
2. Making the growth inclusive for small and marginal farmers, and landless farmers.
3. Ensuring sustainable, stable and scalable agricultural growth.

⁴Farmers include those engaged in crops, livestock, poultry, fisheries, dairy and all other related activities.

Eight pillars of strategy

The sector-specific strategy in the policy are designed on eight pillars: “**SAMRUDHI**”



Instead of reforming the agriculture sector in silos and taking a piece-meal approach to reform, the aim of this policy is to coherently and progressively undertake simultaneous reforms.

The broad strategies include:

1. Creating an ecosystem interlinking inputs, production and markets
2. Focusing on sustainable increase in yields of paddy and diversification to high value agriculture (HVA)
3. Encouraging efficient and ecologically sensitive use of inputs, mainly water, land and soil
4. Promoting processing, including cleaning, grading, etc., for better value capture
5. Creating value-chains particularly of vegetables, livestock: dairy and poultry
6. Encouraging aggregation of farmers in Farmer Producer Organisations (FPO)
7. Reducing wastage by promoting pre and post-harvest management
8. Adapting to climate change – techniques, technology and management
9. Leveraging the power of data and technology for planning and monitoring
10. Leveraging central government schemes

Five-year Targets

- ❖ 100 percent updation and digitization of agricultural land records
- ❖ To completely eliminate exclusion and inclusion errors in KALIA and ensure that every eligible agricultural household is covered under the scheme
- ❖ 100 percent implementation of direct benefit transfer (DBT) and electronic monitoring for government programs
- ❖ Create a 100 percent updated digital data base of all Odisha farmers, labourers, tenant farmers and sharecroppers
- ❖ Cover at least 75 percent of state's farmers under crop insurance;
- ❖ Bring back at least 5 lakh hectares of fallow land into agriculture;
- ❖ To annually divert at least 1 lakh hectares of upland paddy area to high value agriculture
- ❖ Shift part of the rabi acreage of 2.3 million hectares away from pulses to horticultural crops
- ❖ At least 0.1 million hectares will be put under micro-irrigation
- ❖ Increase irrigation coverage: from current 43 percent, the ratio of irrigation potential utilized to irrigation potential created will be increased to at least 70 percent
- ❖ Procure at least 25 percent of production of the MSP like oilseeds, cereals, maize etc. in the next five years.
- ❖ For dairy, organised breeding drive will be promoted and is likely to cover at least 1.5 million breedable bovines in the coming five years.

This Policy aims to create the governance around farmers to be efficient, timely, relevant and responsive which is based on the fundamental framework of 5T- Technology, Teamwork, Timely, Transformation and Transparency. Guided by the 5T principles, the Policy lists the line of action for the upcoming five years.

Highlights of the policy direction presented in the SAMRUDHI- Agricultural Policy 2020, Odisha are given below:

Strategic Recommendations

1. Create and sync markets and production centers as per the identified **production-clusters** in the state- For this, a district-level agro-ecological map will be created by the Department in consultation with experts and this will form the basis of a district-level production plan that will identify the ideal cropping pattern for each district. These regional production belts and clusters (full or mini clusters) will be supported through infrastructural investments and other support relevant central and state government schemes and programmes and private sector. These clusters will be linked to the markets and efficient value-chains will be created to improve the value capture by the farmers;
2. Fresh **land capability classification map** and **soil nutrient map** of the state will be prepared in consultation with expert institutions and relevant government department
3. Develop **export-oriented clusters** with support from the Agricultural and Processed Food Export Development Authority (APEDA) with common infrastructure facilities.
4. Efforts will be made to adopt the **Model Contract Farming Act, 2018**, and a mechanism for quick dispute resolution will be set up for the smooth functioning of the system.
5. The **Model Agricultural Produce and Livestock Marketing Act (APLM), 2017** will be changed as per the state's requirement and will be implemented.
6. After making suitable amendments as per state's requirement, the **Model Agriculture Land Leasing Act 2016** will be adopted. A special effort will be made to protect the rights of landowners.
7. E-trading of commodities will be promoted via **electronic National Agriculture Market (eNAM)** portal.
8. State notifications under the **Essential Commodities Act 1955** will be reviewed to deliver a stable and predictable policy environment.

