HAND BOOK
SCHEMES, PROGRAMMES AND MISSIONS
PROMOTING AGRICULTURAL DEVELOPMENT
AND FARMERS WELFARE

Government of India
Ministry of Agriculture and Farmers Welfare
Department of Agriculture, Cooperation and Farmers Welfare
HAND BOOK
SCHEMES, PROGRAMMES AND MISSIONS
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AND FARMERS WELFARE

Govt. of India
Ministry of Agriculture & Farmers Welfare
Message

I am happy, that the Ministry of Agriculture & Farmers’ Welfare is organizing a national conference under the title of “Agriculture 2022 – Doubling Farmers’ Income” on the 19th and 20th of February 2018 at New Delhi. This conference is in furtherance of the vision of the Hon’ble PM shared with the nation for the first time in February 2016. The Ministry is committed to translate this vision of doubling farmers’ income into reality by 2022. The various schemes, programmes and missions of all the three departments under the Ministry of Agriculture have been recast and reoriented to meeting this laudable objective.

The Government constituted Inter-Ministerial Committee on Doubling Farmers’ Income has been holding wide ranging consultations with farmers and farmers’ bodies, as also other stakeholders representing trade and industry, scientists, policy makers, economists, etc. and is finalizing its strategy. Parallely, and pending submissions of its final report shortly, it has been making recommendations, many of which have been adopted and have also found place in the Budget approvals.

Our Government has always believed in broad based participation of all concerned stakeholders at large, and farmers in particular, when it comes to development of agriculture and welfare of farmers. On the advice of the Hon’ble Prime Minister, our Ministry is organizing two days’ conference by inviting select participants representing a cross-section of experience and expertise, so as to elicit their inputs on shaping the agriculture policy of the country and working towards a time-bound programme of doubling the farmers’ income.

I am happy, that the Extension Division of the Department of Agriculture, Cooperation & FW has brought out a compilation of all the schemes, programmes and missions of all the departments and ministries that contribute to the development of agriculture and welfare of farmers. This will help the participants in deliberating upon the well chosen seven themes in a more comprehensive manner.

(Radha Mohan Singh)
In pursuance of the vision of the Hon'ble Prime Minister, the Department of Agriculture, Cooperation & Farmers' Welfare is organizing a two days’ National Conference on the 19th – 20th February, 2018 at New Delhi, entitled “Agriculture 2022 – Doubling Farmers’ Income”, Seven broad themes have been chosen to examine the large and complex agriculture system from end-to-end. The Conference will be attended by select participants from across the country with varied experience and expertise. The purpose is to elicit suggestions and advice for comprehensive policy formulation, which will help in drawing up a strategy for doubling of farmers’ income.

In order to make the deliberations more productive, various theme participants have been requested to enter into month long pre-conference deliberations using the virtual media. Further, they have also been given a background note on each of the theme. The compilation of various schemes, programmes and missions of all the Departments and the Ministry of Agriculture & Farmers’ Welfare relating to agriculture is another important initiative of the Department in facilitating purposeful and comprehensive discussions. I am also happy that Union Government’s Budget, 2018 highlights relating to agriculture have also been included.

I congratulate the Division of Extension of the Department of Agriculture, Cooperation & Farmers’ Welfare to have coordinated and brought out this useful handbook.

(S.K. Pattanayak)
The Department of Agriculture, Cooperation & Farmers’ Welfare has taken the bottom-line responsibility on behalf of the Ministry of Agriculture & Farmers’ Welfare to organize the two days’ National Conference. Aptly titled as “Agriculture 2022 – Doubling Farmers’ Income”, both the idea of national conference and the themes find inspiration from the vision of the Hon'ble Prime Minister to double farmers’ income by 2022.

The approach to organizing this Conference has been one of wider participation of people concerned and committed to agriculture from across the country and providing them appropriate platforms to enter into meaningful dialogue over at least a month preceding the days of gathering at Delhi. Towards this, the theme leaders and facilitators have formed virtual groups and begun deliberations. This has been further supported by the background notes on each of the themes shared with them.

In order to elicit responses of the participants on the already on going initiatives of the Government through different Departments and Ministries relating to agriculture and farmers’ welfare, the Extension Division of the DAC&FW has brought out a compilation of all schemes, programmes and missions. These have been well compiled in a logical manner with minimal inputs without compromising the quality of intended communication. Section I of the compilation also includes the highlights of agriculture related 2018 Budget provisions of the Union Government. Such a compilation would be of great relevance as the participants deliberate upon the issues with a view to making recommendations to the Government.

(Ashok Dalwai)
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- 1.2 Soil Health Management (SHM)
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Highlights of the Central Government’s Budget 2018-19 on Agriculture and allied Sectors
1. Indian economy has performed very well since the present Government took over in May, 2014. India achieved an average growth of 7.5% during this period. Indian economy is now 2.5 trillion dollar economy – seventh largest in the world.

2. Indian society, polity and economy had shown remarkable resilience in adjusting with the structural reforms. GDP growth at 6.3% in the second quarter signaled turnaround of the economy. The Government have taken up programmes to direct the benefits of structural changes and good growth to reach farmers, poor and other vulnerable sections of the society and to uplift the under-developed region.

3. For decades, country’s agriculture policy and programme had remained production centric. Government have sought to effect a paradigm shift. Honourable Prime Minister gave a clarion call to double farmers’ income by 2022 when India celebrates its 75th year of independence. The emphasis is on generating higher incomes for farmers. Agriculture as an enterprise and want to help farmers produce more from the same land parcel at lesser cost and simultaneously realize higher prices for their produce. The Government emphasis is also on generating productive and gainful on-farm and non-farm employment for the farmers and landless families.

4. As a result of the hard work of our country’s farmers, agriculture production in our country is at a record level. During the year 2016-17, the country has achieved a record food grain production of around 275 million tonnes and around 300 million tonnes of fruits and vegetables.

5. Government is convinced that the farmers should realize at least 50 per cent more than the cost of their produce, in other words, one and a half times of the cost of their production. Government have been very much sensitive to this resolutions and it has declared Minimum support price (MSP) for the majority of rabi crops at least at one and a half times the cost involved.

Now, Government to implement this resolution as a principle for the rest of crops. Government has decided to keep MSP for the all unannounced crops of kharif at least at one and half times of their production cost. This historic decision will prove an important step towards doubling the income of our farmers.

6. Increasing MSP is not adequate and it is more important that farmers should get full benefit of the announced MSP. For this, it is essential that if price of the agriculture produce market is less than MSP, then in that case Government should purchase either at MSP or work in a manner to provide MSP for the farmers through some other mechanism.

Niti Ayog, in consultation with Central and State Governments, will put in place a fool-proof mechanism so that farmers will get adequate price for their produce.
7. For better price realization, farmers need to make decisions based on prices likely to be available after its harvest. Government will create an institutional mechanism, with participation of all concerned Ministries, to develop appropriate policies and practices for price and demand forecast, use of futures and options market, expansion of warehouse depository system and to take decisions about specific exports and imports related measures.

8. The strengthening of e-NAM and to expand coverage of e-NAM to 585 APMCs. 470 APMCs have been connected to e-NAM network and rest will be connected by March, 2018.

More than 86% of our farmers are small and marginal. They are not always in a position to directly transact at APMCs and other wholesale markets. Government will develop and upgrade existing 22,000 rural haats into Gramin Agricultural Markets (GrAMs). In these GrAMs, physical infrastructure will be strengthened using MGNREGA and other Government Schemes.

These GrAMs, electronically linked to e-NAM and exempted from regulations of APMCs, will provide farmers facility to make direct sale to consumers and bulk purchasers.

An Agri-Market Infrastructure Fund with a corpus of Rs. 2000 crore will be set up for developing and upgrading agricultural marketing infrastructure in the 22000 Grameen Agricultural Markets (GrAMs) and 585 APMCs.

10. Task of connecting all eligible habitations with an all-weather road has been substantially completed, with the target date brought forward to March, 2019 from March 2022. It is now time to strengthen and widen its ambit further to include major link routes which connect habitations to agricultural and rural markets (GrAMs). Prime Minister Gram Sadak Yojana Phase III will include such linkages.

11. As India is primarily an agriculture based country, our districts can specialize in some or other agricultural produce and be known for it. But special attention is lacking in this regard. There is a need to develop cluster based model in a scientific manner for identified agriculture produces in our districts in the same manner as we have developed model for industrial sector.

12. Cultivation of horticulture crops in clusters bring advantages of scales of operations and can spur establishment of entire chain from production to marketing, besides giving recognition to the districts for specific crops. The Ministry of Agriculture & Farmers’ Welfare will reorient its ongoing Schemes and promote cluster based development of agri-commodities and regions in partnership with the Ministries of Food Processing, Commerce and other allied Ministries.

13. The Government has promoted organic farming in a big way. Organic farming by Farmer Producer Organizations (FPOs) and Village Producers’ Organizations (VPOs) in large clusters, preferably of 1000 hectares each, will be encouraged. Women Self Help Groups (SHGs) will also be encouraged to take up organic agriculture in clusters under
National Rural Livelihood Programme.

14. Our ecology supports cultivation of highly specialized medicinal and aromatic plants. India is also home to a large number of small and cottage industries that manufacture perfumes, essential oils and other associated products. Our Government shall support organized cultivation and associated industry for which a sum of Rs.200 crore has been allocated for this purpose.

15. Food Processing sector is growing at an average rate of 8% per annum. Prime Minister Krishi Sampada Yojana is the flagship programme for boosting investment in food processing. Allocation of Ministry of Food Processing is being doubled from Rs.715 crore in RE 2017-18 to Rs.1400 crore in BE 2018-19. Government will promote establishment of specialized agro-processing financial institutions in this sector.

16. Tomato, onion and potato are basic vegetables consumed throughout the year. However, seasonal and regional production of these perishable commodities pose a challenge in connecting farmers and consumers in a manner that satisfies both. The Government proposes to launch an “Operation Greens” on the lines of “Operation Flood”. “Operation Greens” shall promote Farmer Producers Organizations (FPOs), agri-logistics, processing facilities and professional management. The Government allocated a sum of Rs. 500 crore for this purpose.

17. India’s agri-exports potential is as high as US $ 100 billion against current exports of US $ 30 billion. To realize this potential, export of agri-commodities will be liberalized. It was proposed to set up state-of-the-art testing facilities in all the forty two Mega Food Parks.

18. The facility of Kisan Credit Cards to fisheries and animal husbandry farmers to help them meet their working capital needs. Small and marginal farmers will get more benefits.

19. Bamboo is ‘Green Gold’. We removed bamboo grown outside forest areas from the definition of trees. Now, it is proposed to launch a Re-structured National Bamboo Mission with an outlay of Rs. 1290 crore to promote bamboo sector in a holistic manner.

20. Many farmers are installing solar water pumps to irrigate their fields. Generation of solar electricity is harvesting of Sun by the farmers using their lands. Government of India will take necessary measures and encourage State Governments to put in place a mechanism that their surplus solar power is purchased by the distribution companies or licencees at reasonably remunerative rates.

21. The Government set up a Long Term Irrigation Fund (LTIF) in NABARD for meeting funding requirement of irrigation works. Scope of the Fund would be expanded to cover specified command area development projects.

22. Last year, it was announced for setting up of Micro Irrigation Fund (MIF) for facilitating expansion of coverage under micro irrigation and Dairy Processing Infrastructure Development Fund (DPIDF) to help finance investment in dairying
infrastructure. It is now time to expand such focused investment Funds. It was announced for setting up a Fisheries and Aquaculture Infrastructure Development Fund (FAIDF) for fisheries sector and an Animal Husbandry Infrastructure Development Fund (AHIDF) for financing infrastructure requirement of animal husbandry sector. Total Corpus of these two new Funds would be Rs.10,000 crore.

23. The Government has been steadily increasing the volume of institutional credit for agriculture sector from year-to-year from Rs. 8.5 lakh crore in 2014-15 to Rs. 10 lakh crore in 2017-18 and now proposed to raise this to Rs. 11 lakh crore for the year 2018-19.

24. Presently, lessee cultivators are not able to avail crop loans. Consequently, a significant proportion of arable land remains fallow and tenant cultivators are forced to secure credit from usurious money lenders. NITI Aayog, in consultation with State Governments, will evolve a suitable mechanism to enable access of lessee cultivators to credit without compromising the rights of the land owners.

25. The Government will extend a favourable taxation treatment to Farmer Producers Organisations (FPOs) for helping farmers aggregate their needs of inputs, farm services, processing and sale operations.

26. Air pollution in the Delhi-NCR region has been a cause of concern. A special Scheme will be implemented to support the efforts of the governments of Haryana, Punjab, Uttar Pradesh and the NCT of Delhi to address air pollution and to subsidize machinery required for in-situ management of crop residue.

27. It also proposed to substantially increase allocation of National Rural Livelihood Mission to Rs. 5750 crore in 2018-19.

28. Ground water irrigation scheme under Prime Minister Krishi Sinchai Yojna- Har Khet ko Pani will be taken up in 96 deprived irrigation districts where less than 30% of the land holdings gets assured irrigation presently. Rs.2600 crore have been allocated for this purpose.

29. The focus of the Government next year will be on providing maximum livelihood opportunities in the rural areas by spending more on livelihood, agriculture and allied activities and construction of rural infrastructure.

30. In the year 2018-19, for creation of livelihood and infrastructure in rural areas, total amount to be spent by the Ministries will be Rs. 14.34 lakh crore, including extra-budgetary and non-budgetary resources of Rs. 11.98 lakh crore. Apart from employment due to farming activities and self employment, this expenditure will create employment of 321 crore person days, 3.17 lakh kilometers of rural roads, 51 lakh new rural houses, 1.88 crore toilets, and provide 1.75 crore new household electric connections besides boosting agricultural growth.
The Hon’ble Prime Minister has set a target before all of us to double the farmers’ income by 2022. The Hon’ble Prime Minister has said that “I have laid this out as a challenge. But it is not merely a challenge. With good strategy, well-designed programmes, adequate resources and good governance in implementation, this target is achievable”.

**Seven Points Strategy**

To achieve this target he has also advocated a seven point strategy. These are:

1. Special focus on irrigation with sufficient budget, with the aim of “Per Drop More Crop”.
2. Provision of quality seeds and nutrients based on soil health of each field.
3. Large investments in Warehousing and Cold Chains to prevent post-harvest crop losses.
4. Promotion of value addition through food processing.
5. Creation of a National Farm Market, removing distortions and e-platform across 585 Stations.
6. Introduction of a New Crop Insurance Scheme to mitigate risks at affordable cost.
7. Promotion of ancillary activities like poultry, beekeeping and fisheries.
Section-3

Input Management Schemes/Programmes/ Missions

OBJECTIVES

- To reduce the cost of cultivation/production through Soil Health Cards.
- To improve productivity and the efficient use of resource use like seed, water, credit and other inputs.
- To increase milk production by providing technical input services like cattle-feed, and mineral mixture etc.
1. Input Management Schemes/Programmes/Missions

1.1 Soil Health Card Scheme (SHC)

About Scheme

Soil Health Card Scheme has been introduced in year 2014-15 to assist State Governments to issue soil health cards to all farmers in the country. Soil health card will provide information to farmers on nutrient status of their soil along with recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility. Soil status will be assessed regularly every 2 years so that nutrient deficiencies are identified and amendments applied.

- Soil Health Card was launched in February, 2015.
- Soil Health Card scheme has been approved for implementation during the remaining period of 12th Plan to provide 12 crore Soil Health Cards to the farmers in the country.
- Soil health card is being issued every 2 years for all land holdings in the country so as to promote balanced and integrated use of plant nutrients.
- Nation-wide program to conduct farm level soil analysis.

