Transforming Agriculture

Department of Agriculture,
Government of Maharashtra
Transforming Maharashtra's Agriculture

The Agriculture sector continues to be the backbone of economic development not only in India but especially in the state of Maharashtra where the sector has witnessed remarkable transformation. This has been made possible mainly on account of the untiring efforts and commitments shown by the farming community ably supported by visionary government policies and interventions like promoting technology adoption, crop diversification, marketing reforms, investment in agriculture related infrastructure, agri-marketing, exports and processing.

Over the last few years, Maharashtra has significantly diversified its production base from coarse cereals to high value agriculture like fruits, vegetables and flowers, soybean, maize apart from dairy, poultry and fisheries. The state has maximum number of Global GAP certified farmers who are participants in various traceability nets designed by APEDA. Maharashtra is one of the leading states in establishing and promoting pesticide residue testing, plant Quarantine laboratories, Floriculture Park, Food Parks, APEDA approved Export Pack houses etc. This has helped the state to become a leading exporter of fruits and vegetables in the country. Agro food processing industries have a firm footing in the state and employ about 15 percent of the formal workforce.

While there has been a remarkable progress on several fronts, agriculture and allied sectors continue to be vulnerable to the challenges posed by climate change and degradation of productive land on account of rampant urbanization, industrialization and depleting water resources. There has also been a reduction in average size of agricultural holdings resulting in an increasing number of marginal & small farmers. Even though Maharashtra’s agriculture is well diversified, there is an instability in the prices of major commodities like soybean, cotton and sugar as they are integrated with global value chains and are influenced by global price movements.

In response to the above emerging production and market-related challenges, the Government of Maharashtra has developed a vision 2030 document which envisages promotion of sustainable agriculture in line with Sustainable Development Goals. The State Government under the able leadership of Honorable Chief Minister Shri Devendra Fadnavis has proposed various initiatives like enhancement of crop productivity, improvement in the yield and quality of horticulture & floriculture produce, water conservation measures, reduction in the cost of cultivation, adoption of an integrated farming system approach, promotion of group farming, creation of quality infrastructure for storage and processing, use of advanced post-harvest technology, promotion of value chains, facilitating export of agriculture produce, extending agriculture credit to all farmers and risk mitigation as part of 2030 vision strategy. This vision strategy would also enable the state in achieving “Doubling of Farmer’s Income by 2022” as envisaged by the Honorable Prime Minister.
Maharashtra at a Glance

Physical
- Agroclimatic Zones: 9
- Geographical area: 307.58 lakh ha.
- Net sown area: 174.06 lakh ha.
- Number of operational holdings: 153.00 lakh
- Average size of operational holding: 1.34 ha.

Cropping Pattern
- Kharif crops (including Sugarcane): 149.74 lakh ha.
- Rabi and Summer Crops: 58.81 lakh ha.

Agricultural Production (2017-18)
- Foodgrains: 99.37 lakh MT
- Pulses: 21.60 lakh MT
- Oilseeds: 47.89 lakh MT
- Cotton: 71.28 lakh Bales
- Sugarcane: 924.35 lakh MT
### Maharashtra: Agriculture Overview

#### Strengths
- Diverse Agro-Climatic Zones
- More than 3200 MSMEs and more than 100 Large Corporates in Agri-Business
- Ranked 1st in Agricultural Marketing and Farmer Friendly Reforms Index
- Leading producer and exporter of pulses, cotton, and soybean.
- 40% share in exports of Fruits & Vegetables
- 50% share in exports of Processed Foods

#### Leading Producer in:
- Fruits & Vegetables
- Pulses
- Oilseeds
- Cotton

#### Agri-Marketing Infrastructure
- 307 APMCs and 598 Sub yards.
- 2200 Rural haats.
- MSWC Godowns (1200 Nos and 1.8 Million MT storage capacity).
- 44 Export Facility Centers established by MSAMB.
- 57 Private Markets.
- Vapour Heat Treatment Facility Center, Vashi - Mumbai.
- Irradiation Facility Center, Vashi, Mumbai - For exporting Mangoes to USA.
- Hot water Immersion Treatment, Goregaon, Mumbai - For exporting mangoes to EU.
- Irradiation Facility Center, Lasalgaon, Nashik - For exporting Onions.