9. Use of **financial commodity instruments like futures and options** to deepen markets of particularly for crops with great domestic and global potential like maize.
10. A **separate window** will be created to address **problems facing rain-fed agriculture**, where low-income farmers dominate.
11. A new **state pest policy** will be launched, which will aim to create an integrated data backed decision support system for pest management.
12. Building on transfers received under the KALIA scheme, **allied activities** like dairy, poultry, bee-keeping **will be encouraged**. The Policy will take an integrated approach that will involve **training of the agri-worker**, ensuring timely supply of adequate and good quality **inputs**, a robust and effective **agri-extension system** and access to efficient and effective **markets**
13. For small and marginal landholders of Odisha, a **new mode of support for farm mechanization** will be designed. Under this, the state government will encourage hiring of farm equipment by subsidising service costs through DBT
14. All milch animals will be tagged in the next two years and livestock insurance will be introduced with larger coverage and higher support from the government (50 per cent of productive milch animals)
15. The almost exclusive focus of state's **R&D and extension machinery** on improving crop production and productivity will be replaced with a **value-chain approach** where each stage of farming- starting from crop planning, land preparation, sowing, to activities like weeding, harvesting, post-harvest management, storage will now be a topic of research for the scientists and point of training for the extension agents. Efforts will be made to identify techniques and technologies those deliver efficacy at each stage of farming.
16. **Strategic research extension plans** (SREP) will be developed to strengthen and improve the efficiency of the extension system. This will involve a bottom-up planning at the district and block levels
17. **The crop insurance scheme/Pradhan Mantri Fasal Bima Yojana (PMFBY) will be expanded** for coverage of areas and crops. The weather-based insurance will be promoted wherever possible.

18. A comprehensive and separate **crop insurance for vegetables and fruits** will be introduced in consultation with the Government of India and insurance companies.
19. All **district disaster management plans** will focus on **anticipatory** preparedness, prevention and rehabilitation
20. Improvement in governance is observed to be potent tool for effective implementation of the Policy. Therefore, **a robust institutional mechanism for convergence between different government departments** will be created. All actions at the block, panchayat and village level will be converged so that there is a single point of contact for the farmer.
21. To promote **convergence at the ground-level, a fully functional technology enabled integrated office** will be set up at **the block level** for all officers of Agriculture, Horticulture, Animal Husbandry, Fishery, Agricultural Marketing and other relevant department
22. To improve performance of schemes, government allocation for agriculture related activities will be evaluated against their outcomes. For this, a **monitoring mechanism** will be put in place and a platform will be created to capture the performance of various agriculture and allied departments and to take timely corrective action if gaps or failures are found
23. Odisha's **decentralized governance structure** where **gram panchayats** administer majority of developmental schemes/programs, will be leveraged for implementing the current Policy effectively and efficiently.
24. **Role of data and information technology** will be deepened to improve policy making and transforming aspects of farming
25. To respond to challenges from climate change and to enhance farmer incomes, **Odisha Organic Farming Policy, 2018** will be implemented with a 360-degree development approach. The acreage under organic farming will be increased from 20,800 hectares currently to at least 200,000 hectares in the next five years.

Operational recommendations

1. **Gramin Agricultural Markets (GrAMs) will be** developed on priority to bring markets closer to the farm-gate.
2. **Promote farmer producer organisations (FPOs):** Farmer producer companies will be provided financial and technical support with assistance from SFAC and NABARD.
3. **The government has now shifted its attention to promoting farmers as businessmen or as “agri-preneurs”.** This will result in rapid modernization of the agricultural sector. Role of Agricultural Promotion and Investment Corporation of Odisha (APICOL) will be pivotal in this.
4. **A value-chain approach will be followed,** wherever possible linked to the production clusters.
5. **To smoothen inter- and intra-year fluctuations in supply of crops,** processing can play a vital role.
6. The Policy places high importance in promoting use of market intelligence in agriculture. **A market information system (MIS) will be created to disseminate the information about current and forecasted prices of major crops to the farmers. An interactive dashboard will be created.** This will be developed in phases where initially done for only the principal crops and horticulture commodities.
7. **Shorter value-chains for fruits and** vegetables will be encouraged and supported.
8. Digitisation of land records will be taken up for effective implementation of all land related benefit schemes. Geo-tagging, along with location agnostic online registration of land records will be taken up.
9. **Balanced fertilization will be promoted.** The soil health card scheme will be scaled up and the portal will be aligned with the Integrated Fertiliser Management System (I-FMS)
10. **Updating soil health status** every three years at the village/panchayat level