Objectives

- To provide information to farmers on soil nutrient status of their soil and recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility.
- Provide customized crop specific recommendation for nutrient application.

Progress

- By December, 2018, 10.48 crores Soil Health Cards has been distributed.

1.2 Soil Health Management (SHM)

About scheme

Under Soil Health Management (SHM) scheme, Government is promoting Integrated Nutrient Management (INM) i.e. soil test based balanced use of fertilizers in conjunction with bio-fertilizers and locally available organic manures like Farm Yard Manure, Compost, Vermi Compost and Green Manure to maintain soil health and its productivity.

Under the SHM scheme there is provision to set up new static Soil Testing Laboratories (STLs) and new Mobile Soil Testing Laboratories besides strengthening of existing laboratories to enable them to undertake micro-nutrient testing.

Soil Health Management under National Mission for Sustainable Agriculture consists of following components:

- Setting up of new Soil Testing laboratories (STL)(static/mobile/mini labs) and strengthening of existing Soil Testing laboratories.
- Training of STL staff/extension officers/farmers/field functionaries and field demonstrations on balanced use of fertilisers etc.
- Promotion and distribution of micronutrients.
- Setting up of new Fertilizer Quality Control Laboratories (FQCL) and strengthening of existing state Fertilizer Quality Control Laboratories.

Objectives

- To promote soil test based balance use of fertilizer in conjunction with organic sources of plant nutrients and bio fertilizer.
- To make agriculture more productive, sustainable and climate resilient.
• To adopt comprehensive soil health management practices.

Progress

The year wise numbers of STLs sanctioned under the scheme are given in table below:-

Progress of Soil Health Card Scheme

1. Soil Testing Labs Established

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<tr>
<td>1.</td>
<td>New Static STLs</td>
<td>10</td>
<td>93</td>
<td>308</td>
<td>411</td>
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<td>2.</td>
<td>New Mobile STLs</td>
<td>69</td>
<td>8</td>
<td>3</td>
<td>80</td>
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<td>3.</td>
<td>Setting up of Mini soil testing labs</td>
<td>0</td>
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<td>8614</td>
<td>8614</td>
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<tr>
<td>Total</td>
<td></td>
<td>79</td>
<td>101</td>
<td>8925</td>
<td>9105</td>
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2. Cycle-I. As on 24.01 2018, against the target of 253 lakh soil sample, 100% soil samples have been collected and tested. Against the target of 1119 lakh soil health cards, 1048.12 lakh (i.e. 94%) cards have been distributed to farmers.

2. Cycle-II. The 2nd Cycle of the scheme started from 1st May 2017. As on 24.01 2018, against the target of 127.31 lakh soil sample collection for the year 2017-18, 103.49 lakh samples have been collected and 63.54 lakh samples tested. Against the target of 626.96 lakh soil health cards, 115.69 lakh cards have been distributed to farmers.

Benefits of SHC and SHM Scheme

• Soil health card promote balance and judicious use of plant nutrients.

• Soil test based applications of major, secondary and micronutrients.

• Adoption of Integrated Nutrient Management (INM) leads to reduction in consumption of chemical fertilizer.

• Application of fertilizer based on soil health card recommendations decreases the use of chemical fertilizer by 8-10%.

• Application of fertilizers on soil health card recommendation leads to increase the yield of crops by 5-6% and increase the farmers income.

Fertilizers

1.3 Opening of Model Fertilizer Retail Shop

• In the Budget 2016-17, announcement was made for opening up of 2000 Model Fertilizers Retail Shop over a period of three years by Department and Fertilizers.

• Guidelines issued to all the Fertilizers Companies for opening up of Model Fertilizer Retail Shops, vide O.M. dated 13.7.2016.

• It will provide mandatory services like selling of quality fertilizers at genuine rates, soil testing, seed testing, promotion of balanced use of nutrients etc.

• It will also provide some optional services like hiring of equipment such as tractors, laser levellers, rotator, crop harvester and thrashers, hiring of sprayers, sale of small implements like spades and sickles etc.

• Target of opening of 2000 Model Fertilizer Retail Shops has been achieved.

1.4 Policy on Promotion of City Compost

The policy on promotion of City Compost has been notified by the Department of Fertilizers on 10.02.2016 which fully complement the “Swachh Bharat Mission” of the Government of India.

Under the said policy

• Market Development Assistance (MDA) of Rs.1500 per tonne of City Compost for
scaling up production and consumption.
- Marketing and promotion of city compost to be done through Fertilizer companies.
- The companies will also adopt villages for promoting the use of compost.
- Govt. Departments and PSUs will also use City Compost to the extent possible for their horticulture and related use.
- DAC&FW will carry out IEC campaigns to educate farmers on the benefits of city compost and make popular amongst them.
- Ministry of Urban Development will take steps to increase setting up of compost plants across all States.

**Progress**

During the year 2017-18 (upto November, 2017), 90,733 MT of City Compost has been co-marketed by fertilizer marketing companies.

**1.5. Direct Benefit Transfer Scheme in Fertilizers**

The Government has decided to introduce Direct Benefit Transfer (DBT) system for fertilizer subsidy payments. Under the proposed fertilizer DBT system, 100% subsidy on various fertilizer grades shall be released to the fertilizer companies on the basis of actual sales made by the retailers to the beneficiaries. Sale of all subsidized fertilizers to farmers/buyers will be made through Point of Sale (PoS) devices installed at each retailer shop and the beneficiaries will be identified through Aadhaar Card, KCC, Voter Identity Card etc.

**Present status of DBT pilot and Pan-India Rollout**

- The Pilot project has been implemented in 17 districts out of the projected 19 districts.
- A Project Monitoring Cell is in place in the Department to oversee implementation of DBT exclusively. 24 State Coordinators have been appointed across all States to monitor the on-going DBT activities.
- The Department has chalked out a detailed plan of action for Pan-India rollout of the DBT in Fertilizers scheme, based on the preparedness of the State Governments and deployment of PoS devices by fertilizer companies.
- Different states/U.T.s have been put on Go-Live mode w.e.f. 01.09.2017.
- As on date 25 States/UTs have been brought under DBT Framework.

**1.6 Neem –Coated Urea**

This was introduced for improvement in soil health, reduction in pest and disease attack thereby reduction in usage of plant protection chemicals, overall increase in the crop yield and reduces diversion of urea towards non-agricultural purpose.

**Progress**

The production of neem coated urea during 2016-17 was 242.01 LMT which is significantly higher that the production of urea in previous years.

Use of Neem Coated Urea has resulted in reduction of pest and diseases infestation by 4-5%.

**Seed**

**1.7. Sub-Mission on Seed and Planting Material (SMSP)**

Seed Division of DAC&FW is implementing a Centrally Sponsored Scheme viz. Sub-Mission on Seed and Planting Material (SMSP) under National Mission on Agricultural Extension and Technology (NMAET) since. 2014.
Objectives

- Increasing production of certified/quality seed
- Increasing Seed Replacement Rate (SRR) more particularly to achieve higher Seed Replacement Rate (SRR) in crops like paddy, gram, groundnut, cotton etc. as recommended by Consultative Group of the Ministry of Agriculture
- Upgrading the quality of farm saved seeds with specific objective to cover 10% villages and produce 100 lakh quintals of seed each year through farmers participatory seed production.
- Strengthening the seed multiplication chain through assistance to public and private sector.
- Promoting new technologies and methodologies in seed production, processing, testing etc.
- Strengthening and modernizing infrastructure for seed production, storage, certification and quality control particularly to ensure compliance with the provisions of the Seeds Bill 2004/ISTA standards, OECD certification.
- Facilitating movement of seed from India in international trade and increase its share to 10% by 2020 as envisaged in the new policy on seed development.
- Ensuring availability of seed in contingent situations.
- Facilitating dissemination of seed related information through information, education and communication.
- To provide an effective system for protection of plant varieties, the rights of farmers as well as plant breeders and to encourage the development of new varieties of plants, through PPVFRA.

Progress

- In the last three years 96778 seed villages programme were organised and 316.31 quintals seed were produced involving 66.56 lakh farmers under seed village programme.
- During the year 2017-18 total seed requirement was 371.38 lakh quintals as against availability of 419.41 lakh quintal.

1.8 Protection of Plant Varieties and Farmers’ Rights Authority, India

In order to provide for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants it has been considered necessary to recognize and protect the rights of the farmers in respect of their contribution made at any time in conserving, improving and making available plant genetic resources for the development of the new plant varieties. Moreover to accelerate agricultural development, it is necessary to protect plants breeder’s rights to stimulate investment for research and development for the development of new plant varieties.

Such protection is likely to facilitate the growth of the seed industry which will ensure the availability of high quality seeds and planting material to the farmers. India having ratified the Agreement on Trade Related Aspects of the Intellectual Property Rights has to make provision for giving effect to Agreement. To give effect to the aforesaid objective the Protection of Plant Varieties and Farmer’s Rights Act, 2001 has been enacted in India.

For the purposes of this Act, Protection of Plant Varieties and Farmers’ Rights Authority has been establishment and is located at NASC Complex, Pusa.
Salient Achievements

- Protection of Plant Varieties and Farmers’ Right Act (PPV&FR), 2001, provides for the establishment on an effective system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants.
- The Authority has received a total of 12763 applications for registration under PPVFR act, 2001 out of which 7581 applications have been received from farmers.
- The Authority has issued registration certificate to 2442 varieties out of which 892 registration certificates have been issued to farmers’ varieties.
- About 04 lakh farmers have been trained through various awareness camps organized by PPV&FR Authority about Farmers’ Rights as per PPV&FR Act, 2001
- 114 crop species have been notified for registration and 25 crop species are under process of notification.
- The Authority has conferred Plant Genome Saviour Award to 15 Farming Communities and 39 Farmers.
- PPV&FR Authority has established branch offices at Ranchi and Guwahati.
- Three (03) New Branch Offices of PPV&FR Authority have been approved recently for establishment at Palampur (H.P.) which will cover the States of Northern Hill Zone, another at Pune (Maharashtra) which will cover the Central and Western Zone States and third one at Shivamogga (Karnataka) for Southern States.
- The amount of cash reward for “Plant Genome Saviour” Farmer Award, has been enhanced from Rs. 1.00 lakh to Rs. 1.50 lakh each and the amount of Farmers’ Recognition has been enhanced from Nil to Rs. 1.00 lakh each during 2015.
- The annual fee for the farmers after registration of varieties has been reduced from Rs. 2000 per year to Rs. 10 only during 2015.
- Anomalies in the PPV&FR Rules and Regulation have been rectified during 2015 make the procedures of registration easier.

Water Management-Micro-irrigation

1.9 Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

About scheme

The Pradhan Mantri Krishi Sinchayee Yojana has been made operational from 1st July, 2015 with the motto of ‘Har Khet Ko Pani’ for providing end-to end solutions in irrigation supply chain, viz. water sources, distribution network and farm level applications.

Department of Agriculture Cooperation & Farmers Welfare is implementing ‘Per Drop More Crop’ component of PMKSY. The Per Drop More Crop mainly focuses on enhancing water use efficiency at farm level through precision/Micro Irrigation (Drip and Sprinkler Irrigation). Besides promoting precision irrigation and better on-farm water management practices to optimize the use of available water resources, this component also supports gap filling interventions like micro level water storage or water conservation/management activities to complement and supplement the works under taken through various national/state level programmes for drought proofing measures.

Objectives:

- Developing a long term solution for mitigating the effect of drought and increasing area under irrigation with motto of Har Khet Ko Pani.
- Achieve convergence of investments in
We are committed to doubling of farmers' income by 2022.

- Expand cultivable area under assured irrigation
- Improve on-farm water use efficiency to reduce wastage of water
- Enhance the adoption of precision irrigation and other water saving technologies (More crop per drop),
- Promote sustainable water conservation practices etc.

**Other Initiatives:**

- District Irrigation Plans (DIPs) are the cornerstone for integrated planning and implementation of PMKSY. District irrigation plans (DIP) for all 675 districts have been prepared which covers almost all the agricultural dominated districts of the country.

- An Android based Bhuvan integration app viz. BHUVAN PDMC has been developed in collaboration with NRSC, Hyderabad for geo-tagging of interventions/assets created under PMKSY.

### 1.10. Watershed Development Component of Pradhan Mantri Krishi Sinchai Yojana (WDC-PMKSY) (Erstwhile IWMP)

Pradhan Mantri Krishi Sinchai Yojana (PMKSY) has been launched in 2015-16 by amalgamating ongoing Schemes of three Ministries viz. Accelerated Irrigation Benefit Programmed (AMP) and PMKSY (VTR) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR, RD&GR); IWMP of the Ministry of Rural Development, DoLR and the Minor Irrigation component of On Farm Water Management.
We are committed to doubling of farmers' income by 2022.

(OFWM) of National Mission of Sustainable Agriculture (NMSA) of the Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW). Total allocation for PMKSY during 2016-17 is Rs. 5767 crore (BE), out of which Rs 1550 crore (BE) has been allocated for Watershed Development Component including Rs.55 crime for Neeranchal.

The IWMP, one of the flagship programmes of the Government of India had been under implementation since 2009-10 in all the States except Goa. From 2015-16, the IWMP is amalgamated as Watershed Development Component of Pradhan Mantri Krishi Sinchayee Yojana (WDC-PMKSY). The primary objectives of Watershed Development Programme are harnessing, conserving and developing degraded natural sources such as soil, vegetative cover and ground water table; prevention of soil run-off; rain water harvesting and recharging of ground water table; increasing the productivity of crops; introduction of multi-cropping and diverse agro-based activities; promoting sustainable livelihoods and increasing the household incomes; etc.

Watershed Development principally aims for development of rainfed portions of net cultivated area and culturable wastelands. The major activities undertaken under the programme inter it include preparation of Detailed Project Reports (DPRs), community mobilisation, institution and capacity building, entry point activities, ridge area treatment, drainage line treatment, soil and moisture conservation, rain water harvesting, nursery raising, afforestation, horticulture, pasture development, livelihood activities for the asset-less persons and production system & micro enterprises for small and marginal farmers.

**Agricultural Credit**

**1.11 Kisan Credit Card**

**About scheme**

In order to ensure that all eligible farmers are provided with hassle free and timely credit for their agricultural operation, Kisan Credit Card (KCC) scheme was introduced in 1998-99. Marginal farmers, share croppers, oral lessee and tenant farmers are eligible to be covered under the Scheme.

**Objectives**

To meet the short term credit requirements for cultivation of crops, post harvest expenses, produce marketing loan, consumption requirements of farmer household, working capital for maintenance of farm assets and activities allied to agriculture like dairy animals, inland fishery etc. investment credit requirement for agriculture and allied activities like pump sets, sprayers, dairy animals etc.

**Eligibility**

- Farmers - individual/joint borrowers who are owner cultivators;
- Tenant farmers, oral lessees & share croppers;
- Self Help Groups (SHGs) or Joint Liability Groups (JLGs) of farmers including tenant farmers, share croppers etc.

**Progress**

A total number of 4.32 crore KCCs had been converted to RKCCs (As on 11.10. 2017)

**1.12. Interest Subvention Scheme**

**About scheme**

The Government has been implementing Interest Subvention Scheme since 2006-07.
Under the Scheme, interest subvention of 2% per annum is provided to Public Sector Banks, Private Sector Scheduled Commercial Banks, Cooperative Banks and Regional Rural Banks on their own funds used for short term crop loans upto Rs.3.00 lakh per farmer provided the lending institutions make available short term credit at the ground level at 7% per annum to farmers. Farmers are provided with 3% additional interest subvention for the short term crop loan of upto Rs.3.00 lakh for a maximum period of one year for prompt repayment on or before the due date. Thus, farmers, who promptly repay their crop loans as per the repayment schedule fixed by the banks, are extended loans at an effective interest rate of 4% per annum. Government has extended the scheme to crop loans borrowed from private sector scheduled commercial banks in respect of loans given within the service area of the branch concerned.