#### Dedicated Institutions
- 4 State Agriculture Universities & 44 Krishi Vigyan Kendras (KVK).
- National Institute of Post Harvest Technology - NIPHT.
- VANAMATI, Nagpur - Apex Training Institute of State.
- National Research Station - Grapes & Pomegranate.
- Central Institute of Cotton Research, Nagpur.
- Central Institute of Research on Cotton Technology, Mumbai and Nagpur.
- Central Citrus Research Institute, Nagpur.
- Directorate of Onion and Garlic Research, Pune.
- Directorate of Floricultural Research, Pune.
- National Institute of Abiotic Stress Management, Baramati, Pune.
### Maharashtra – A Leading Producer

<table>
<thead>
<tr>
<th>Crop</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soybean</strong></td>
<td>- 2nd Largest producer in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 40.43 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 45.50 lakh MT</td>
</tr>
<tr>
<td><strong>Mango</strong></td>
<td>- 1st in exports with 71% share of India’s exports</td>
</tr>
<tr>
<td></td>
<td>- Area – 1.66 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 8.00 lakh MT</td>
</tr>
<tr>
<td><strong>Grapes</strong></td>
<td>- 1st in Area and Production &amp; Export in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 1.04 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 28.00 lakh MT</td>
</tr>
<tr>
<td><strong>Turmeric</strong></td>
<td>- 2nd in Production in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 1.07 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 17.79 lakh MT</td>
</tr>
<tr>
<td><strong>Cotton</strong></td>
<td>- Largest producer in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 42.53 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 71.28 lakh bales</td>
</tr>
<tr>
<td><strong>Pomegranate</strong></td>
<td>- 1st in Area and Production &amp; Export in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 1.47 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 18.00 lakh MT</td>
</tr>
<tr>
<td><strong>Banana</strong></td>
<td>- 3rd in Production in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 0.75 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 30.73 lakh MT</td>
</tr>
<tr>
<td><strong>Meat</strong></td>
<td>- 2nd in Production in India</td>
</tr>
<tr>
<td></td>
<td>- Share - 12.07%</td>
</tr>
<tr>
<td></td>
<td>- Production - 9.25 lakh MT</td>
</tr>
<tr>
<td><strong>Tur/Red Gram</strong></td>
<td>Largest producer in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 12.10 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 6.84 lakh MT</td>
</tr>
<tr>
<td><strong>Cashew nut</strong></td>
<td>- 1st in Production in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 1.86 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 2.57 lakh MT</td>
</tr>
<tr>
<td><strong>Onion</strong></td>
<td>- 1st in Area and Production &amp; Export in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 4.72 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 67.73 lakh MT</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td>- 4th in Production in India</td>
</tr>
<tr>
<td></td>
<td>- Inland Fishery - 1.31 lakh MT</td>
</tr>
<tr>
<td></td>
<td>- Marine Fishery - 4.75 lakh MT</td>
</tr>
<tr>
<td><strong>Maize</strong></td>
<td>- 4th Largest producer in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 9.48 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 19.28 lakh MT</td>
</tr>
<tr>
<td><strong>Oranges</strong></td>
<td>- 3rd in Production in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 1.08 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 9.85 lakh MT</td>
</tr>
<tr>
<td><strong>Okra</strong></td>
<td>- 1st in Export in India</td>
</tr>
<tr>
<td></td>
<td>- Area – 0.13 lakh Ha.</td>
</tr>
<tr>
<td></td>
<td>- Production – 1.39 lakh MT</td>
</tr>
<tr>
<td><strong>Milk</strong></td>
<td>- 7th in Production in India</td>
</tr>
<tr>
<td></td>
<td>- Per capita avail. - 256 g/day</td>
</tr>
<tr>
<td></td>
<td>- Production – 111.02 lakh MT</td>
</tr>
</tbody>
</table>
Geographical Indications (GI)

Maharashtra Leads in GI Registration

- GI Registration is to protect and promote unique indigenous products
- Community owned Intellectual Property Right
- Total GI Registered in Maharashtra - 26
Traceability System

Traceability net wise - Farms Registered For Export in India and Maharashtra

<table>
<thead>
<tr>
<th></th>
<th>Grapenet</th>
<th>Mangonet</th>
<th>Anarnet</th>
<th>Vegnet</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>43831</td>
<td>29001</td>
<td>1753</td>
<td>1135</td>
<td>65140</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>43712</td>
<td>8846</td>
<td>1662</td>
<td>1077</td>
<td>55297</td>
</tr>
<tr>
<td>% Share</td>
<td>99%</td>
<td>31%</td>
<td>95%</td>
<td>95%</td>
<td>85%</td>
</tr>
</tbody>
</table>

Pesticide Residue Lab HPLC

Grape Farm

Mobile App

Farm Registration Certificate
Export of Fruits & Vegetables

Maharashtra Rank 1st in Fruits Export

*Quantity in Lakh MT
* Value in Crore

Maharashtra Rank 1st in Vegetables Export

*Quantity in Lakh MT
* Value in Crore
Flagship Schemes & Programs
Jalayukt Shivar Abhiyan

Challenges: With almost 80% area dependent on monsoon, Maharashtra has been exposed to severe droughts with erratic and inconsistent rainfall. Climate change has aggrieved the situation. State is witnessing cyclic droughts affecting crop production leading to socio-economic distress. Depleting ground water, drying up of drinking water resources is a major problem for the State. Almost every alternate year, there is a huge burden on public exchequer because of relief measures.