11. The fertiliser value-chain will be streamlined to ensure transparency and effective distribution. This will involve use of Aadhaar connected e-pos machine among other things.
12. **Salinity of soils will be addressed on priority** through improved drainage, drainage line treatment (DLT), changes in crop choices and cropping patterns and other strategies
13. **The 3-M (matter, moisture, microbes) framework will guide the** soil strategy for rain-fed areas
14. Dynamic seed rolling plans will be created. These will be based on crop-wise, area-wise (season-wise) actual seed rate per hectare. This will be mapped with desired/targeted Seed Replacement Rate (SRR), and Varietal Replacement Rate (VRR), previous trends and targets of introducing new varieties replacing older varieties
15. Jalanidhi scheme will be scaled up for providing water to the last-mile and solar-powered irrigation pumps will be encouraged to meet farm energy requirements. Efforts will also be made to connect the solar panels to the grid; this will generate additional income for farmers
16. Water conservation will be a policy focus and wasteful methods of irrigation and techniques of production (like flooding in paddy) will be discouraged and efficient and effective technological alternatives will be identified and communicated to farmers
17. A system of pest management based on IT will be developed. A forecasting model to predict pest incidence will also be developed based on weather parameters, historical and scientific data.
18. Pesticide procurement will be strictly based on quality. A monitoring of effectiveness will also be done, and low performing pesticides will be removed from the approved list of pesticides.
19. **Access to credit to all farmers, including tenant farmers will be improved.** For this, appropriate financial instruments, new channels of credit and expanded beneficiary groups will be promoted. Revised KCC scheme implementation will be monitored and improved

20. **The strategy in the livestock sector is long-term** and is planned to start with the improvement and composition of breeds. Artificial Insemination (AI) of milch animals will be stepped up to reach 20 lakh AIs per year and sex-sorted semen will be encouraged with a higher level of incentivisation.
21. **Dairying through co-operatives will be encouraged** by creating infrastructure for cattle feed manufacturing, milk procurement, processing and marketing.
22. **The private sector will be incentivised to create a value chain** for dairy products at the village level.
23. **The current procurement of nearly 20 per cent of total milk output will be increased to 25 per cent** during the next five years through OMFED and private milk processors.
24. **OMFED will expand the milk cold chain, particularly at the village level through collection centres, to cover all viable village co-operatives within the next five years.** Bulk milk coolers (BMC) will be provided to all villages whose catchment area offers at least 500 litres of milk per day.
25. Preventive animal health care services for control of major diseases like foot and mouth disease (FMD), brucellosis, HS, BQ, theileriosis, IBR and other diseases like mastitis, etc., will be taken up. A campaign to eliminate FMD through vaccination will be taken up to cover 100 per cent of animals in the state.
26. A fodder development programme to grow fodder in public lands and fallow lands will be put in place.
27. The ration balancing programme for milch animals will be expanded to cover 10,000 villages.
28. In goat rearing, the department will undertake the identification of breeds that grow faster and gain weight quickly under Odisha's climatic conditions.
29. Genetic improvement of sheep and goat will be through selective breeding. A buck exchange programme will be promoted to reduce in-breeding.
30. **In the case of poultry, low-input technology birds** suitable to the local climate will be promoted for livelihood support to landless, small and marginal farmers.

31. **Large integrators in the poultry sector will be incentivised to set up decentralized production models.** Integrators will be assisted to set up these models.
32. Vaccines will be subsidised for small/backyard poultry units.
33. Use of antibiotics in poultry will be regulated and efforts will be made through an effective extension machinery to ensure that antibiotics are used only for disease treatment and not as a growth enhancer.
34. Welfare schemes for fishermen will be introduced including life insurance, assistance to buy fishing boats, nets, etc., and climate information services to fishers to manage weather-related risks.
35. Digitisation and geo-tagging of fisheries assets in the state will be taken up using geographic information system (GIS) based Management Information System (MIS) or GIS-based MIS established
36. **Inland fisheries will be encouraged through the concerted efforts like revising the leasing policy of ponds/water bodies and making it fisherman friendly and enhancing reservoir fish production**
37. **Strengthening marketing infrastructure for fish by setting up exclusive fish processing/sale centres in various parts of the state.** This will involve, *inter alia*, encouraging cold chains for fish marketing, and promoting modern and cost-effective technology for hygienic dry fish marketing
38. **The agri- extension system will be strengthened. In the next five years, at least 500,000 farmers will be trained and 100 percent geo-tagging of crop cutting/demonstration activities will be done.** The extension related manpower will be created and strengthened at district, block and village-level
39. To improve the disaster response, *inter alia*, 100 percent area will be put under early warning system in the next five years, sufficient reserves of seeds, fertilisers and other support like credit, etc. will be ensured and process of assessment of damage will be made faster and more efficient
40. To promote and support women in agriculture, *inter alia*,
 - a. **At least 30 per cent of the horticulture and small livestock scheme budgets will be dedicated to women.**