Further, in order to discourage distress sale by farmers and to encourage them to store their produce in warehouses against warehouse receipts, the benefit of interest subvention scheme has been extended to small and marginal farmers having Kisan Credit Card for a further period upto six months post harvest on the same rate as available to crop loan against negotiable warehouse receipt for keeping their produce in warehouses accredited by Warehousing Development Regulatory Authority (WDRA).

**Objectives:**

To provide relief to farmers affected by natural calamities, the interest subvention of two percent in crop loans continues to be available to banks for the first year on the restructured amount. Such restructured loans may attract normal rate of interest from the second year onwards as per the policy laid down by the RBI.

**Progress:**

During the financial year 2015-16, the Government allocated a sum of Rs.13,000 crore to Department of Financial Services for settling the claims under Interest Subvention Scheme and the entire sum was released to RBI/NABARD, the implementing agencies.

**1.13 Joint Liability Group (JLG)**

**About scheme**

The Scheme for financing of Joint Liability Groups of Tenant Farmers was started by NABARD in 2005-06. The scheme was extended to non-farm sector from 2009 onwards. Thus, JLGs consists of those of farmers and also of non-farmers. The exclusive scheme for *Bhoomi Heen Kisan* was launched by Government of India during the year 2014-15 with a target for financing 5 lakh Joint Farming Groups of “Bhoomi Heen Kisan” through NABARD.

Joint Liability Group is an informal group comprising 4 to 10 individuals coming together for the purpose of availing bank loan on individual basis or through group mechanism against mutual guarantee.

**Objectives**

- The JLG mode of financing serves as collateral substitute for loans to be provided to the target group i.e. small, marginal, tenant farmers, oral lessees, share croppers, etc.
- It builds mutual trust and confidence between the bank and the target group and minimizes the risks in the loan portfolio for the banks through group dynamics, cluster approach, peer education and credit discipline.
- To provide food security to vulnerable section by enhanced agriculture production,
productivity and livelihood promotion.

- JLGs can also easily serve as a conduit for technology transfer, facilitating common access to market information, training and technology dissemination in activities like soil testing, training and assessing input requirements, etc.

**Progress**

Since inception of the scheme till 2017 (December, 2017), 25.42 lakh Joint Liability Groups (JLGs) have been formed.

**Agricultural Credit**

Agricultural credit flow has increased consistently over the years and it reached Rs.1065756 crore against the target of Rs.900,000 crore during 2016-17.

**Farm Mechanization**

1.14. **Sub-Mission on Agricultural Mechanization (SMAM)**

**About scheme**

Recognizing the need to mechanize the marginal and small farmers and for inclusive growth of farm mechanization sector in the country a Sub -Mission on Agricultural Mechanization (SMAM) was launched in the year 2014-15.

The financial assistance as cost subsidy to the tune of 25-50% is being provided for the individual ownership of the farm machinery which is also applicable for farm machinery component under RKVY, NFSM, NHM & NMOOP schemes for different categories of Machinery & Equipment. The financial assistance @40% is provided for establishment of farm machinery banks to provide the custom hiring services for the benefits of small and marginal farmers. To promote the mechanization in selected village with low level of farm mechanization, financial assistance @80% of the project cost for farm machinery banks is given to the group of minimum 8 farmers. Hiring assistance for various farm operations carried out through the farm machinery banks set up under financial assistance is also provided @50% of the cost of operation/ ha limited to Rs. 2000 per ha. to farmers.

**Objectives**

- Increasing the reach of farm mechanization to small and marginal farmers and to the regions where availability of farm power is low.
- Promoting ‘Custom Hiring Centres’ to offset the adverse economies of scale arising due to small land holding and high cost of individual ownership.
- Creating hubs for hi-tech & high value farm equipments.
- Creating awareness among stakeholders through demonstration and capacity building activities.
- Ensuring performance testing and certification at designated testing centers located all over the country.

**Mission Strategy**

- To achieve the above objectives, the Mission to adopt the following strategies:
  (i) Conduct performance testing for various farm machineries and equipments at the four Farm Machinery Training and Testing Institutes (FMTTIs), designated State Agricultural Universities (SAUs) and ICAR institutions.
- Promote farm mechanization among stakeholders by way of on-field and off-field training and demonstrations.
- Provide financial assistance to farmers
for procurement of farm machinery and implements.

- Establish custom hiring centres location and crop specific farm machinery and implements.
- Provide financial assistance to small and marginal farmers for hiring machinery and implements in low mechanized regions.

**Mission Components**

- Promotion and Strengthening of Agricultural Mechanization through training, to ensure performance testing of agricultural machinery and equipment, capacity building of farmers and end users and promoting farm mechanization through demonstrations.
- Demonstration, Training and Distribution of Post- Harvest Technology and Management (PHTM) for popularizing technology for primary processing, value addition, low cost scientific storage/transport and the crop by-product management through demonstrations, capacity building of farmers and end users. Provides financial assistance for establishing PHT units.
- Financial Assistance for Procurement of Agricultural Machinery and Equipment to Promotes ownership of various agricultural machinery & equipments as per norms of assistance.
- Establish Farm Machinery Banks for Custom Hiring to provides suitable financial assistance to establish Farm Machinery Banks for Custom Hiring for appropriate locations and crops.
- Establish Hi-Tech, High Productive Equipment Hub for Custom Hiring: to Provides financial assistance to set up hi-tech machinery hubs for high value crops like sugarcane, cotton etc.
- Promotion of Farm Mechanization in Selected Villages to provides financial assistance to promote appropriate technologies and to set up Farm Machinery Banks in identified villages in low mechanised states.
- Financial Assistance for Promotion of Mechanized Operations/hectare carried out through Custom Hiring Centres to provides financial assistance on per hectare basis to the beneficiaries hiring machinery/equipment from custom hiring centres in low mechanized areas.
- Promotion of Farm Machinery and Equipment in North-Eastern Region to extends financial assistance to beneficiaries in high-potential but low mechanised states of North-East.

**Progress**

Since 2014- till 2017 (up to December, 2017), Rs. 1143.73 crore has been allocated under this component. 16059 demonstrations organised, 45969 trainees trained at FMTTIs, 474234 machineries distributed to farmers, 4898 custom-hiring centres established, 57 hi-tech hubs established and 2350 Farm Machinery Banks established at village levels.

**1.15. Sub Mission on Plant Protection and Plant Quarantine (SMPP)**

**About scheme**

Sub Mission on Plant Protection and Plant Quarantine (SMPPQ) is one of the Scheme under Green Revolution (Krishonnati Yojana). The primary aim of this Sub Mission is to minimize loss to quality and yield of agricultural crops from the ravages of insect pests, diseases, weeds, nematodes, rodents, etc. and to shield our agricultural bio-security from the incursions and spread of alien species.
The Sub-Mission also seeks to facilitate exports of Indian agricultural commodities to global markets and to promote good agricultural practices, particularly with respect to plant protection strategies and techniques. In this regard, the Destructive Insects and Pests Act, 1914 and the Insecticides Act, 1968 provide the legal framework for the regulatory function. The SMPPQ has the following components:

i. Strengthening and Modernization of Pest Management Approach in India (SMPMA): The component includes propagating Integrated Pest Management (IPM), Locust Control and Research and Implementation of Insecticide Act, 1968

ii. Strengthening and Modernization of Plant Quarantine Facilities in India (SMPQF): The objective of Plant Quarantine is to prevent introduction of exotic pests, diseases and weeds which are likely to be introduced through import of plants or plant products into India.

iii. Monitoring of Pesticide Residue at the National Level (MPRNL): The objective of the scheme is to analyze pesticide residue in various agricultural commodities and environmental samples.

iv. National Institute of Plant Health Management (NIPHM): It is an autonomous body, mandated to promote environmentally sustainable Plant Health Management practices in diverse and changing agro-climatic conditions, and Bio security & Incursion Management through capacity building programmes, besides extending policy support to Central and State Governments.

**Objectives**

- To minimize loss to quality and yield of agricultural crops from the ravage of insect pests, diseases, weeds, nematodes, rodents etc.
- To shield our bio-security from the incursions and spread of alien species.
- To facilitate exports of Indian Agricultural commodities to global markets
- To promote good agricultural practices, particularly with respect to plant protection strategies and techniques.

**Progress**

i. Establishment of four new Central Integrated Pest Management Centres (CIPMCs) at Agra, Jaipur, Nashik and Vijaywada. These CIPMCs has expanded the geographical reach of the department in promoting Integrated Pest Management (IPM) as an alternative approach to pest management.

ii. Successful in preventing pest attacks, such as, Rugose Spiralling Whitefly (RSW), Aleurodicus rugioperculatus Martin, on Coconut palm in Tamil Nadu & Kerala, Yellow rust in Uttar Pradesh, Punjab & Haryana, Rice swarming caterpillar (Spodoptera mauritia) in rice growing areas of Assam, etc.

iii. Single Window clearance for issue of Phytosanitary Certificate (PSC)

iv. Complete Online registration under Sec 9(3) and 9(4) of the Insecticides Act, 1968 has been operationalized.

v. Number of forms as prescribed in Insecticides Act, 1968 has been reduced from 30 to 22 at present.
We are committed to doubling of farmers’ income by 2022.

**Production Management Schemes for Higher Productivity**

**OBJECTIVES**

- Increasing production of cereals, pulses, vegetables, and fruits through area expansion and productivity enhancement in a sustainable manner.
- Promotion of good agricultural practices with respect to plant protection strategies and techniques.
- Improving the productivity of cattle through various schemes and programmes.
Agriculture

2.1. National Food Security Mission (NFSM)

Introduction:

National Food Security Mission was launched in 2007-08 to increase the production of rice, wheat and pulses by 10, 8 and 2 million tonnes, respectively by the end of XI Plan through area expansion and productivity enhancement; restoring soil fertility and productivity; creating employment opportunities; and enhancing farm level economy. The Mission is being continued during 12th Five Year Plan with new target of additional production of 25 million tonnes of food grains comprising of 10 million tonnes rice, 8 million tonnes of wheat, 4 million tonnes of pulses and 3 million tonnes of coarse cereals by the end of XII Plan.

Objectives:

- To Increasing production of rice, wheat, pulses and coarse cereals through area expansion and productivity enhancement in a sustainable manner in the identified districts of the country.
- To restoring soil fertility and productivity at the individual farm level, and
- To enhancing farm level economy (i.e. farm profits) to restore confidence amongst the farmers.

Area Coverage under NFSM from 2017-18 onwards:

From 2016-17, NFSM is being implemented in 638 districts of 29 states. NFSM-Rice is being implemented in 194 districts of 25 states. NFSM-Wheat is being implemented in 126 districts of 11 states. NFSM-Pulses is being implemented in 638 districts of 29 states and NFSM-Coarse cereals is being implemented in 265 districts of 28 states.

Interventions included under programme

- Breeder Seed production of pulses was introduced under NFSM-Pulses programme.
- 150 Seed Hubs are being implemented through IIPR Kanpur for increasing certified seeds of indigenous production of pulses in India through the Indian Institute of Pulses Research (IIPR), Kanpur and their centres.
- Supplying of Minikits of pulses seed varieties not older than 10 years free of the cost (100% share) to the farmers.
- In addition to State Governments, the ICAR/KVKs/SAUs also involve in conducting the demonstrations on improved latest package of practices of pulses.
- 15% allocation is earmarked for pulses under NFSM for production of quality seeds through State Governments.
- The government has decided to create a buffer stock of pulses to control fluctuation of prices of pulses. Procurement has already started through the Department of Food and Consumer Affairs.

Outcome:

- As per the target, NFSM has achieved the bumper production of rice (110.15 million tonnes), wheat (98.38 million tonnes), pulses (22.95 million tonnes) and coarse cereals (44.19 million tonnes), during 2016-17 as per 4th advance estimates. The total foodgrains production achieved during 2016-17 is 275.68 million tonnes i.e. (9.6%) increase against last year.

2.2. Bringing Green Revolution to Eastern India (BGREI),

About scheme

BGREI program was initiated in 2010-11 as a sub-scheme of Rashtriya Krishi Vikas Yojana (RKVY) to address the constraints limiting the
productivity of "rice based cropping systems" in Eastern India comprising of seven (7) States namely, Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, Eastern Uttar Pradesh and West Bengal. The goal of the BGREI program is to harness the water potential for enhancing rice production in Eastern India which was hitherto underutilized.

The programme is being implemented in identified Districts of the above States which are not covered under either NFSM-Rice or NFSM-Wheat.

Presently the Scheme is being implemented on 60:40 sharing pattern between GoI and states except for Assam where it is being implemented on 90:10 sharing pattern.

Objectives:

- To increase production & productivity of rice and wheat by adopting latest crop production technologies.
- To promote cultivation in rice fallow areas to increase cropping intensity and income of the farmers.
- To create water harvesting structures and efficient utilization of water potential and
- To promote post harvest technology and marketing support.

Progress:

- During the year 2017-18, an amount of Rs. 450.00 crore as GoI share has been earmarked against which an amount of Rs. 237.61 crore has been released, so far.
- Regular and frequent visits to the fields to monitor the implementation of the programme are made by the Directors of Commodity Development Directorates of Rice, Wheat, Pulses & Sugarcane and National Consultants.
- The production of rice has increased from 45.65 million tons during 2009-10 to 60.78 million tonns during 2016-17 (as per 4th Advance Estimates of DES) after implementation of BGREI and NFSM in the seven states.

2.3. National Mission on Oilseeds and Oil Palm (NMOOP)

About Scheme

NMOOP was launched in 2014-15 restructuring the Centrally Sponsored Scheme of Integrated Scheme of Oilseeds, Oil Palm and Maize (ISOPOM) and Oil Palm Area Expansion (OPAE) have made significant contribution in increasing the oilseeds production and area expansion under oil palm during 12th Plan period.

The strategy of the Mission includes increasing Seed Replacement Ratio (SRR) with focus on varietal replacement; increasing irrigation coverage under oilseeds, diversification of area from low yielding cereals crops to oilseeds crops; inter-cropping of oilseeds with cereals/pulses/sugarcane; use of fallow land after paddy/potato cultivation; expansion of cultivation of Oil Palm, increasing availability of quality planting materials of Oil Palm & TPBs, maintenance cost and Inter-cropping during gestation period of oil palm and TBOs.

Objectives

- To enhance the cropping intensity of the area ensuring overall improvement of soil health, ensure effective management of insects & pest and increase irrigation coverage of the crop.
- Demonstration of recommended varieties and proven technologies in a cluster approach through Minikits and Frontline/Cluster demonstration in cultivation of oilseeds.
- Production and supply of quality seeds and nutrients, application of plant protection
We are committed to doubling of farmers' income by 2022

measures including seed treatment and use of improved farm implements, water saving devices and micro irrigation.

Progress

Oilseeds

- Oilseeds production of 32.10 million tonnes has been achieved during 2016-17 which is the highest during past three years of NMOOP implementation of w.e.f. 2014-15.
- The yield of 1225 kg/ha of oilseeds has been achieved during 2016-17, which is the highest since independence of the country.
- A total of 29310 ha. area under 73275 FLDs ha covered through 516 KVKs during 2017-18 against the involvement of 299 KVKs during 2015-16 and 425 KVKs during 2016-17.
- Cluster demonstration of 10 ha-50 ha in a village/ block are conducted through KVKs for visible impact of modern technologies.
- Farmers are provided production inputs like seeds of new High Yielding Verities/ Hybrids of oilseeds crops, seed treatment, micro nutrients, bio-agents/ bio-pesticides/ bio-fertilisers and improved production technologies under the supervision of scientists.