The Program:
- “Jalayukt Shivar Abhiyan” is envisioned by the Chief Minister as a flagship program of Government of Maharashtra.
- Launched in the year 2015-16 to ensure soil and water conservation through scientific watershed management interventions with an objective to achieve sustainable development.

Salient Features:
- Watershed development as a base to ensure sustainability in drought affected villages.
- People’s participation in watershed planning and implementation.
- Use of GIS and remote sensing for watershed planning.
- Convergence of schemes for holistic development.
- Treatments undertaken with active participation of people to create decentralized water storages.
- Cement Nala Bandh in series.
- Repairs and desilting of various water structures.
- Desilting of wells to rejuvenate the springs.
- Desilting of old nalas & rivers to make it feasible to store plenty of water.
- To use the present water storage available efficiently.
- To undertake various area treatments in watershed development programme.

Achievements:
- Implemented in 22589 villages.
- 6.23 lakh various soil and water conservation works has been completed.
- 1919 lakh cubic meters silt excavated.
- 6486 km Nala deepening.
- 27.08 lakh TCM water storage capacity created.
- 39.04 lakh ha. protective irrigation capacity created.
Farm Pond on Demand

In view of the water scarcity in the State with erratic rainfall, Government has launched Farm Pond on Demand (‘Magel Tyala Shettale’). Aim of this scheme is to provide sustainable protective irrigation facility to farmers.

Objectives of the campaign:
- Harvesting maximum rainwater within the village area.
- Recharge ground water levels.
- Increasing protective irrigation facility.
- Creation of decentralized water storages.

Implementation and monitoring:
- Transparent and hassle free process through ‘Aaple Sarkar’ portal.
- Root level Officer to upload geo tagged photograph of the farm pond.
- The subsidy of Rs. 50,000 is directly transferred in the bank account of the beneficiary.

Achievements:
- 1,28,620 Farm Ponds completed.
- About 2.5 lakh TCM water storage capacity created.

Impact:
This ambitious program of the Government is now converted into a people’s movement, resulting in increased ground water level and protective irrigation capacity which is helping in increasing the productivity of farmers.
Micro Irrigation

- Maharashtra is leading in area under micro irrigation.
- First State in the country to start use of drip irrigation as early as 1986-87.
- Focus on water guzzling crops – Sugarcane, Banana.
- Aiding productivity increase in – Cotton, Tur, Fruit crops.
- Massive awareness creation.
- Transparency through DBT (Direct Benefit Transfer).
- Easy availability – everyone can apply through e-Thibak.

Coverage of Micro-Irrigation

<table>
<thead>
<tr>
<th>Year</th>
<th>Drip</th>
<th>Sprinkler</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986-87</td>
<td>0.01</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>1990-91</td>
<td>11.42</td>
<td>2.02</td>
<td>13.44</td>
</tr>
<tr>
<td>2000-01</td>
<td>16.19</td>
<td>2.02</td>
<td>18.21</td>
</tr>
<tr>
<td>2010-11</td>
<td>19.28</td>
<td>2.02</td>
<td>21.30</td>
</tr>
<tr>
<td>2012-13</td>
<td>23.15</td>
<td>2.02</td>
<td>25.17</td>
</tr>
<tr>
<td>2014-15</td>
<td>24.20</td>
<td>2.02</td>
<td>26.22</td>
</tr>
<tr>
<td>2017-18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018-19</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Onion Storage Structures

- Onion is grown on 4.68 lakh ha. area, which gives 60 lakh MT produce.
- Production of Onion in Maharashtra is about 30% of India’s production.
- Onion is grown in Kharif, late Kharif, Rabi/Summer seasons.
- Production cycle and price behavior:
  - Less availability during June to October (lean season) - higher prices.
  - Higher availability during November to May (peak season) - lower prices.
  - Supply during lean season depends on onion stored during peak season (April & May).
- Storage of Onions on farmers' field is the key.
- Construction of farm level Onion storage structures taken up to avoid distress sale.
- Farmers can store surplus onion in peak season when market prices fall down and fetch better prices in lean season.
- Minimal deterioration and loss of quality during storage.
- 36926 onion storage structures constructed with 8.62 lakh MT storage capacity.
High Tech Farming: Infrastructure

Diversification to high tech farming is one of the foresighted policy initiative of the State, aiming at better management of farm resources and higher income. It includes cultivation of high value horticulture crops, expanding irrigation potential and exports of fruits and vegetable crops. Diversification of traditional crops to plantation of fruit crop, flowers and vegetables generated employment in the rural areas uplifting socio-economic status of the farmers.

**Infrastructure for Protected Cultivation**

1. **Community Water Storage facility – Boon for Rainfed Agriculture**
   - Key role in changing scenario of dry land into productive one.
   - Creation of assured water resources using runoff water.
   - 21820 structures created with 133767 TCM water storage capacity.