- b. **Agricultural extension material will be revised to cater to the needs of women farmers with more focus on backyard livestock/poultry/fisheries and women-friendly crops (like vegetables) and techniques of production.**
 - c. **Efforts to get women friendly farm equipment designed, produced and promoted will be strengthened, wherever necessary.**
 - d. **Access to credit will be improved through special focus on women.**
 - e. **A policy to encourage SHGs run and operated by women will be put in place.**
 - f. **Mission Shakti will be used to empower women farmers**
41. **To improve and reward performance of departmental officials, a rigorous performance metrics** will be defined at all levels and technology will be used to ensure the accountability of officers to achieve performance standards. High performing officials will be rewarded/acknowledged appropriately.
42. **A decision support system will be developed under the Analytics for Decision-making and Agricultural Policy Transformation (ADAPT) programme, which will be an integrated platform for all relevant departmental datasets need to effectively manage the department's activities.** The platform will also enable data use by officials of the government at the state, district, block, *gram panchayat* (GP) and village level. The platform will also be available on mobile for easy access by officials.
43. **100 percent program implementation will be e-monitored in the next five years** by the Agriculture Department.
44. A complete and updated farmer database will be generated. All necessary steps will be taken to clean, connect and strengthen existing databases to create a single, dynamic, all-inclusive database on landowning farmers, sharecroppers and tenant farmers. The database will be used to provide various inputs, advisories and other benefits to farmers.
45. **Steps will be taken to adopt the use of drones for remote monitoring and procuring high-resolution satellite imagery and weather analysis from IMD and private partnerships.** The analysis of the data from various sources will be

used in activities like creating agro-advisories, monitoring the situation in the remote areas, crop cutting experiments, etc. The data will also be used to help farmers avail of crop insurance and credit that are rightly priced.

46. **Use of IOT (sensors) will be promoted to keep a real-time check on the supply and consumption of inputs like seeds, fertilisers, pesticides etc.**
47. Steps will be taken to set up automate grading and sorting of crops using robotics and machine vision. This will reduce efforts and wastage in the supply chain.
48. Technologies like blockchain will be used to support the implementation of contract farming.

Climate change and Odisha Agriculture

1. Odisha University of Agriculture and Technology (OUAT) along with Indian Council of Agricultural Research (ICAR) and CGIAR institutions like International Rice Research Institute (IRRI) will develop climate resilient varieties of crops suitable for the 10 agro-climatic zones of the state.
2. Local seeds that are more climate resilient and have high yield potential will be identified and encouraged.
3. Promotion of flood tolerant varieties in flood prone areas and drought resistant varieties in drought prone areas and salt tolerant varieties in salinity affected areas will be undertaken.
4. Climate-smart seed delivery is envisaged in this Policy. A crop contingency plan will be prepared with a 'seed reserve' policy in areas of repeated calamity stress.
5. In the case of poultry, low-input technology birds suitable to the local climate will be promoted for livelihood support to landless, small and marginal farmers
6. As a focus, the extension machinery of the state will promote the adoption of water-conservation practices like use of precision agriculture techniques, energy-friendly irrigation pumps, micro irrigation, climate smart technologies, internet of things (IoT), and use of technology in animal husbandry to monitor animal behaviour, health, production and markets, wherever possible

7. Participatory water security management (groundwater and surface water sources) will be promoted in alignment with the identified production cluster approach.
8. Awareness generation, appropriate use of water and community management will be taken up through participatory rural appraisal (PRA) exercises, training programmes, and simulation games.
9. Attention will be paid to projects for drainage where water logging is frequent and problematic.
10. Performance of Water User Associations (WUAs) will be reviewed and a conducive eco-system will be built to enable them to improve water use efficiency in the states
11. Participatory Watershed Management will be prioritized
12. Focus on sub-surface water storage in addition to rainwater harvesting, rainwater conservation will be stressed particularly in rain-fed regions

Conclusion

The Policy presents a comprehensive, coherent and a progressive road map of reforms for Odisha's agricultural sector. It builds on Odisha's inherent strengths, identifies steps to address the constraints and elicits ways to make optimal use of resources and opportunities.

The thrust on 360-degree approach where holistic, simultaneous and broad-based reforms are undertaken in the entire farming eco system of Odisha, is likely to position the state's farmers on a high growth trajectory going forward.