Promotion of Oil Palm in the country: Progress

- The total area under oil palm cultivation in India is 3.16 lakh ha as on 2016-17 comprising of an area of 97,141 ha during 12th plan period under NMOOP scheme. Oil Palm in cultivated mainly in Andhra Pradesh, Karnataka, Telangana, Tamil Nadu, Kerala and Mizoram.
- The FFBs production during 2016-17 was 12.9 lakh MT with Crude Palm Oil (CPO) production of 2.20 lakh MT.
- Oil palm growers have been supported through Market Intervention Scheme (MIS) to assured Fresh Fruits Bunchs (FFB) prices as and when the international price of CPOs falls below $800.
- The rate of assistance of planting materials, maintenance cost/ inter-cropping during gestation period and bore well have been received during 2017-18.

Horticulture

2.4. Mission for Integrated Development of Horticulture (MIDH)

About Scheme

Mission for Integrated Development of Horticulture (MIDH) launched in 2014-15 is a Centrally Sponsored Scheme for the holistic growth of the horticulture sector covering fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo. Under National Horticulture Mission (NHM) scheme Government of India (GOI) contributes 60% of total outlay and 40% share are contributed by State Governments for developmental programmes. Under Horticulture Mission for North Eastern and Himalayan State (HMNEH) scheme, GOI contribution is 90% and 10% share is contributed by State Governments. Similarly under National Horticulture Board (NHB), Coconut Development Board (CDB), Central Institute for Horticulture (CIH), Nagaland and the National Level Agencies (NLAs), GOI contribution is 100%.

2.Major interventions and initiatives of MIDH for doubling of farmers' income are increased focus on supply of quality planting material, increasing productivity through protected cultivation and proper management practices, promoting sustainable horticulture, post harvest management (PHM) infrastructure including development of cold chain, linking farmers to market, aggregation of farmers
into FPOs/FIGs and promoting their tie up with Market Aggregators (MAs) and Financial Institutions (FIs) also encourage the farmer groups (FPOs/FIGs) own the entire value chain from farm gate to market. Focus is also on specific value chain management and precision farming, bridging skill gap by skill development training, making MIDH DBT compliant and ICT based MIS and monitoring. Emphasis is also on development of crop specific projects based on entire value chain (from farm to market) in the states.

Objective

a) Promote holistic growth of horticulture sector, including bamboo and coconut through area based regionally differentiated strategies which includes research, technology promotion, extension, post-harvest management, processing and marketing in consonance with comparative advantage of each State/region and its diverse agro-climatic features;

b) Encourage aggregation of farmers into farmer groups like FIGs/FPOs and FPCs to bring economy of scale and scope.

c) Enhance horticulture production, augment farmers, income and strengthen nutritional security;

d) Improve productivity by way of quality planting material and water use efficiency through Micro Irrigation.

e) Support skill development and create employment generation opportunities for rural youth in horticulture and post-harvest management, especially in the cold chain sector.

Major Achievements under MIDH.

- Area expansion : 463651 ha
- Rejuvenation : 79356 ha
- Protected cultivation : 109766 ha
- Adoption of Organic Farming : 23704ha
- IPM : 319357ha.
- Nurseries: 265Nos.
- Water Resources: 17021Nos.
- Horticulture Mechanization: 100695Nos.
- Beekeeping: 472740Nos.
- Training of Farmers: 353298Nos.
- Post-harvest Management infrastructure: 28167Nos.

2.5. Horticulture Mission for North East and Himalayan States (HMNEH):

Ministry of Agriculture & Farmers Welfare, Government of India has been implementing a Centrally Sponsored Scheme - Horticulture Mission for North East and Himalayan States (HMNEH) earlier known as “Technology Mission for Integrated Development of Horticulture in North Eastern States since 2001-02. During the X Plan (2003-04), the scheme was further extended to three Himalayan States namely: Himachal Pradesh, Jammu and Kashmir and Uttarakhand.

The Mission covers entire spectrum of horticulture, right from planting to consumption, with backward and forward linkages. With effect from 2014-15, HMNEH scheme has been subsumed under the Mission for Integrated Development of Horticulture (MIDH).

2.6 National Horticulture Board

National Horticulture Board (NHB) was set up by Government of India in April 1984 on the basis of recommendations of the "Group on Perishable Agricultural Commodities", headed by Dr M.S. Swaminathan, the then Member (Agriculture), Planning Commission, Government of India. The NHB is registered as a Society under the Societies Registration Act
1860, with its headquarters at Gurgaon.

Recognizing the fact that the Commercial Horticulture provides not only food and nutritional security but also paves the way for crop diversification for better economic gain and risk mitigation for the farmers. The need for promoting this sector by concerted efforts for private investment through commercial horticulture projects has been visualized. This sector includes area expansion under commercial horticulture projects in clusters, post harvest management related infrastructure combined with public and private sector initiatives of technology development and transfer, product promotion, marketing & export.

National Horticulture Board (NHB) is striving to accelerate the process of the development of commercial horticulture in potential clusters by organizing the producer farmers for better utilization of resources, transfer of technology and gaining benefit of scaling up.

**Progress**

- Since inception of scheme, NHB assisted over 3114 Cold Storage project with installed capacity of 136.84 lakh MT across the country.
- During 2017-18 (as on 31st Dec, 2017) Board has set target of creation of 3.50 lakh MT cold storage capacity. The Board has assisted 15 nos. of cold storages for creating of 0.87 lakh MT capacity.
- NHB supported 1069 Commercial Horticulture Projects on Open Field Cultivation, Protected Cultivation, Post Harvest management etc. across the country during 2017-18.
- NHB supported 694 projects/events for Transfer of Technology which includes 20 projects during 2017-18 (as on 31st Dec, 2017).
- NHB accredited 1628 nurseries for production of superior quality planting material including vegetable seedlings which includes 417 nurseries accredited during 2017-18 (as on 30th November, 2017).
- NHB has set up Saffron Park at Pampore Pulwama (J&K) at a total cost of Rs. 37.81 crores. Park will have facilities for processing, Quality Control, Export Promotion Activity and E-auction Centre.

**2.7. Coconut Development Board Including Technology Mission On Coconut**

Coconut Development Board is a statutory body established by the Government of India for the integrated development of coconut production and utilization in the country with focus on productivity increase and product diversification. The Board came into existence on 12th January 1981 and functions under the administrative control of the Ministry of Agriculture & Farmers Welfare, Government of India. CDB has its Headquarters at Kochi in Kerala and Regional Offices at Bangalore in Karnataka, Chennai in Tamilnadu and Guwahati in Assam. There are six State Centres situated at Bhubaneswar in Odisha, Kolkata in West Bengal, Patna in Bihar, Thane in Maharashtra, Hyderabad in Telangana and Port Blair in the Union Territory of Andaman & Nicobar Islands. The Board has 9 Demonstration cum Seed Production (DSP) Farms in different locations of the country. A Market Development cum Information Centre has established in Delhi. The Board has set up a Technology Development Centre at Vazhakulam near Aluva in Kerala.

The thrust areas identified by the CDB programmes under MIDH are: production and distribution of quality planting material, expansion of area under coconut cultivation especially in potential and non-traditional
areas, improving the productivity of coconut in major coconut producing states, developing technology in post-harvest processing and marketing activities, product diversification and by-product utilization of coconut for value addition.

The major programs that are being implemented by the Board are:

a) Production and Distribution of Quality Planting Materials.
b) Establishment of Demonstration-cum-Seed Production Farms.
c) Establishment of Regional Coconut Nurseries.
d) Distribution of Hybrids/Dwarf Seedlings in Govt/Pvt sector.
e) Establishment of Nucleus Coconut Seed Garden.
f) Establishment of Small Coconut Nurseries.
g) Expansion of Area under Coconut.
h) Integrated Farming for productivity improvement.
i) Laying out of Demonstration Plots.
j) Aid to Organic Manure Units.
k) Technology Demonstration/Quality Testing Lab.
l) Marketing, market intelligent services, Statistics and Strengthening of Export Promotion Council.

2.8. Central Institute of Horticulture (CIH)

Recognizing the potential for development of horticulture in Northeast region, and in order to provide adequate institutional support to tap this potential, Government of India has set-up the “Central Institute of Horticulture” at Medziphema, Nagaland in the year 2005-06 under the Central Sector Scheme. The institute provides technical support on different aspects of horticultural development. The main focus of the institute is on demonstration of identified technologies specific for the region; production and supply of quality seed and planting material of improved/high yielding varieties, demonstration of proven technologies and training of State department officials and field functionaries on different aspects of horticulture development including post-harvest management, processing and value addition.

Significant achievements of CIH include establishment of green house for protected cultivation of high value vegetables & flowers, establishment of mother blocks of identified fruit crops, establishment of nursery for production and distribution of quality planting material, laying of demonstration plots for exhibiting improved production systems

2.9. Directorate of Cashewnut and Cocoa Development, Kochi

The Directorate of Cashewnut and Cocoa Development functioning at Cochin is the subordinate office of the Department of Agriculture, Cooperation & Farmers Welfare of the Union Ministry of Agriculture & Farmers Welfare. The Directorate formulates and executes the development programmes of cashew and cocoa in the country and monitor the implementation of development programmes formulated and executed by the State Governments under Mission for Integrated Development of Horticulture. The DCCD is implementing programmes viz. new plantation development, replanting/rejuvenation of cashew plantations, front line technology demonstrations, production of planting materials, HRD, publicity for crop promotion under MIDH for the development of these crops. The DCCD also acts as a nodal agency for accreditation of existing cashew/cocoa nurseries and issue recognition. The development of new plantations with clones of
high yielding varieties of cashew and hybrid seedlings in the case of Cocoa in the farmer’s field has been envisaged under this programme. Under the scheme, an additional area of 10400 ha under cashew and 6750 ha cocoa with clones of high yielding varieties has been brought under MIDH with financial assistance since 2014.

Progress:

On the implementation of programmes under MIDH, the area under cashew was raised to 10.41 lakh ha in 2017-18 with a total production of 8.17 lakh MT from 10.07 lakh ha in 2013-14 with a total production of 7.36 lakh MT. The cocoa area are raised to 87440 ha with the production of 19866 MT of dry beans in 2017-18.

2.10. Directorate of Arecanut And Spices Development, Calicut

The Directorate of Arecanut and Spices Development (DASD) is a subordinate office under Ministry of Agriculture, Government of India, established on 1st April, 1966 at Calicut, Kerala to look after the development of Spices, Arecanut, Betel vine and Aromatic plants at National level. The Directorate monitors the development programmes in spices implemented by the states.

Major programmes and activities of the Directorate are;

- The Directorate is directly involved in the production and distribution of quality planting material of high yielding varieties of spices and technology transfer programmes in association with State agricultural Universities and Central Institutes across the country.
- DASD is engaged in accreditation of nurseries to improve the quality of planting material disbursed through various nurseries across the nation.
- Skill based certificate trainings on selected agri -based job roles are being provided to unemployed rural youth at affiliated training institutes.
- Value Chain Studies are being conducted for potential crops in selected areas and proposals for enhancing the value chain are prepared. Value Chain Study on Turmeric in Telangana State & Seabuck thorn in Jammu & Kashmir was done by the Directorate during 2017-18.
- Innovative technologies such as single bud planting and portray method of nursery raising in ginger and turmeric is promoted by the directorate. Special programme on micro-rhizome production has been undertaken in association with Kerala Agri University and Indian Institute of Spices Research to promote disease free seed material in these crops.
- Participatory mode rehabilitation programme for pepper gardens in Kerala, Pilot project on establishment of seed production centres in ginger growing areas in collaboration with FPOs are also initiated by the directorate.
- More than 8000 farmers are trained annually on different aspects of cultivation, management, post harvest management and processing of spice crops and demonstration are laid out across the country on advanced technologies in spice cultivation.
- Collection, compilation and dissemination of area and production statistics on mandate crops are done by the directorate and made available to different state/national level agencies engaged in research and planning.

2.11. National Centre for Cold-Chain Development

National Centre for Cold-chain Development
We are committed to doubling of farmers’ income by 2022

(NCCD) was operationalised in 2012, under the Ministry of Agriculture and Farmers’ Welfare. NCCD is registered as a Society and structured to function as a think-tank on cold-chain, to function in an autonomous manner in Public-Private-Partnership (PPP) mode with stakeholders as members of the society. Broadly, the aims and objectives of NCCD are to recommend, suggest, assess, educate, coordinate, facilitate and foster various aspects of cold chain at policy level. It also undertakes applied R&D and capacity building in this domain. NCCD actively interacts and liaises between stakeholders (private and public) to provide appropriate policy inputs and to assist to redress concerns of stakeholders.

NCCD conducted the first comprehensive nationwide assessment on cold-chain infrastructure in 2015 and also formulated Guidelines and Minimum System Standards for use by cold-chain infrastructure development agencies. NCCD has guided the revisions in cold-chain schemes, to rationalise them to include the missing links in cold-chain (integrated pack-houses with pre-coolers, staging cold rooms, multi-modal reefer containers, etc.), and to promote energy and operational efficiencies in the farm-to-fork supply chain.

NCCD also undertakes awareness programs to provide concept level clarity for cold-chain development, to public and private sector participants, conducts capacity building and entrepreneur development initiatives, through members of the Society. NCCD is a knowledge partner in the Committee on Doubling Farmers’ Income and provides inputs on reforms in agri-logistics and agricultural marketing system.

2.12. Prime Ministers’ Package for J&K

Rs. 500 crore Special Package was announced on 07.11.2015 by Hon’ble Prime Minister for restoration of damaged horticulture areas and development of horticulture in J&K State. Cabinet Committee on Economic Affairs approved one time relaxation of MIDH cost norms for PMDP.

Funding norms have been relaxed to encourage apple growers to import special varieties of plants for better survival, early flowering and enhanced fruiting apple planting materials and four wire trellises system which may increase the productivity 3-4 times.

**Provisions:**

- Import of four wire trellis system @ of Rs. 9.8 lakh per hectare.
- Enhanced rate of subsidy @ 90% for provision of planting material.
- Administrative approval for implementation of CCEA’s decision has been issued on 08.12.2016.
- Rs. 47.89 crore of GOI Share released in 2016-17.
- Rs. 75.00 crore of GOI Share has been released so far during 2017-18 (as on 30th Nov. 2017), out of which an amount of Rs. 7.8 crore has been utilized (as reported by Govt. of J&K).

2.13. Bee Development : National Bee Board (NBB)

NBB was also restructured in 2006 by Ministry of Agriculture & Farmers Welfare, Government of India. The main objective of NBB is overall development of beekeeping by promoting scientific beekeeping in the country to increase the productivity of crops through pollination and honey production to increase the income of farmers/beekeepers. NBB has been recognized as a National Level Agency (NLA) under MIDH for development and promotion of scientific beekeeping in the country. After restructuring of NBB by this Department, the scientific beekeeping has been promoted in a
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big way in the country and there has been good progress in this field.

**Progress up to 2016-17 is summarized as under:-**

1. 7617 beekeepers/ beekeeping & honey societies/ firms/ companies, etc. with 12.40 lakhs honeybee colonies have been registered (as on 31st December, 2017.)
2. 21,823 farmers/ beekeepers have been trained in scientific beekeeping by National Bee Board (NBB) upto 31st December, 2017.
3. Designed technical standards for food grade plastic containers for storing honey, which helped in minimizing the problem of presence of Lead in honey.
4. 12 integrated Bee Developed Centres(IBDCs)/Centres of Excellence (CoEs) as role model for beekeeping have been commissioned by NBB during the years 2015-16, 2016-17,2017-18 in 12 States.