2. **Plastic Mulching**
   - Reduction in evaporation and conservation of soil moisture.
   - Reduction in growth of weeds.
   - Increased water use efficiency.
   - Reduction in use of inputs like fertilizers and labour.
   - 4975 beneficiaries covering 9724 ha. area.

![Graph showing collective field water storage facility and plastic mulching]

**Collective field water Storage facility**

- 11307 Collective field water storage facility Nos.
- 10513 Water storage facility ('1000 Cu.M.)

**Plastic Mulching**

- 2809 Plastic Mulching (Ha) for 2009-10 to 2013-14
- 3446 Plastic Mulching (Ha) for 2014-15 to 2018-19
High Tech Farming: Protected Cultivation

Features -
- Climate controlled off season growing of fruits/vegetable/flowers.
- Protected cultivation is the future because land and water resources are scarce.
- Controlled environment enables growing multiple crops with increased productivity and quality.
- Efficient use of water, fertilizer, seed & plant protection chemicals.
- Better quality and quantity of produce augments farmer’s income.
- Precision farming through green houses, shed net houses and plastic mulching.

Green Houses & Shed net houses -
- Green house and shed net house facilitate the farmers to produce high quality vegetables & flowers.
- Farmers can fetch high market prices by supplying in off season.
- 4357 Green houses erected on 1000 ha. area.
- 7088 Shed net houses erected on 1590 ha. area.
Soil Health Card Program

- Create awareness amongst farmers about balance use of fertilizers, reduce the input cost and maintain soil fertility.
- Maharashtra is leading State in implementation of this programme.
- In all 131.46 lakh and 130.53 lakh Soil Health Cards are distributed amongst the farmers in the first (2015-16 & 2016-17) and second cycle (2017-18 & 2018-19) respectively.
- The database processed and 23 lakh advisory through SMS are sent through Kisan Portal.
- Preparing Fertilizer Nutrient Index Maps with the help of SLUSI Nagpur.
- Due to awareness of the Soil Health Card among the farmers, number of soil samples received from private farmers reduced by 20%.
- 21 Government and 224 Private Labs are engaged.

Dr. Punjbrao Deshmukh Jaivik Sheti Mission

- State sponsored scheme for promoting organic farming.
- The programme is being implemented in the suicide prone six districts of the zone.
- 500 organic clusters will be formed covering about 25000 ha. area and participation of 15000 farmers.
- The total outlay of the mission is Rs. 100 crore for 4 years (2019-20 to 2022-23).
- Focus on reducing chemical inputs and cost of cultivation.
- Under Paramparagat Krishi Vikas Yojana (PKVY), 1289 Organic Clusters created.
- 52000 farmers and 26000 ha. area covered.
Pradhan Mantri Kisan Samman Yojana (PM KISAN)

- With a view to augment the income of farmers, Government of India has approved a Central Sector Scheme, namely “Pradhan Mantri Kisan Samman Yojana (PM KISAN)” during this financial year 2018-19. The Scheme has taken effect from 01.12.2018 for transfer of benefit to eligible beneficiaries.
- Under the PM KISAN Scheme, Estimated Number of Eligible Beneficiaries is over **90 Lakh**.
- Over **80.50 Lakh** Beneficiaries data uploaded on PM KISAN Portal.
- Over **45 Lakh** Beneficiaries have been benefitted.

Pradhan Mantri Fasal Bima Yojana (PMFBY)

- Maharashtra is a leading State in farmers participation.
- Majority non-loanee farmers are participating through Common Service Centers.
- Committee for complaints redressal established at Block and District level.
- Jalna & Beed districts received national level "Prime Minister Award".

### Year wise achievements

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Farmer Lakh</th>
<th>Area Insured (Lakh Ha.)</th>
<th>Gross Premium (Rs. In Cr.)</th>
<th>No. of Beneficiaries In Lakhs</th>
<th>Compensation Amount (Rs. in Cr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-17</td>
<td>116.72</td>
<td>70.85</td>
<td>4010.68</td>
<td>27.87</td>
<td>1923.08</td>
</tr>
<tr>
<td>2017-18</td>
<td>100.91</td>
<td>58.01</td>
<td>3544.93</td>
<td>52.34</td>
<td>2703.53</td>
</tr>
<tr>
<td>2018-19</td>
<td>139.98</td>
<td>83.27</td>
<td>4778.33</td>
<td>54.46</td>
<td>*3730.52</td>
</tr>
</tbody>
</table>

Note : *As per interim report from Insurance Company.
Gopinath Munde Shetkari Apghat Vima Yojana

Farmers are prone to accidents while performing their farming business. Due to death / disability of earning head of family; the family members of farmers have to face critical financial situation. In order to give financial support to the aggrieved family members, State Government has taken the insurance policy to provide insurance cover.

The insurance cover is provided to 1.37 crore registered farmers in the state. Under this policy on death of farmer nominee can get Rs. 2 lakh claim amount & for disability farmers can get Rs. 0.5 lakh claim amount.