**Animal Production and Productivity Schemes**


The new Scheme National Programme for Bovine Breeding and Dairy Development (NPBBDD) has been launched by merging four existing schemes i.e. Intensive Dairy Development Programme (IDDP), Strengthening Infrastructure for Quality & Clean Milk Production (SIQ&CMP), Assistant to Cooperatives and National Project for Cattle & Buffalo Breeding with the budget provision of Rs.1800 crores for implementation during 12th Plan [NPBB- Rs 1200 crore and NPDD- Rs 600 crore].

**Objectives:**

- National Programme for Bovine Breeding and Dairy Development (NPBBDD) was launched in February, 2014 as a comprehensive and scientific Programme having two components:
  a) National Programme for Bovine Breeding (NPBB),
  b) National Programme for Dairy Development (NPDD)

**2.15. Rashtriya Gokul Mission**

- Rashtriya Gokul Mission initiated in December 2014 exclusively development and conservation of indigenous breeds in a scientific and holistic manner with an allocation of Rs 500 crore for the first time in the country.

**Progress**

- Till date, 35 projects from 27 States have been approved with an allocation of Rs 582.09 crore. Out of this, Rs 2016.63 crores has been released to the States for implementation of the scheme upto February 2017.
- Funds have approved and first instalment released under the scheme for establishment of 14 Gokul Grams {3 in Maharashtra, 1 in Punjab, 2 in Chhattisgarh, 1 Andhra Pradesh, 1 (cow sanctuary) in Gujarat, 2 (1 with Veterinary University Mathura and 1 at Araziline Varanasi) in Uttar Pradesh, 1 in Madhya Pradesh, 1 in Karnataka and 1 in Haryana 2}.
- Funds approved and first instalment released for strengthening 41 bull mother farms of indigenous bovine breeds. Out of this, 31 bull mother farms have been strengthened in the country.
- Funds approved and first instalment released for establishment of Field Performance Recording Programme (FPRP) for 1,50,000 indigenous animals.
- 301 bulls of indigenous breeds have been inducted at the semen stations for semen
production.

- Bull production programme for natural service for indigenous breeds have been initiated by MP, Kerala, UP, Punjab, Haryana and Gujarat.
- Funds approved for establishing separate line for marketing of A2A2 milk in the State of Kranataka and Odisha.
- Haryana has initiated marketing of A2A2 Milk after initiatives taken by this Ministry.
- “Gopal Ratna’ Awards: to the farmers maintaining the best herd of Indigenous Breeds and practicing better management practices.
- “Kamadhenu” Awards: to the best managed Indigenous herd by Institutions/Trusts/NGOs/Gaushalas/Breeders’ Societies have been instituted under Rashtriya Gokul Mission.

2.16. National Kamdhenu Breeding Centre

- Most of the countries in the world at the national level have National Breeding Centre. “National Kamdhenu Breeding Centres” for development, conservation and preservation of Indigenous Breeds are being set up as a Centre of Excellence to develop and conserve indigenous breeds in a holistic and scientific manner for the first time in the country.
- A nucleus herd of all the indigenous bovine breeds (40 Cattle and 13 Buffaloes) will be conserved and developed with the aim of enhancing their productivity and upgrading genetic merit.
- Under the scheme two National Kamdhenu Breeding Centres are being established one in northern region and other in southern region respectively.
- Andhra Pradesh has initiated activities for establishment of NKBC at Chintaladevi, Nellore and procured animals of 8 indigenous breeds.
- Madhya Pradesh has also initiated activities for establishment of NKBC at Kiratpur Itarsi.

2.17. National Programme for Bovine Breeding

- Genetic up-gradation of cattle and buffalo population through delivery of breeding inputs at farmers’ doorstep.
- The scheme includes establishment of Multi-Purpose AI Technicians in Rural India (MAITRIs) on self-sustainable basis and streamlining of liquid nitrogen transport and distribution system.

Progress

- 27 States are participating under the scheme and amount of Rs 119.75 crore has been released to the State upto February 2017 for implementation of the project.
- 9787 existing AI centres have been strengthened by replacement of cryo-containers and AI kits.
- Funds have been sanctioned for strengthening of 108 AI training institutes as per MSP for AI Training Institutes and Standard Protocol for AI Training Institutes developed by DADF.
- 25,000 existing AI technicians trained in latest development in frozen semen technology and AI.
- SOP and MSP for AI technicians and AI Training Institutes have been developed and issued to all the States and UTs.
- 56 AI training institutes have been evaluated and out of this 40 have been recommended / accredited for training of AI technicians.
• 3380 fertility camps have been organised by the State and 38927 animals have been treated for infertility.
• 50 semen stations have been evaluated during 2015-16. Out of this 33 A graded and 14 graded as B.
• 115 semen banks strengthened for storage and supply of Liquid Nitrogen and frozen semen doses.

2.18. National Livestock Mission

NLM was launched in 2014-15 with the focus on the sustainable development of livestock sector and it took into account various factors which are crucial as key drivers to the development of livestock. The major outcomes of the Mission envisaged are mainstreaming of livestock rearing as business models and linkages for successful business ventures to achieve 5-6% annual growth rate, optimal utilization of scarce nutritional resources – reducing the gap in demand and availability of fodder, conservation and improvement of indigenous breeds, higher productivity and production in a sustainable and environment friendly manner, enhanced livelihood opportunities, especially in rainfed areas and for landless, small and marginal farmers, increased awareness, improved risk coverage and better availability of quality animal products to consumers overall socio-economic upliftment of livestock rearers.

Following four Sub-Missions were accordingly envisaged:

a) **Sub-Mission on Fodder and Feed Development:** is addressing the problems of scarcity of animal feed resources in order to give a push to the livestock sector making it a competitive enterprise for India and also to harness its export potential. The major objective is to reduce the deficit to nil.

b) **Sub-Mission on Livestock Development:** for productivity enhancement, entrepreneurship development and employment generation (bankable projects), strengthening of infrastructure of state farms with respect to modernization, automation and biosecurity, conservation of threatened breeds, minor livestock development, rural slaughter houses, fallen animals and livestock insurance. It is further envisaged to expand the scope of innovative projects by formulating new initiatives for small ruminants and poultry.

c) **Sub-Mission on Pig Development in North-Eastern Region:** There has been persistent demand from the North Eastern States seeking support for all round development of piggery in the region. Government of India would support the State Piggery Farms, and importation of germplasm so that eventually the masses get the benefit as it is linked to livelihood and contributes in providing protein-rich food in 8 States of the NER.

d) **Sub-Mission on Skill Development, Technology Transfer and Extension:** The extension machinery at field level for livestock activities is very weak. As a result, farmers are not able to adopt the technologies developed by research institutions. The emergence of new technologies and practices require linkages between stakeholders and this sub-mission will enable a wider outreach to the farmers.
2.19. Fodder and Feed Development

Components
- Distribution of Fodder seeds.
- Assistance for hand and power driven chaff cutters.
- Assistance for Silage making units.

Progress:
- 10,907 tons of quality fodder seeds were distributed to the farmers for fodder production.
- 51,130 no. of power and hand driven chaff cutters were distributed to the farmers.
- 3,823 no. of silage making units were assisted.

2.20. Rural Backyard Poultry Development

Objective: To give supplementary income and nutritional support to BPL beneficiaries

Progress:
- 3.76 lakh beneficiaries funded for assistance under Rural Backyard Poultry Development.
- ‘Innovative Poultry Productivity Project’ launched under NLM in 15 identified Poultry Potential States from the year 2017-18 on pilot basis.

2.21. Sheep/Goat Development

Components
- Modernisation and Development of Breeding Infrastructure (for State farms)
- Propagation of Artificial Insemination
- Ram / Buck / Boar Shows
- Cluster Based Deworming

Progress:
- Under NLM, 14 State Government Farms has been assisted for their strengthening.
- Under NLM, assistance has been given for organization of 30 nos. of Ram / Buck / Boar Shows.
- Under NLM, assistance has been given for cluster based deworming for 5,00,000 nos. of sheep and goats
- Under NLM, assistance has been given for establishment of four Artificial Insemination Lab. for small ruminants.

2.22. Livestock Health and Disease Control (LH & DC)

The high prevalence of various animal diseases is serious impediment to growth of the livestock sector. With improvement in the quality of livestock through cross-breeding programmes, the susceptibility of these livestock to various diseases including exotic diseases has increased. Therefore, in order to supplement the efforts of the State/UT Governments for prevention, control and containment of animal diseases the Department is implementing ‘Livestock Health & Disease Control Scheme (LH&DC).

The scheme has been clubbed as sub-scheme under umbrella scheme “White Revolution-Rastriya Pashudhan Vikas Yojana” as “Livestock Health & Disease Control” having following components:

(a) Assistance to States for Control of Animal Diseases (ASCAD).
(b) Professional Efficiency Development (PED).
(c) National Project on Rinderpest Surveillance & Monitoring (NPRSM).
(d) Foot and Mouth Disease Control Programme (FMD-CP).
(e) National Animal Disease Reporting System (NADRS).
(f) Peste des Petits Ruminants Control Programme (PPR-CP).
(g) Brucellosis Control Programme (Brucellosis - CP).
(h) Establishment and Strengthening of existing Veterinary Hospitals and Dispensaries (ESVHD).
(i) Classical Swine Fever Control Programme (CSF-CP).

Progress:
A total of 545.55 million vaccinations have been done during 2017-18 (till 31st December, 2017) under different components of Livestock Health and Disease Control (LH&DC) Schemes.

To prevent economic losses due to Foot and Mouth Disease and to develop herd immunity in cloven-footed animals, ‘Foot and Mouth Disease Control Programme (FMD-CP)’ was under implementation in selected 54 districts since 10th Five Year Plan and expanded gradually during 11th and 12th Five Year Plan to 352 districts of 19 States/ UTs. However, the remaining States have been included during 2016-16 under FMD vaccination coverage so as to attain a “FMD Mukt Bharat”. FMD Outbreaks which were 1957 during 2011-13 have been drastically reduced to 505 only during the period 2014-16 which decreased by 74.19 percent2.5.

Fishery

2.23. Blue Revolution

The Blue Revolution with its multi-dimensional activities focuses mainly on increasing fisheries production and productivity from aquaculture and fisheries resources, both inland and marine.

OBJECTIVES
- To increase the overall fish production in a responsible and sustainable manner for economic prosperity.
- To modernize the fisheries with special focus on new technologies.
- To ensure food and nutritional security.
- To generate employment and export earnings.
- To ensure inclusive development and empower fishers and aquaculture farmers.

The restructured Centrally Plan Scheme with Central Sector components on Blue Revolution: Integrated Development and Management of Fisheries formulated at a total Central outlay of 3000 crore for five years has the following components:

(a) National Fisheries Development Board (NFDB) and its activities.
(b) Development of Inland Fisheries and Aquaculture.
(c) Development of Marine Fisheries, Infrastructure and Post-Harvest Operations.
(d) Strengthening of Database & Geographical Information System of the Fisheries Sector.
(e) Institutional Arrangement for Fisheries Sector.
(f) Monitoring, Control and Surveillance (MCS) and other need-based Interventions.
(g) National Scheme of Welfare of Fishers.
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Output Management Schemes- Post Production

OBJECTIVES

- To develop agricultural marketing infrastructure for effectively managing marketable surplus of agriculture including horticulture and dairy, poultry, fishery, livestock and minor forest produce.
- Promoting innovative and latest technologies and competitive alternative agricultural marketing infrastructure by encouraging private and cooperative sector investments, direct marketing, and creation of scientific storage capacity, Integrated value chains (confined up to primary processing stage only).
- To provide Infrastructure facilities for grading, standardization and quality certification of agricultural produce.
- To facilitate exports of Indian Agricultural commodities to global markets.
Output Management Schemes-Post Production.

3.1 Agricultural Marketing

Under the AMI sub-scheme, there are two components (i) Storage Infrastructure (ii) Marketing Infrastructure other than Storage.

Objectives

- The main objectives of the AMI schemes are to develop agricultural marketing infrastructure for effectively managing marketable surplus of agriculture including horticulture and of allied sectors including dairy, poultry, fishery, livestock and minor forest produce.
- Promoting innovative and latest technologies and competitive alternative agricultural marketing infrastructure by encouraging private and cooperative sector investments, direct marketing, creation of scientific storage capacity, Integrated value chains (confined up to primary processing stage only).
- To provide Infrastructure facilities for grading, standardization and quality certification of agricultural produce.
- To create general awareness and provide training to farmers, entrepreneurs, market functionaries and other stakeholders on various aspects of agricultural marketing including grading, standardization and quality certification.

3.2 National Agriculture Market (e-NAM)

Under the scheme, a pan India electronic trading portal (e-NAM) is deployed in selected regulated wholesale markets in States across the country and 585 markets are proposed to be integrated with e-NAM by March, 2018. E-NAM is reformed linked scheme and States are required to carry out pre-requisite reforms to enable (i) a Single licence to be valid across the State, (ii) Single point levy of market fee, and (iii) Provision for electronic auction as a mode of price discovery.

Small Farmers’ Agribusiness Consortium (SFAC) to act as the Lead Promoter of NAM.

Progress

- On 14th April, 2016, Hon’ble Prime Minister Sh. Narendra Modi launched the pilot of e-NAM on the 125th Birth Anniversary of Baba Saheb Dr. Bhimrao Ambedkar in 21 markets of 8 states.
- National Agriculture Market (e-NAM) scheme was approved on 1st July, 2015 with an initial allocation of Rs. 200 crore to link 585 wholesale APMC mandis across the country through a common e-platform.
- National Agriculture Market (NAM) is a pan-India electronic trading portal which networks the existing APMC and other market yards to create a unified national market for agricultural commodities.
- The Central Government offers one time grant to the States / UTs up to Rs.30.00 lakh per market, based on their DPR for purchase of hardware, internet connection, assaying equipment and related infrastructure.
- An additional grant of Rs. 45 lakh per mandi is envisaged in the budget announcement of 2017-18 for installation of sorting, grading, & packing facility and compost unit in the E-NAM Mandis.
- In principle approval given to integrate 630 mandis in 18 States, UTs with e-NAM.
- To facilitate assaying of commodities for trading on e-NAM, common tradable parameters have been developed for 90 commodities.
• By 26th January, 2018, total 152 lakh tonnes of agricultural produce worth Rs. 36587 crores has been recorded; 74 lakh farmers, 1.01 lakh traders and 53169 commission agents were registered on e-NAM platform.

3.3. Schemes of Small Farmers Agribusiness Consortium (SFAC)

SFAC was set up as a registered society on 18th January, 1994. Currently, the members of SFAC include RBI, SB1, IDB1, EX1M Bank, Oriental Bank of Commerce, NABARD, Canara Bank, NAFED etc.

SFAC is implementing the Central Sector Scheme for agribusiness development in association with Notified Financial Institutions providing:

• Venture Capital to agribusiness projects, and assistance to farmers / products groups for preparing bankable Detailed Project Reports (DPR).

3.3.1. Agri-Business Development (ABD) through Venture Capital Scheme (VCA)

About scheme:

Venture Capital Assistance Scheme is being implemented to provide interest-free Venture Capital to setup agribusiness projects and Project Development Facility (PDF) and facilitate the promotion of agri-business projects.

Objectives

• To facilitate setting up of agribusiness ventures in close association with all Financial Institutions notified by the Reserve Bank of India where the ownership of the Central/State Government is more than 50% such as Nationalized banks, SBI & its subsidiaries, IDBI, SIDBI, NABARD, NCDC, NEDFI, Exim Bank, RRBs & State Financial Corporations.

• To catalyze private investment in setting up of agribusiness projects and thereby providing assured market to producers for increasing rural income & employment.

• To strengthen backward linkages of agribusiness projects with producers.

• To assist farmers, producer groups, and agriculture graduates to enhance their participation in value chain through Project Development Facility.

• To arrange training and visits, etc. of agripreneurs in setting up identified agribusiness projects.

• To augment and strengthen existing set up of State and Central SFAC.

Progress:

SFAC has extended Venture Capital Assistance support to 1910 units amounting Rs. 560.27 crore and 1,60,751 farmers have been benefited. It has resulted in direct employment generation to 87,223 persons. Under the scheme, during 2017-18, SFAC has extended equity support to 87 agripreneurs amounting Rs. 79.90 crore.

3.3.2. Equity Grant Scheme (EGS) For Farmer Producer Companies (FPCS)

About scheme

Equity Grant Scheme extends support to the equity base of Farmer Producer Companies (FPCs) by providing matching equity grants. The EGS shall be operated by Small Farmers' Agri Business Consortium (SFAC). The Equity Grant Scheme enables eligible FPCs to receive a grant equivalent in amount to the equity contribution of their shareholder members in the FPC subject to a maximum of Rs. 10.00 lakh per FPC in two tranche. The Scheme shall address nascent and emerging FPCs, which have paid up capital not exceeding Rs. 30 lakh as on
the date of application.

In order to support the equity base of FPCs, a matching Equity Grant up to a maximum of Rs 15 lacs is given to FPCs.

Equity Grant shall be a cash infusion equivalent to the amount of shareholder equity in the FPC subject to a cap of Rs. 10 lakh per FPC. Equity Grant sanctioned shall be directly transferred to the Bank account of the FPC. The FPC shall, within 45 days of the receipt of the Equity Grant, issue additional shares to its shareholder members, equivalent in value to the amount of the Grant received by it.

Objectives :

- Enhancing viability and sustainability of FPCs.
- Enhancing credit worthiness of FPC.
- Enhancing the shareholding of members to increase their ownership and participation in their FPC.

Progress:

In order to support equity base of FPCs, a matching grant up to a maximum of Rs. 10 lakh is given to FPCs. During 2014-17, equity grants have been sanctioned to 154 Farmers producing Companies (FPCs). During 2017-18, SFAC has extended equity grant to 204 FPCs have been extended.

3.3.3. Credit Guarantee Fund Scheme (CGFS)

About scheme:

Credit Guarantee Fund has been set up with the primary objective of providing a Credit Guarantee Cover to Eligible Lending Institutions (ELI’s) which are providing collateral free loans to Farmer Producer Companies (FPCs). The Credit Guarantee Fund offers a cover of 85% to loans extended by banks to FPCs without collateral, up to a maximum of Rs. 1.00 Crore.

- To provide a Credit Guarantee Cover to Eligible Lending Institution (ELI) to enable them to provide collateral free credit to FPCs by minimising their lending risks in respect of loans not exceeding Rs. 1.00 Crore.
- To enable FPC to get collateral free loan by providing credit guarantee to ELI’s.

Progress:

During 2014-17, a total of 26 FPCs have taken benefit under the scheme.

3.3.4. Farmer Producer Organizations (FPOs)

About scheme:

The concept of ‘Farmer Producer Organizations (FPO)’ consists of collectivization of producers especially small and marginal farmers so as to form an effective alliance to collectively address many challenges of agriculture such as improved access to investment, technology, inputs and markets. Farmer Producer Organizations registered under the special provisions of the Companies Act, 1956 as the most appropriate Institutional form around which the mobilization of farmers is to be made for building their capacity to collectively leverage their production and marketing strength.

The formation and development of FPOs will be actively encouraged and supported by the Central and State Governments and their agencies, using financial resources from various Centrally sponsored and State-funded schemes in the agriculture sector agencies. This goal will be achieved by creating a coalition of partners by the concerned promoter body, involving civil society institutions, research organisations, consultants, private sector players and any other entity which can contribute to the development of strong and viable producer owned FPOs.
Objectives

- To promote economically viable, democratic, and self-governing Farmer Producer Organisations (FPOs).
- To provide support for the promotion of such FPOs by qualified and experienced Resource Institutions.
- To provide the required assistance and resources – policy action, inputs, technical knowledge, financial resources, and infrastructure – to strengthen these FPOs.
- To remove hurdles in enabling farmers’ access the markets through their FPOs, both as buyers and sellers.
- To create an enabling policy environment for investments in FPOs to leverage their collective production and marketing power.

Progress

- As on 31st Dec, 2017, against a target of 7.83 lakh farmers to be mobilized, 6.99 lakh small & marginal farmers have been identified and formed into 41,094 Farmer Interest Groups (FIGs). These FIGs further have been federated into FPOs and so far 693 FPOs have been registered and 109 are under the process of registration.
- 443 FPOs have been registered during 2014 to 2017 as compared to 223 FPOs during 2011-14 with total increase of 98.65% collectivization of farmers.

3.3.5. Scheme for Farmer Producer Companies.

SFAC is also taking up the implementation of the Equity Grant and Credit Guarantee Fund Scheme for Farmer Producer Companies which was approved by the EFC during 2013-14.

This scheme will enable registered farmer producer companies to access equity grant to double member equity upto a maximum limit of Rs.10.00 lakhs. The scheme also provides a credit guarantee to financial institutions which extend loans to producer companies without collateral upto Rs.1.00 crore.

SFAC is organizing awareness camps to publicize the Equity Grant and Credit Guarantee Fund Scheme all over India.

3.4. Price Support and Procurement

In order to support the equity base of FPCs, a matching equity Grant up to maximum of Rs. 15 lakh is given to FPCs. During 2014-17, equity grants have been sanctioned to 154 Farmers Producers Companies (FPCs).

3.4.1. Minimum Support Price (MSP)- Noticification

Minimum Support Price (MSP) is a form of market intervention by the Government of India to insure agricultural producers against any sharp fall in farm prices. The minimum support prices are announced by the Government of India at the beginning of the sowing season for certain crops on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP). MSP is price fixed by Government of India to protect the producer - farmers - against excessive fall in price during bumper production years. The minimum support prices are a guarantee price for their produce from the Government. The major objectives are to support the farmers from distress sales and to procure food grains for public distribution. In case the market price for the commodity falls below the announced minimum price due to bumper production and glut in the market, government agencies
purchase the entire quantity offered by the farmers at the announced minimum price.

The Price Support Policy of the Government is directed at providing insurance to agricultural producers against any sharp fall in farm prices. The minimum guaranteed prices are fixed to set a floor below which market prices cannot fall. Till the mid 1970s, Government announced two types of administered prices:

- Minimum Support Prices (MSP)
- Procurement Prices

The MSPs served as the floor prices and were fixed by the Government in the nature of a long-term guarantee for investment decisions of producers, with the assurance that prices of their commodities would not be allowed to fall below the level fixed by the Government, even in the case of a bumper crop. Procurement prices were the prices of kharif and rabi cereals at which the grain was to be domestically procured by public agencies (like the FCI) for release through PDS. It was announced soon after harvest began. Normally procurement price was lower than the open market price and higher than the MSP. This policy of two official prices being announced continued with some variation up to 1973-74, in the case of paddy. In the case of wheat it was discontinued in 1969 and then revived in 1974-75 for one year only. Since there were too many demands for stepping up the MSP. In 1975-76, the present system was evolved in which only one set of prices was announced for paddy (and other kharif crops) and wheat being procured for buffer stock operations.

Government fixes the Minimum Support Prices (MSPs) of major agricultural crops after taking into account the recommendations of the Commission for Agricultural Costs & Prices (CACP). The Commission is mandated to recommend MSPs for 22 Agricultural Commodities and Fair and Remunerative Price (FRP) of sugarcane taken into consideration the cost of production (CoP), overall demand-supply, domestic and international prices, inter-crop price parity, likely effect of the price policy on the rest of the economy and rational utilization of land, water and other production resources. Thus, pricing policy i.e. the exercise of MSP is not based on cost only though the cost is an important determinants of MSP. During last three following crops MSP were given as under:

3.4.2. Procurement of Foodgrains (Department of Food & Public Distribution)

Procurement operations are seasonal - Kharif Marketing Season (KMS) starts from 01st October and lasts up to next 30th September of a year. Paddy / Rice and Coarse grains like jowar, bajra, ragi & maize are procured during the KMS.

The Rabi Marketing Season (RMS) starts from 1st April and lasts up to next 31st March of a year. Mostly, wheat and sometimes barley is procured during RMS.

3.4.3. Price Support Scheme (PSS)

Price Support Scheme (PSS) is implemented for procurement of oil seeds, pulses and cotton through Central Nodal Agencies at the Minimum Support Price (MSP) declared by the Government. This scheme is implemented at the request of the concerned state government, which agrees to exempt the procured commodities from levy of mandi tax and assist central nodal agencies in logistic arrangements including gunny bags, provide working capital for state agencies, creation of revolving fund for PSS operations etc. as required under the Scheme guidelines. The basic objectives of PSS are to provide remunerative prices to the growers for their produce with a view to encourage higher
We are committed to doubling of farmers' income by 2022

Crop-wise MSP

<table>
<thead>
<tr>
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<td></td>
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<td>1650</td>
<td>1725</td>
<td>1900</td>
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<td>4000</td>
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<td>3700</td>
<td>4000</td>
<td>900(29.0)</td>
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<tr>
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<td></td>
<td>1150</td>
<td>1225</td>
<td>3700</td>
<td>1410</td>
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investment and production and to safeguard the interest of consumers by making available supplies at reasonable prices with low cost of intermediation.

**Department of Consumer Affairs**

The Department of Consumer Affairs (DCA) is one of the two Departments under the Ministry of Consumer Affairs, Food & Public Distribution. The mandate of the Department is consumer advocacy.

**3.4.4. Price Stabilization Fund (PSF)**

The PSF plan scheme was transferred to the Department of Consumer Affairs (DOCA) w.e.f. 1st April, 2016 from Department of Agriculture, Cooperation & Farmers (DAC&FW).

The Price Stabilization Fund (PSF) was set up with an initial corpus of Rs. 500 crore to tackle inflationary trends of important agrihorticultural commodities like onion, potatoes and pulses to protect the interests of consumers. These commodities would be stored and in case
of increase in market prices, be sold to help bring down the prices. It was also felt that such market intervention initiatives by Government would not only help send the appropriate market signal but also deter speculative/hoarding activities. To begin with, the Fund was to be used only for market interventions in case of perishable agri-horticultural commodities such as onion and potato which showed extreme volatility of prices. Subsequently, pulses were also covered. As per the scheme, the PSF is to be used to grant interest free advance of working capital to Central Agencies, State/UT Governments/Agencies to undertake such market intervention operations. Apart from domestic procurement from farmers/wholesale mandis, import may also be undertaken with support from the Fund.

Price stabilization operations are determined at the Centre by the Price Stabilization Fund Management Committee (PSFMC) headed by Secretary of the administrative department. The Corpus Fund is managed by Small Farmers Agribusiness Consortium (SFAC) on behalf of the administrative department. Likewise in the States/UTs, the price stabilisation operations are to be managed by the State level PSFMC and operated out of the State level Corpus Fund. Interest free advances from the PSF corpus may be made both to Central Agencies and to State level Corpus. The State level Corpus is created with a sharing pattern between GOI and State in the ratio of 50:50, which is 75:25 in case the North Eastern States.

### Output

Major achievement is the creation of buffer stock of pulses and onions with support under Price Stabilization Fund (PSF) scheme of the Department.

### 3.4.5. Market Intervention Scheme (MIS)

This Division also implements Market Intervention Scheme (MIS) for procurement of agricultural and horticultural commodities which are perishable in nature and are not covered under the Price Support Scheme (PSS). The objective of intervention is to protect the growers of these commodities from making distress sale in the event of a bumper crop during the peak arrival period when the prices tend to fall below economic levels and cost of production. The condition is that there should be either at least a 10 percent increase in production or a 10 percent decrease in the ruling market prices over the previous normal year. The scheme is implemented at the request of a State/UT government which is ready to bear 50 percent of the loss (25 percent in case of North-Eastern States), if any, incurred on its implementation. The extent of total amount of loss to be shared on a 50:50 basis between the Central Government and the State Government is restricted to 25 percent of the total procurement value which includes cost of the commodity procured plus permitted overhead expenses.

#### Ministry of Food Processing Industries (MoFPI)

### 3.5. Pradhan Mantri Kisan SAMPADA Yojana

Government of India (GOI) has approved a new Central Sector Scheme – Pradhan Mantri Kisan SAMPADA Yojana (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters) with an allocation of Rs. 6,000 crore for the period 2016-20 on 3 May 2017 coterminous with the 14th Finance Commission cycle. The scheme is being implemented by Ministry of Food Processing Industries (MoFPI).

**PM Kisan SAMPADA Yojana** is a comprehensive package which will result in creation of modern infrastructure with efficient
supply chain management from farm gate to retail outlet. It will not only provide a big boost to the growth of food processing sector in the country but also help in providing better process to farmers and is a big step towards doubling of farmers income, creating huge employment opportunities especially in the rural areas, reducing wastage of agricultural produce, increasing the processing level and enhancing the export of the processed foods.

The followings schemes will be implemented under PM Kisan SAMPADA Yojana

- Mega Food Parks.
- Integrated Cold Chain and Value Addition Infrastructure.
- Creation / Expansion of Food Processing & Preservation Capacities.
- Infrastructure for Agro-processing Clusters.
- Creation of Backward and Forward Linkages.
- Food Safety and Quality Assurance Infrastructure.
- Human Resources and Institutions.

Output

PM Kisan SAMPADA Yojana is expected to leverage investment of Rs. 31,400 crore for handling of 334 lakh MT agro-produce valued at Rs. 1,04,125 crore, benefiting 20 lakh farmers and generating 5,30,500 direct/indirect employment in the country by the year 2019-20.

3.6. Mega Food Parks

The Scheme of Mega Food Park aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure maximizing value addition, minimizing wastage, increasing farmers’ income and creating employment opportunities particularly in rural sector. The Mega Food Park Scheme is based on “Cluster” approach and envisages creation of state of art support infrastructure in a well-defined agri/ horticultural zone for setting up of modern food processing units along with well-established supply chain. Mega Food Park typically consist of supply chain infrastructure including collection centers, primary processing centers, central processing centers, cold chain and around 30-35 fully developed plots for entrepreneurs to set up food processing units.

The Mega Food Park project is implemented by a Special Purpose Vehicle (SPV) which is a Corporate Body registered under the Companies Act. However, State Government, State Government entities and Cooperatives are not required to form a separate SPV for implementation of Mega Food Park project. Subject to fulfillment of the conditions of the Scheme Guidelines, the funds are released to the SPVs.

Progress:

So far Nine Mega Food Parks, namely, Patanjali Food and Herbal Park, Haridwar, Srini Food Park, Chittoor, North East Mega Food Park, Nalbari, International Mega Food Park, Fazilka, Integrated Food Park, Tumkur, Jharkhand Mega Food Park, Ranchi, Indus Mega Food Park, Khargoan, Jangipur Bengal Mega Food Park, Murshidabad and MITS Mega Food Park Pvt Ltd, Rayagada are functional.

3.7. Cold Chain

The objective of the Scheme of Cold Chain, Value Addition and Preservation Infrastructure is to provide integrated cold chain and preservation infrastructure facilities, without any break, from the farm gate to the consumer. It covers pre-cooling facilities at production sites, reefer vans, mobile cooling units as well as value
addition centres which include infrastructural facilities like Processing/ Multi-line Processing/ Collection Centres, etc. for horticulture, organic produce, marine, dairy, meat and poultry etc.

The integrated cold chain project is set up by Partnership/ Proprietorship Firms, Companies, Corporations, Cooperatives, Self Help Groups (SHGs), Farmer Producer Organizations (FPOs), NGOs, Central/ State PSUs, etc. subject to fulfillment of eligibility conditions of scheme guidelines.