Since 2015-16, more than 6700 proposals were sanctioned and Rs. 134.17 crore claim amount was distributed to the farmers.

Hon. Dr. Anil Bonde, Agriculture Minister, Distributing Claim amount Certificate
Agricultural Mechanisation

Approach to mechanization is to ensure timely operations, improve inputs use efficiency and cropping intensity, reduce cost of production, avoid drudgery, enhance farm power use efficiency and increase productivity levels and net income of farmers.

Strategy:
- Focus on Farm Mechanization through various schemes.
- Transfer of funds directly to beneficiary account (DBT).

Achievements:
- Funds of Rs. 937 crores utilized to benefit 200348 farmers (2014-15 to 2018-19).
- No. of Tractors – 33845.
- No. of Power Tillers – 12080.
- No. of Implements – 1.54 lakh.
- Farm power utilization increased from 1.11 Kw/ha. To 1.76 Kw/ha.
Farmers Field School - Connecting with Farmers

- Dialogue with farmers at critical stages of crop growth - from land preparation to post harvest management.
- Effective transfer of technology through hands on.
- Farmers training through trained facilitators and SAU/KVK experts.
- 12,000 FFS for Rice, Soybean, Cotton, Red Gram, Maize, Sorghum, Sugarcane and Gram.
- Collaborative efforts of Agriculture Department, Agri Universities, KVKs, RAWE students, ATMA and PoCRA facilitators.
- Focus on Integrated Crop Management and Integrated Pest Management.
- Implementation through convergence of various schemes.
- Technical empowerment of more than 3 lakh farmers including women.
- FFS trained farmers become Facilitators for next year program.
- Participatory approach is the key for success.
Group Farming – Community Farming Approach

- Flagship programme of the State.
- Enabling fragmented small land holdings to be pooled together to bring economic viability.
- Group Farming includes ease of doing farming by improved technology, mechanization, market linkage, post-harvest management, processing and value addition of agriculture and allied components.

- Minimum 20 farmers and minimum 100 acre of land is required for each registered Farmer Group. But for Kokan Division 50 acre of land is admissible.
- 60% assistance is given to each Farmers Group. Remaining 20% own contribution and 20% Bank loan.
- Maximum up to Rs.100 Lakh financial assistance is given for implementing various activities of agriculture and allied components.
**Maharashtra Food Processing Policy**


**Salient Features** -
- Established Directorate of Food Processing in Commissionerate of Agriculture, Pune.
- Single window system service to facilitate various licenses at State & District level.
- Food processing clusters identified to promote Food Processing Industry and Mega Food Parks.
- APMC Act amended to facilitate direct purchase of agricultural produce from producer farmers, Private Market, Single License, e-trading and contract farming.
- Support to cross regional multimodal logistics.
- Act for leasing the farmers' land for long term commercial basis promulgated.
- Labour law proposed to be amended to introduce presumption that food processing industries falls under category of seasonal industry.
- Concessions offered: electricity tariff, electricity duty and cess, permission to lift water, exemption from NA permission.
- Pre sanction of Environment Department is not required for projects not discharging effluent.
- 50% of the subsidy will be provided for obtaining industry recognized skill certifications.
- Priority to the projects being set up by women's group.

**Chief Minister’s Scheme for Agro and Food Processing**

- Flagship scheme launched in 2017-18 to promote value addition of agriculture produce, market development and export promotion through farmer involvement.
- Participants: Women's self-help groups, farmer producer companies / groups, private sector, rural unemployed youth, cooperative societies etc.
- 30% credit linked back ended subsidy with maximum limit of Rs. 50.00 lakhs.
- 88 projects worth Rs. 25.42 crores project cost have been sanctioned.
Allied Sectors
Sugar Industry

- Maharashtra accounts for one-third of countries sugar production.
- Sugar industry contributes to overall economic and social development of the state directly impacting more than 200 talukas.
- It plays a key role in employment generation followed by textile industry.
- Sugar industry has contributed in development of educational institutions, hospitals, consumer societies, sub-irrigation schemes, agricultural service centers in rural areas.
- Maharashtra government is promoting production of ethanol, cogeneration, particle boards, fertilizer factories, drip and many allied industries.
- Total sugar factories – 246
  Co-operative - 138  Private -108

Sugarcane Crushing (2018-19):
Area : 11.62 Lakh ha.
Crushing : 952.11 Lakh MT
Production : 1072 Lakh Qt.