3.8. Scheme for Creation / Expansion of Food Processing / Preservation Capacities

The main objective of the Scheme is creation of processing and preservation capacities and modernisation/ expansion of existing food processing units with a view to increasing the level of processing, value addition leading to reduction of wastage. The setting up of new units and modernization / expansion of existing units are covered under the scheme. The processing units undertake a wide range of processing activities depending on the processing sectors which results in value addition and / or enhancing shelf life of the processed products.

Scheme is implemented through organizations such as Central & State PSUs / Joint Ventures / Farmer Producers Organization (FPOs)/ NGOs / Cooperatives/ SHG’s / Pvt. Ltd companies/ individuals proprietorship firms engaged in establishment/ up-gradation/ modernization of food processing units. Proposals under the scheme are invited through Expression of Interest (EOI) and Project Management Agencies (PMA) are engaged by MOFPI to assist in the implementation of the scheme.

3.9. Agro Processing Cluster

The scheme aims at development of modern infrastructure and common facilities to encourage group of entrepreneurs to set up food processing units based on cluster approach. Under the scheme, effective backward and forward linkages are created by linking groups of producers/ farmers to the processors and markets through well-equipped supply chain consisting of modern infrastructure for food processing closer to production areas and provision of integrated / complete preservation infrastructure facilities from the farm gate to the consumer.

Each clusters have two basic components i.e. Basic Enabling Infrastructure (roads, water supply, power supply, drainage, ETP etc.), Core Infrastructure/ Common facilities (warehouses, cold storages, IQF, tetra pack, sorting, grading etc) and at least 5 food processing units with a minimum investment of Rs. 25 crore. The units are set up simultaneous along with creation of common infrastructure.

The Project Execution Agency (PEA) which is responsible for overall implementation of the projects undertakes various activities including formulation of the Detailed Project Report (DPR), procurement/ purchase of land, arranging finance, creating infrastructure, ensuring external infrastructure linkages for the project etc. PEA may sell / lease plots in agro-processing cluster to other food processing units but the common facilities in the cluster cannot be sold or leased out.

Agro processing clusters set up by Govt./ PSUs/ Joint Ventures/ NGOs/ Cooperatives/ SHGs/ FPOs/ Private Sector/ individuals etc. are eligible for financial assistance subject to terms and conditions under the scheme guidelines.

3.10. Scheme for Creation of Backward and Forward Linkages

The objective of the scheme is to provide
effective and seamless backward and forward integration for processed food industry by plugging the gaps in supply chain in terms of availability of raw material and linkages with the market. Under the scheme, financial assistance is provided for setting up of primary processing centers/ collection centers at farm gate and modern retail outlets at the front end along with connectivity through insulated/ refrigerated transport.

The Scheme is applicable to perishable horticulture and non-horticulture produce such as, fruits, vegetables, dairy products, meat, poultry, fish, Ready to Cook Food Products, Honey, Coconut, Spices, Mushroom, Retail Shops for Perishable Food Products etc. The Scheme would enable linking of farmers to processors and the market for ensuring remunerative prices for agri produce.

The scheme is implemented by agencies/ organizations such as Govt./ PSUs/ Joint Ventures/ NGOs/ Cooperatives/ SHGs / FPOs / Private Sector / individuals etc.

3.11. Food Safety & Standards Authority of India (FSSAI)

The Food Safety & Standards Authority of India (FSSAI) has been established under the Food Safety & Standards Act (FSS Act), 2006. It is a statutory body for laying down science based standards for articles of food and regulating manufacturing, processing, distribution, sale and import of food so as to ensure safe and wholesome food for human consumption.

3.12. Detecting Adulteration

(i) A Central Sector Scheme for strengthening of Food Testing Infrastructure in the country at an estimated cost of Rs. 481.95 crore is under implementation. Under this scheme, 45 State/UT Food Testing Labs at least one in each State/ITT with a provision of two labs in larger States) and 14 Referral Food Testing labs will be upgraded to enable them to obtain NABL accreditation.

(ii) Inflonet: With a view to optimally utilise the resources, a network of food testing laboratories (State Food Testing Labs, and Referral labs) is being established across the country. Inflonet will enable multiple systems to work in an integrated manner to deliver services. The system will also be integrated with the existing Systems namely (1) Food Import Clearance System, (2) Food Licensing and Registration System, (3) FS Quick Access system which provides information about food categories and tests to be performed along with prescribed limits.

(iii) Specific measure to check adulteration in milk: FSSAI has identified instruments which are useful for instant identification of milk adulteration.

3.13. Licensing and Registration of Food Business Operators

(i) FSSAI has developed an online Food Licensing and Registration System (FLRS) to smoothen the process of licensing and registration of Food Business Operators. It provides a mechanism for online connectivity to all Designated Officers and Food Safety Commissioners of various States/UTs to communicate any untoward incidents of food related offences. Common Service Centres have been roped in to increase the reach of the licensing and registration processes.

Progress

The States / UTs have also granted 7,31,590 licenses and registered 28,74,471 Food Business Operators (FB0s) under the Act till 31.10.2016.

(ii) FSSAI has operationalized the import
We are committed to doubling of farmers’ income by 2022.

food clearance process in a phased manner since August-September 2010 through appointment of Authorized Officers for 21 points of entry at six major locations i.e. Delhi, Mumbai, Chennai, Kolkata, Tuticorin and Cochin Ports (including sea, air and land). Further, with a view to facilitate trade and import of food item into the country.


National Cooperative Development Corporation (NCDC), a Statutory Corporation was established on 14.03.1963 under an Act of Parliament (NCDC Act of 1962) for economic development through cooperative societies. NCDC is primarily focused on the cooperatives in the agriculture and allied sectors. These cover the complete value chain from “farm to shelf” including production, processing, marketing, storage, cold-chain, for agricultural and allied produce besides other inputs such as fertilizer, seeds, banking etc. and other sectors such as energy, rural housing and forest produce.

NCDC is playing key role in doubling the farmers’ income through cooperatives.

The promotional and developmental functions of NCDC aim at creating eco-systems for agriculture and allied sector stakeholders for successful conceptualization and implementation of developmental schemes and projects in cooperative sector. NCDC provides financial assistance for economic development of agriculture and allied sectors through cooperative societies. It also provides assistance for capacity building and upgradation of skills of personnel involved in the cooperatives.

Financial assistance in the form of subsidy is being provided through NCDC for improving the economic conditions of cooperatives particularly in the less developed and under developed regions, removing regional imbalances, to speed up cooperative development in agricultural marketing, processing and storage, cold-chain development, computerization of Primary Agricultural Cooperative Credit Societies (PACS), cotton development, establishment of new as well as modernization / expansion / rehabilitation of existing cooperative spinning mills, ginning and pressing units, promotion and development of selected districts in the country through cooperative efforts etc.

Progress

• Over the years, disbursements of NCDC financial assistance are growing. NCDC made an all time high release of Rs. 15914 crore during 2016-17. During Current financial year 2017-18 disbursement targets have already been surpassed. Disbursements of Rs. 19758.89 crore have been achieved against the target of Rs. 8000.00 crore till 13/02/2018.
• NCDC has provided cumulative financial assistance of Rs. 94407.61 crore. Out of total cumulative assistance of Rs. 94407.61 crore since 1963, 51.40% i.e. Rs. 45880.86 crore assistance has been provided since 2014-15.
• Net NPA of zero percent maintained during last 6 years.
• Recovery percentage maintained above 99.50%
• NCDC is a ISO 9001:2008 compliant organisation from October 2014 and has upgraded its Quality Management System in conformity with the ISO 9001:2015, the latest ISO Standard since December 2016.
Risk Management in Agriculture

OBJECTIVES

- To create and strengthen infrastructure for production of quality milk and strengthen infrastructure for procurement, processing and marketing of milk.
- To cover the risk of crops damage owing to natural hazard and sustain their income through risk management intervention.

PRADHAN MANTRI
FASAL BIMA YOJANA

Minimum Premium, Maximum Insurance for Farmer Welfare
Risk Management in Agriculture

4.1. Pradhan Mantri Fasal Bima Yojna (PMFBY)

The erstwhile Crop Insurance Schemes have been reviewed in consultation with various stakeholders including States/UTs. As a result of the review, a new scheme “Pradhan Mantri Fasal Bima Yojana (PMFBY) has been approved for implementation from Kharif 2016 along with pilot Unified Package Insurance Scheme (UPIS) and Restructured Weather Based Crop Insurance Scheme (RWBCIS).

Under the PMFBY, the premium rates to be paid by farmers are very low and balance premium will be paid by the Government, to be shared equally by State & Central Government, to provide full insured amount to the farmers against crop loss on account of natural calamities. There is no upper limit on Government subsidy.

Features
- Covers all food grains, oilseeds and annual commercial/Horticultural crops.
- One season one rate – a uniform maximum premium of 2% for Kharif, 1.5% for Rabi, Food & Oil seed crops and 5% for Annual Commercial/Horticultural Crops.
- Covers all risks of crop cycle – preventive sowing; risk to standing crops and post-harvest losses.
- For losses due to hailstorm, landslide and inundation assessment of yield losses at individual field level.
- Post-harvest losses for cut& spread crops on field upto 14 days due to cyclone/cyclonic rains and unseasonal rains.
- On account payment upto 25% of sum insured due to prevented sowing or mid season adversity.

4.2. Drought Management Scheme

The Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) is mandated to coordinate relief measures necessitated by drought, hailstorm, pest attack, frost/cold wave. Spatial distribution and quantum of rainfall during South-West Monsoon (June-September) mainly determines the incidence of drought in the country, as South West Monsoon accounts for more than 70% of annual rainfall.

- A Manual for Drought Management was published in the year 2009 by the Department revised in 2016 through a consultative process, involving the concerned Central Ministries Departments, State Governments, Scientific, Technical and Research Organizations.
- Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW) is mandated to coordinate relief measures necessitated by drought, hailstorm, pest attack and cold wave/frost.
- The revised items and Norms for assistance State Disaster Response Fund (SDRF) and National Disaster Response Fund (NDRF), for the period 2015-16 to 2019-20, was intimated to all State Governments by Ministry of Home Affair (MHA).
- A Drought Management Plan (DMP) as required under Disaster Management Act, 2005, has been prepared keeping in view the theme of national Platform for Disaster Risk Reduction (NPDRR) to achieve “Disaster Risk Reduction for Sustainable Development : Making India Resilient by 2030.”

Progress:
- Need for assistance for all categories has increased by 1.5 times.
- Threshold admissibility assistance raised from 1ha to 2 ha in all cases.
- The financial assistance paid to the farmers in the event of death increased to Rs, 4 lakh from Rs. 1.5 lakh.
• Assistance for fund under National Disaster Response fund was Rs. 30101 crore during 2014-2017.

4.3. Risk Management & Insurance in Animal Husbandry and Dairying

Providing protection mechanism to the farmers / BPL / SC / ST / landless livestock rearers against any eventual loss of their Indigenous / crossbred milch animals, pack animals and other livestock (Goat, Sheep, Pigs, Rabbit, yak and Mithun) animals due to death.

Progress

• Since 2014-15, Livestock Insurance Scheme is covered all the Districts of India and all the animals (Milch Cattle, Small animals and Pack animals) have been covered for insurance.
• Premium rate of Insurance is 3%-4.% for one year and 7.5% - 10.5% for three years based on different category and areas.
• Since 2014-17, 26.80 lakh animals have been insured and Rs. 81.95 crore release to States for Livestock Insurance Scheme.
• Insurance Value for Milch Animals on the basis of lactation of animal from Rs. 3000 per litre for cow and Rs. 4000 per litre for Buffalo.
• Payment after loss of animal within 15 days otherwise penalty of 12% compound interest to the beneficiaries.
• Focus on landless farmers, BPL, SC, ST and Women farmers so that benefit of insurance reach to last strata of society.

4.4. Mahalanobis National Crop Forecast Centre (MNCFC)

4.4.1. CHAMAN (Coordinated Horticulture Assessment and Management using Geo-informatics)
• Launched in September 2014
• Use of Remote Sensing and GIS for crop area and production assessment of 7 horticulture crops in 159 districts (Target 185).
• Use of Remote Sensing for horticulture development planning; Site Suitability, Orchard rejuvenation, Post-Harvest Infrastructure, Aqua-horticulture.
• Using sample survey methodology for area and production assessment of all major fruits and vegetables, fields work for Phase-I work completed in 4 States, viz. Maharashtra, Himachal Pradesh, Tamilnadu and Andhra Pradesh and field work of Phase-II is in progress

4.4.2. Crop Intensification in Rice-fallow Area

• Launched in September 2016.

Objectives:

• Rice-Fallow area assessment and characterization for crop intensification for Rabi Pulses in 6 states.
• Rice area mapping in Assam, Bihar, Chhattisgarh, Jharkhand, Odisha & West Bengal.
• Post Kharif Rice Fallow area suitability mapping in Chhattisgarh & Odisha.

4.4.3. KISAN (Crop Insurance using Space technology And Geo-informatics)

• Launched in October 2015.
• Use of high resolution remote sensing from satellite and UAV for improved crop yield estimation.
• Remote sensing based crop cutting experiment (CCE) site selection for rice crop in Odisha states under PMFBY.
• Area discrepancy assessment using satellite data.
• Development of protocol for CCE quality checking using remote sensing.
4.5. National Rainfed Area Authority (NRAA)

NRAA has been set up as an Advisory Body for policy and programme formulation and monitoring of schemes/programmes to resolve the agrarian challenges across the vast rainfed system of the country, besides promoting sustainable practices for steady growth of agricultural sector and farmers’ welfare.

It has been networking across and partnering with national and state level research and academic institutions, NGOs and developmental institutions and organizations working for agricultural sectors in general and rainfed system in particular.

ICAR, CRIDA, Hyderabad has been tasked to prepared detailed action plans for the 24 districts chosen in the first phase to initiate drought-proofing activities.

4.6. Agro-Meteorological Advisory Services (AAS) under Gramin Krishi Mausam Seva under Ministry of earth Science

The Dissemination of agromet advisories to the farmers through different multi-channel system of All India Radio (AIR) and Doordarshan, private TV and radio channels, newspaper and internet, SMS and IVR (Interactive Voice Response Technology) and PPP mode etc. is being made on wider scale.

R & D projects on e-Agromet, experimental surface soil moisture estimation, downscaling of surface soil moisture using SMOS satellite data at 1 km resolution, development of standardized precipitation evapotranspiration index (SPEI) using gridded rainfall and temperature (0.25 x 0.25 degree), Sowing Suitability of crops have been undertaken through different institutes.

A new Initiative under Gramin Krishi Mausam Sewa, Forecasting Agricultural output using Space, Agrometeorology and Land based observations have been undertaken and the crop yield forecast for different crops are prepared for communication to Mahalanobis National Crop Forecast Centre (MNCFC), Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW), Ministry of Agriculture, New Delhi.

Progress

At present, 19.5 million agriculture dependent households are benefitted by this service. Weather forecast and advisories under alerts and warnings through SMS now enable farmers in planning farming operations effectively to minimize/ control damage of crops under adverse weather conditions.

4.7. Hydro-meteorological Services

The necessary technical and operational support was provided to various Central / State Govt. organizations and other agencies in the field of Hydromet design, flood forecasting, rainfall monitoring for water management and agricultural planning purposes etc. The daily and weekly rainfall statistics for an additional 19 districts was generated from August 2016 taking the total to 660 districts for which these data are being generated. Sub-basin wise Quantitative Precipitation Forecasts (QPF) were generated using operational NWP models and uploaded on ESSO-IMD website for 146 flood prone sub-basins of India to be used as Guidance for forecasters for issuance of operational QPF for river basins.