Annual Industry turnover : Rs.35,000 crore
Payout to Farmers : Rs.23,000 crore
Labour and transport charges : Rs.5,000 crore
Co generation units revenue : Rs.221.13 crore
Government Tax receipts : Rs.2,000 crore

Member farmers : Over 20 Lakh
Number of employees : Over 2 Lakh
Sugarcane growers : Over 30 Lakh
Indirect employment : 15-20 Lakh
Animal Husbandry and Dairy

- The State ranks seventh in milk production and per capita availability of milk in the State is 256 grams per day as against 375 grams per day at the national level.
- Maharashtra is the second largest meat producer State in India with share of 12.07 per cent.
- The State ranks fifth in eggs production and the per capita availability of eggs in the State is 48 eggs per annum as against 74 eggs per annum at the national level.

Focus on enhancing production of Milk, Eggs, Meat, achieving disease-free status in Livestock & Poultry by undertaking treatment, disease diagnosis and preventive vaccination.

- Network of 4847 veterinary service outlets.
- Preventive vaccination against the contagious bacterial and viral diseases in livestock & poultry.
- Genetic improvement in bovines through use of Artificial Insemination Technique. 24 lakh inseminations every year.

<table>
<thead>
<tr>
<th>Vision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doubling production of milk &amp; milk products by 2030</td>
</tr>
<tr>
<td>By 2030 Per capita availability of</td>
</tr>
<tr>
<td>Milk : 376 grams (per day)</td>
</tr>
<tr>
<td>Eggs : 84 (per annum)</td>
</tr>
<tr>
<td>Meat : 10.4 kg (per annum)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production of Animal Products</th>
</tr>
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<tbody>
<tr>
<td><strong>Product</strong></td>
</tr>
<tr>
<td>Milk</td>
</tr>
<tr>
<td>Eggs</td>
</tr>
<tr>
<td>Meat</td>
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</table>
**Fisheries**

- The State stands 4th in production of fish in the entire nation.

**Inland Fisheries:**
- Maharashtra has a large waterspread area of 3.55 lakh Ha which includes 46 large, 39 medium, 233 small reservoirs and 20018 tanks.
- Annual average fish production is 1.31 MT (FY 2017-18).
- Under ‘Blue Revolution’ initiative 2544 cages have been distributed.

**Marine Fisheries:**
- Maharashtra also has a vast coastline extending up to 720 Km with fauna enriched continental shelf covering an area of 1,12,512 Sq. Km.
- Marine sector fish production is 4.75 MT and exports of marine fish products worth Rs 4906 Cr. (FY 2017-18).
- Development of major ports at Karanja (Dist. Raigad), Anandwadi (Dist. Sindhudurg) and Mirkarwada (Dist. Ratnagiri) to boost fishing activity along the coastline.
- Modernisation of Sasoon dock, Mumbai is on the anvil to provide state of the art facilities.
- First multispecies hatchery in the country (unique and exclusive species - Seabass, Crab, Oyster, Mussel) at Sindhudurg.

**Vision:**
- Achieve self-sufficiency in fish seed & fish meal production.
- Production of fish by 2030: 7.80 lakh MT.
- Enhancement of fish production at an annual growth rate of 6.0 per cent and increasing the per capita consumption of fish to 10 to 11 kg per annum.
Agri - Marketing Reforms
Agri-Marketing Reforms

Direct Marketing License
- For purchase of Agri produce directly from farmers
- Bank Guarantee - Five Lakh
- FPOs are exempted from Bank Guarantee
- 1064 Licenses issued
- Total turnover: Rs. 2800 crores

Single Market License for the entire State of Maharashtra

Private Markets
- Alternate Markets other than APMCs, operated by private entity
- 57 Private Markets in State
- Total turnover: Rs. 5008 crores

Contract Farming

Farmer Consumer Markets
- Farmers sell their farm produce directly to consumer in Municipal Corporation Jurisdictions
- Sant Shiromani Shri Savta Mali Athaavdi Bazar – 120 markets
- MSAMB appointed as nodal agency
- Turnover: Rs. 4 - 5 crores per week

E-Auctions

Direct Market License
- Single license across all APMCs
- Bank guarantees - 5 Lakh from 15 Lakh for entire State.
- 38 Licenses issued
- Total turnover: Rs. 6226 crores

Private Markets
- Alternate channel for farmers for selling
- Transparency
- 60 APMCs under e-NAM
- 25 APMCs enabled with E-Trading platform under MACP Project

Landmark Amendments
- Deregulation of fruits & vegetables outside APMCs
- Farmers exempted from paying Adat
- Voting rights to Farmers in APMC
- Provision of Electronic Markets
Farmers Collectives: Community Based Organizations

- CBOs include Farmer Producer Organizations (FPOs), Cluster Level Federations (CLFs), Community Managed Resource Center (CMRC) and Primary Agricultural Credit Societies (PACS).
- Small and marginal farmers gain economies of scale and bargaining power through groups CBOs.
- Over 500 CBOs have primary processing and storage infrastructure at village level to facilitate aggregation and sale of produce of member farmers.

**Farmer Producer Organisation**
- Over 1700 FPOs present in State.
- 400 FPOs have Common Facilities Centers (FCSCs).
- Farmer Member base over 4.5 lakh farmers.

**SHG Federations**
- It is a women based Community Level Federation.
- Over 600 SHG Federations are formed in State.
- 305 CLFs developed by MSRLM and 361 CMRCs by MAVIM.

**Primary Agricultural Credit Societies**
- Over 21000 PACs present in State.
- 1800 PACS are strengthened under Atal Mahapanan Abhiyan.
Technological Interventions
MahaAgritech Project

- A joint venture of Govt of Maharashtra, Maharashtra Remote Sensing Application Centre (MRSAC), Nagpur and National Remote Sensing Centre (NRSC), Hyderabad.
- New initiative under digital agriculture to use contemporary technologies for decision support and management in Agriculture.
- Use of satellite data, weather data, field data supported with drone surveys, automated data analytics for decision support system.

Project Activities -

- Digitisation of soil health data and advisory service.
- Satellite based horticulture inventory.
- Yield verification and smart sampling for crop insurance.
- Digitalisation of crop statistical data for Area-Yield-Production trends.
- Geo tagging of assets.
- Generating farmers database.

Decision support tools of the project

- Satellite technology based Crop inventory.
- Crop surveillance based on weather data, satellite indices.
- Crop yield monitoring.
- Drought Monitoring and declaration.
- Crop planning suitable to weather, soil moisture and soil fertility.
- Generation and dissemination of Agro-Advisory.
CROPSAP - Crop Protection

- Multi-stakeholder project of the State in collaboration with Research Institutes.
- First online, real time ‘Crop Pest Management Advisory Project’ in country.
- Covers Rice, Soybean, Cotton, Red Gram, Maize, Sorghum, Sugarcane and Gram.
- Early warning of pest helps to adopt appropriate management strategies.
- Scientific advisory SMS to farmers.
- Mass awareness creation and knowledge updation through trainings and field visits.
- No major pest outbreak since inception of project.
- Saved huge crop losses due to pest infestation.
- Pink Boll Worm (PBW) on Cotton managed effectively.
- Focused on PBW and Fall Army Worm on Maize.
- Project replicated in other states and in other countries also.

- **Winner - ‘National e-Governance Gold Award’ and ‘Prime Minister’s Award for Excellence in Public Administration 2012-13.’**
Weather Data and Advisory - Mahavedh

- The Government of Maharashtra has launched Mahavedh, a Public Private Partnership project in collaboration with M/s. Skymet Weather Services Pvt. Ltd. in 2017.
- Network of 2061 Automatic Weather Stations (AWS) called 'Skysense' is established. Each AWS covers 12 sq.km in lowland and 5 sq.km in the highland region.
- An AWS continuously and automatically captures weather parameters such as rainfall, air temperature, relative humidity, wind speed and wind direction.
- AWS data can be viewed using a free smart phone app.

**Mahavedh Services**

- Providing farmers real time weather data through Skymitra app.
- Delivering agriculture advisories integrating data and knowledge resources using Artificial Intelligence and Machine Learning.
- Mahavedh data is used for crop insurance schemes, research, weather forecasting, implementation of various development schemes, disaster management and for any other purpose involving larger public interest.
- User agencies: Maharashtra Remote Sensing Application Center, Groundwater Survey and Development Agency, Disaster Management Department, Project on Climate Resilient Agriculture (PoCRA).
Key Projects in Agribusiness
Maharashtra Agricultural Competitiveness Project (MACP)

Project objectives

“Increase the farmer’s productivity, profitability and market access of the farming community in Maharashtra.”

Project Strategy

- Promote the development of alternative marketing options to farmers.
- Support the top tier of regulated wholesale markets in the state, to reform, invest and provide better services.
- Gradually undertake further incremental regulatory reforms.

Project Cost

- Rs.708.20 crore

Project Components

A. Intensification and Diversification of Market led Production.
B. Improving Farmers Access to Markets.
C. Project Management, Learning & Adjusting.

Total Beneficiaries Impacted: 45.62 Lakhs

Direct Beneficiaries: 18.01 Lakhs
- Farmers: 17.29 Lakhs
- Traders: 0.62 Lakhs
- Others: 0.10 Lakhs

Indirect Beneficiaries: 27.61 Lakhs
Maharashtra Agricultural Competitiveness Project (MACP)

Impacts

**Productivity**
- Average 23% net increase in crop productivity across (Cereals, Pulses, Fruits & vegetables)
- Goat productivity increased from 5.5% to 15% (HVG model)

**Profitability**
- Increase net farm incomes from 10% (onion) to 312% (maize) with an average of 165% for all target crops.
- Increased goat profitability on average by 500% through diversification from crops (cotton, soybean and sugarcane) to fodder production, aggregated sales, and selling by weighing.

**Market Access**
- Alternative marketing channels increased the average share of farmers in retail price by 4.7%.
- Net price realization in private markets for major crops was approximately 5.0% higher than traditional markets.

Alternative market reforms including private markets, direct marketing arrangements, and contract farming resulted in 11% share in state’s recorded turnover (FY2017-18).

“Against a total investments of USD 100 million, the project leveraged a total private investment of USD 232 million.”

**Major Achievements**

**Agribusiness Promotion Facility (ABPF)**
- Mobilized investments of Rs. 397 crore from 1,836 agro-enterprises startups generating 6,577 jobs including 28% females.

**Farmer Producer Companies (FPC)**
- Over 1.8 Lakh farmers mobilized into 406 FPCs.
- 406 Farmer’s Common Service Centers set up by FPCs.
- 22% higher price realisation and 8% inputs cost reduction.

**Market Linkages**
- Farmers’ share in storage capacity in MSWC warehouses doubled (from 17% to 37%).
- 472 Rural Haats created.
- E-marketing platform Piloted in warehouses.
Nanaji Deshmukh Krushi Sanjeevani Prakalp (PoCRA)

The Government of Maharashtra is implementing Nanaji Deshmukh Krushi Sanjeevani Prakalp i.e. Maharashtra Project on Climate Resilient Agriculture (PoCRA) with assistance from the World Bank.

**Project Objective**

To enhance climate-resilience and profitability of smallholder farming systems in selected districts of Maharashtra.

**Project Area**

![Project Scope Map]

**Project Components**

Components are designed to contribute towards Climate co-benefits by promoting agro-technologies that (i) enhance the adaptation capacity of the various farming systems and (ii) mitigate Green House Gases emissions through carbon sequestration.

- Promoting climate resilient agricultural systems
- Climate-smart post-harvest management and value chain promotion
- Institutional development, knowledge and policies for climate resilient agriculture

**Highlights of Project Implementation**

- Focussed Extension for Climate Resilient Agriculture.
- Village Selection based on Climate Vulnerability Index.
- Community involvement in planning, execution, and monitoring.
- Village Climate Resilient Agriculture Management Committee (VCRMC) formed, empowered and entrusted.
- Soil & Water conservation interventions based on Water Balance Assessment.
- Demand-driven & Market-led Extension.
- Existing Farmer Groups (FPCs/FIGs/SHGs) being strengthened.
- Focus on Social Inclusion (Marginal & small holders, Women, ST, and SC farmers).
- Convergence with other programs/schemes.
- Identification of climate resilient technologies with the help of ICAR institutes and SAUs.
State of Maharashtra's Agribusiness and Rural Transformation (SMART)

Project Development Objectives:

“To support development of inclusive and competitive agriculture value chains, focusing on small holder farmers and agri-entrepreneurs in Maharashtra.”

Strategy

- Build state capacity for evidence-based agribusiness reforms.
- Expand market access through Productive Partnerships and Market Access Plans.
- Strengthen risk mitigation measures through market intelligence and warehouse receipt finance.

Project Cost - Rs. 2220 crore

- World Bank (IBRD) Loan Rs. 1554 crore.
- Government of Maharashtra: Rs. 596 crore.
- Private Sector (VSTF): Rs.70 crore.

Project Beneficiaries - Producers, Community Based Organizations (FPOs, PACs, SHG Federations), Agri Enterprises and Value Chain Participants.

Implementing Agencies - Partnership between Agriculture, Marketing & Cooperation, Animal Husbandry, Rural Development Department and the Village Social Transformation Foundation (VSTF).

Unique Implementation Arrangement: Private sector participation through VSTF bringing in technical and managerial expertise in agribusiness and CSR funds.

Signed MoUs - Productive Partnership

49 MoUs were signed under SMART project

- Select MoU Partners:-

![List of companies and logos]
## Project Components

<table>
<thead>
<tr>
<th>Enhancing Institutional Capacity for Agribusiness Reforms</th>
<th>Supporting Enterprise Growth and Expanding Market Access</th>
<th>Building Risk Mitigation Mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Research and technical assistance on agriculture reform program</td>
<td>● Market Access Plans</td>
<td>● Enhanced market information and intelligence services</td>
</tr>
<tr>
<td>● Establishing Agribusiness Stewardship Councils</td>
<td>● Productive Partnerships</td>
<td>● Strengthening the warehouse receipts systems.</td>
</tr>
<tr>
<td></td>
<td>● Pilot program on Urban Food Systems</td>
<td>● Improving the risk management capabilities of the State</td>
</tr>
<tr>
<td></td>
<td>● Access to finance</td>
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## Light House Projects initiated under Productive Partnership

100,000
(Expected farmers to be benefited from such partnerships)

**Project Benefits - Farmers:**
- Improvement in product yield
- Market led production
- Increase in Profitability

**Project Benefits - CBOs:**
- Market linkage
- Price risk mitigation
- Employment generation

**Project Benefits - Buyers:**
- Procurement Linkages
- Homogenous product quality
- Sustainability of supply