Output

Design storm study in respect of sixteen (16) Hydraulic projects has been completed during the period Jan-Oct 2016, thereby generating a revenue of Rs 30,17,603/-. 
Extension Management in Agriculture

OBJECTIVES

- Dissemination of information to the farmers about innovation and production technologies and upgradation of knowledge and skill of Farmers.
- To create training infrastructure for training of agriculture and allies sectors.
Agriculture Extension

5.1. Support to State Extension Programmes for Extension Reforms Scheme (ATMA Scheme)

- The erstwhile Scheme ‘Support to State Extension Programmes for Extension Reforms (ATMA)’ implemented since 2005 has now been included as a component of the Sub-Mission on Agriculture Extension (SMAE) under umbrella scheme “Green Revolution Krishonnati Yojana” with some cost revisions.
- It is now under implementation in 676 districts of 29 states & 3 UTs of the country. The scheme promotes decentralized farmer-driven and farmer accountable extension system through an institutional arrangement for technology dissemination in the form of an Agricultural Technology Management Agency (ATMA) at district level. Under the scheme grants-in-aid is released to states with an objective to support State Governments efforts of revitalization of the extension system and making available the latest agricultural technologies in different thematic areas to increase agricultural production through extension activities viz. Farmers Training, Demonstrations, Exposure Visits, Kisan Mela, Mobilization of Farmers Groups and Setting up of Farm Schools. Through these activities, latest agriculture technologies are disseminated to farmers of the country.

Progress

This Scheme has been revised to include manpower support, roping in the farmers’ feed back in to planning by setting up Farmer Advisory Committees (FACs) at Block/ District & State Level and providing farmer-to-farmer learning and extension support through Farmer Friend.

The Modified Scheme has dedicated Specialists & Functionary Support at State (2 at State Nodal Cell and 7 to 15 at SAMETI level based on the number of blocks in the State/UT ), District (5 per district) & Block level (4 per Block). Various activities supported under the Scheme for educating and creating awareness amongst farmers include farmers trainings, exposure visits, demonstration, Kisan Mela mobilization of farmers Interest Groups (FIGs) and farm schools etc. Since inception of the scheme in 2005, 4.33 crore farmers’ have been benefited through various farmer oriented activities.

5.2. Mass Media Support to Agricultural Extension

5.2.1. Telecast of Krishi Darshan Programmes on Doordarshan

Under this scheme, a 30 minute programme is being telecast 5-6 days a week through 01 National, 18 Regional Kendras and 180 High Power/Low Power Transmitters of Doordarshan. For telecasting success stories, innovations and for popularization changersetting technology and farming practices through the Saturday slot of Doordarshan’s National Channel, DAC&FW is producing films, which would consciously project interalia positive aspects in agriculture and allied sector in India.

5.2.2. Broadcast of Kisan Vani Programme on All India Radio

Under this component, 96 FM/AM stations of All India Radio are broadcasting 30-minute programme six days a week from 6.30-7.00 PM. Each station broadcast separate programme in respective dialects/ languages. With easy availability of FM Radio on mobile phones, FM Stations can have wider outreach than before.
We are committed to doubling of farmers' income by 2022

5.2.3 Telecast/ Broadcast of spots/ jingles advisories under ‘Free Commercial Time (FCT)’ on AIR and DD:

In addition to above regular programmes, the Free Commercial Time (FCT) available under Krishi Darshan and Kisanvani programme is being utilized for dissemination of Advisories on Rabi / Kharif season, Jingles on Cooperatives spots on Kisan Call Centers, Judicious use of fertilizers, safe use of Pesticides, Machinery and Technology, Farm School, National Food Security Mission (NFSM), Kisan Credit Card and Agri -Clinic and Agri -Business Centers (ACABC), package of practices available to the farmers under National Food Security Mission (NFSM), and other important flagship programmes like Neem Coated urea, Pradhan Mantri Krishi Sichai Yajana, Pradhan Mantri Fasal Bima Yojana (PMFBY),, BGREI , National Agriculture Market, Soil health Card, Bee Keeping, NHM, Parampagat Krishi Vikas Yojana and Organic Farming etc and , contingency plan developed by State Governments and emergent issues like Drought, Flood etc.

Focused Publicity & Awareness Campaign through other media platforms:

- Besides above, the ‘Focused Publicity & Awareness Campaign which would cut across all the Divisions of the Ministry was launched on July 5, 2010 to create awareness about the assistance available under various schemes of the Department of Agriculture, Cooperation & Farmers Welfare.
- Video Spots and Audio spots are being broadcast/telecast through AIR, DD, Lok Sabha TV and also on Private TV Channels. The above spots are being broadcast/telecast through AIR/ DD and private national and regional TV channels during news and entertainment programmes.

5.3. Establishment of the Agri-Clinics and Agri-Business Centres (ACABC)

A Central Sector component, “ Establishment of Agri-Clinics and Agri-Business Centres (AC&ABC)” has been under implementation since April, 2002 to supplement the efforts of public extension, support agricultural development and create gainful self-employment opportunities to unemployed youths with qualification in agriculture and allied sectors.

The National Institute of Agricultural Extension Management (MANAGE), Hyderabad is the implementing agency for Training Component and National Bank for Agriculture and Rural Development (NABARD) is the implementing agency for Subsidy Component of AC&ABC scheme.

There is a provision of credit linked back-ended upfront composite subsidy on the bank loan availed by trained candidates under the Scheme. The subsidy is 44% in respect of women, SC/ST and all categories of candidates from North-Eastern and Hill States and 36% in respect of other categories.

The subsidy is admissible for loans upto Rs.20 lakh in case of individual and Rs.100 lakh in case of Group Projects (for ventures set up by a group of 5 trained candidates).

The scheme promotes involvement of agri-preneurs trained under the AC&ABC scheme in providing advisory and extension services to the farmers in agriculture and allied areas through agriventures established with financial supports. These agri-preneurs are actively involved in providing advisory and extension services to the farmers on various technologies including soil health, cropping practices, plant protection, post harvest technology etc.
Progress

During the current year 2998 candidates have been trained and 270 have established their ventures. Since inception of the scheme, 56,542 candidates have been trained and 23,517 agri-ventures have been established in the country till 31.12.2017 creating job opportunities to the tune of 7337 thousand mandays. Among the ventures established, 1915 have been granted with subsidy as on 31.12.2017. The agriventures established under the scheme are acting as active supplementary institutions for Government Extension mechanism in the States/UTs.

5.4. Kisan Call Centers (KCC)

The KCC Scheme was launched on 21st January 2004 to provide answer to farmers' queries on agriculture and allied sectors through toll free telephone lines. A country wide common eleven digit number '1800-180-1551' has been allocated for KCC. The replies to the queries of the farming community are being given in 22 local languages. KCCs operate from 14 locations in the country covering all the States and UTs.

Output

Since inception of the scheme, in the year 2004 over 353.75 lakh live calls have been registered at the KCC till December, 2017.

5.5. MANAGE

MANAGE Hyderabad is a national level nodal Training Institutes for providing training support to senior and middle level functionaries of the State Governments. It is also providing necessary support to the states in implementation of Extension Reforms (ATMA) scheme and other Extension schemes of the Department.

5.6. Extension Education Institutes (EEIs)

Four Extension Education Institutes namely, Nilokeri (Haryana), Rajendranagar, Hyderabad (Telangana), Anand (Gujarat), Jorhat (Assam) are functioning at the Regional Level. The objectives of EEIs are to improve the skills and professional competence of middle level Extension field functionaries of Agriculture and Allied Departments of the State Governments in the areas of (a) Extension Education; (b) Extension Methodology; (c) Information and Communication Technology; (d) Training Methodology; (e) Communication; (f) Market led Extension; etc. Every year on average 200 on and off campus is being organized by all EEIs.

5.7. Model Training Courses (MTCs)

Model Training Courses of eight days duration on thrust areas of Agriculture, Horticulture, Animal Husbandry, Fisheries Extension are supported by the Directorate of Extension (DOE) with the objective of improving the professional competence and upgrading the knowledge and developing technical skills of Subject Matter Specialists/ Extension workers of Agriculture and allied departments of the State Governments. 155 training programmes have been organized during 2017-18 (upto December, 2017).

5.8. Diploma in Agricultural Extension Services for Input Dealers (DAESI)

DAESI is of one year (expanded to 48 weeks) regular course launched in 2003 with an objective to impart education in agriculture and other allied areas to the Input Dealers so that they can establish linkage to their business with extension services, besides discharging regulatory responsibilities enjoined on them. This programme was earlier implemented
through MANAGE @ Rs. 20,000/- per candidate in self-financing mode in Andhra Pradesh, Maharashtra, Tamil Nadu, Odisha, Jharkhand & West Bengal. Now SAMETIs are also involved in conducting training programmes and so far 7946 candidates have been trained under 208 DAESI batches organized till December, 2017.

5.9. Exhibitions/ Melas

Agricultural Exhibitions / Fairs are an effective means of reaching to a large number of farmers. The Department has sponsored / organized about 08 Kisan Melas in different parts of the country including participation in India International Trade Fair 2016 by setting up Agriculture Pavilion from 14th - 27th November, 2016 at Pragati Maidan, New Delhi to disseminate relevant information and promote appropriate technologies and improved agronomic practices among the farmers and other stakeholders in agriculture and allied sectors. Financial assistance is provided for organization of Regional Agriculture Fairs (RAFs) to State Agriculture Universities and Indian Council of Agricultural Research (ICAR) institutes. Five (5) Regional Agriculture Fairs @ one in each region, namely, North, South, East, West and North East organised through State Agriculture Universities/ ICAR Institutes during a year are supported with a maximum funding of Rs.15 lakh each. The Ministry of Agriculture and Farmers’ Welfare also provides financial assistance to other institutions for organization of farmer centric International/ National/ State level events.

5.10. Mera Gaon- Mera Gaurav (ICAR)

This programme has been initiated to effectively promote direct interface of scientists of ICAR Institutes and State Agricultural Universities with the farmers to hasten the lab to land process. For this, a group of four scientists each is adopting 5 villages. The project is intended to connect with 25,000 villages. At present, agricultural scientists are providing information on newer technologies to the farmers in 13,500 villages.

5.11. Use of Information and Communication Technology in Agriculture

Ministry of Agriculture & Farmers’ Welfare aims to improve awareness, knowledge and efficiency of farmers. A comprehensive ICT strategy has, therefore, been developed not only to reach out to farmers in an easy and better way but also for planning and monitoring of schemes so that policy decisions can be taken at a faster pace and farmers can be benefited quickly. To empower different sections of rural areas, different ICT strategies have been devised.

5.12. National e-Governance Plan– Agriculture:

Ministry of Agriculture & Farmers’ Welfare is implementing National e-Governance Plan – Agriculture (NeGP-A). Its aim is to achieve rapid development in India through use of Information & Communication Technology (ICT) for timely access to agriculture related information for the farmers. In Agriculture, availability of real time information at the right time is the major issue. Lack of information at proper time causes a huge loss to farmers. NeGP-A aims to bridge this gap in communication by using technology. It provides an integrated approach to the delivery of services to the farming community using ICT. Under NeGP-A, around 60 online services have been developed and launched to provide ease of access and timely information to farmers. Some services are developed for monitoring of schemes so that quick analysis and reporting can be done.
5.13. MKisan-Use of basic mobile telephony

Since the penetration of smart phones with internet in rural areas is around 7-8% only, mobile telephony is considered to be the alternate and the best option to deliver services to the farmers. Mobile telephony has transformed the tenor of our lives. Department has developed a portal - mkisan(mkisan.gov.in), where around 2.5 crore farmers are registered and experts/scientists of different departments like IMD, ICAR, State Government, State Agriculture Universities send information to farmers in local languages.

Weather information about likelihood of rainfall, temperature, etc. enables farmers to make informed decision in choice of seed varieties, decide on timing of sowing and harvesting. With market information, farmers are better informed about markets to sell produce, prevailing market prices and quantity demanded in the market. Thus, they can make informed decisions to sell produce at the right price and right time. This helps reducing distress sales by farmers due to market supply fluctuations. Around 1745 crore SMSs have been sent through mkisan since its inception in 2013.

5.14. Farmers’ portal (www.farmer.gov.in)

Farmers’ Portal is a one stop shop for farmers where a farmer can get relevant information on range of topics including seeds, fertilizer, pesticides, credit, good practices, dealer network, availability of inputs, agromet
advisory etc. This information can be drilled down through the pictorial view of Map of India placed on the Home page as well.

While over 800 websites of various departments and organisations related to Agriculture & allied sectors in the Central and State Governments and 80 applications/portals of the Department pertained to agriculture & allied sectors from organisational and schematic view-point, not even one portal existed for the farmers and that was the genesis of the Farmers' Portal.

This centralized repository is the back bone of all mobile apps and SMS advisories. This portal provides information across all stages of crop management right from sowing of seeds till post harvesting. The beauty of this web based portal is that one can sift down to the block level and get the information of particular block.

**5.15. Development of Mobile Apps**

Spreading agricultural related information to farmers in the poorest communities has been made easier by proliferation of mobile phones. Today, mobile apps and services are being designed and released in different parts of the world. Mobile apps help to fulfil the larger objective of farmers’ empowerment and facilitates in extension services which can address the global food security issues. Many mobile apps have been developed for farmers.

Kisan Suvidha App: This app provides information to the farmers on critical parameters viz Weather, Plant Protection, Input Dealers, Agroadvisories and Market Prices, etc. Downloads till 6th Dec, 2017: 424752
Pusa Krishi mobile app has been launched by Union Agriculture Minister on March 21, 2016 to help farmers to get information about technologies developed by IARI to realize the dream “LAB to LAND” of our Prime Minister. Downloads till 6th Dec, 2017: 29086

Crop Insurance mobile app is used to calculate the Insurance Premium for notified crops based on area, coverage amount and loan amount in case of loanee farmer. It can also be used to get details of normal sum insured, extended sum insured, premium details and subsidy information of any notified crop in any notified area. Downloads till 6th Dec, 2017: 21230

AgriMarket app is use to fetch the market price of commodities from markets within the range of 50 km of the device’s location using mobile GPS. There is another option to get price of any market and any crop in case person does not want to use GPS location. Downloads till 6th Dec, 2017: 32148

Cce Agri – Mobile App
- CCE Agri mobile app has been developed to digitize the information of crop cutting experiment conducted in field.
- It automatically captures the location of field through GPS.
- Photographs and data captured through the app are transfer to web server immediately.
- Reduced claim settlement time and a level of transparency has achieved.
- Experiments done till 6th Dec, 2017: 235935

Crop Insurance Portal
- The only Portal for all stakeholders including Farmers, States, Insurance Companies, Banks
- Both Insurance Schemes viz. PMFBY and WBCIS Covered
- Information to Farmers on Premium, Cut Off Dates & Company Contacts for their Crop & Location on Web and through mobile app.
- Insurance Premium Calculator and Creation of Database of Notified / Allotted Dynamically
- Farmer’s Application for Loan / Insurance and its Integration with Banks
- Total downloads till 6th Dec, 2017: 21230.
Management of Allied Activities- Generation of Additional Employment and Income

OBJECTIVES

- To generate self-employment & income generation and provide infrastructure for agriculture and dairy sector.
- To optimally utilize the infrastructure for promoting self and wage employment through skill training programmes.
- Promote and trade in agriculture and international cooperation for the promotion of Indian agriculture.
6.1. Rashriya Krishi Vikas Yojana (RKVY)

RKVY accords flexibility and autonomy to States in planning and executing projects related to agriculture and allied sectors. States are empowered to formulate strategies for development of the agriculture and allied sectors in a holistic way taking into account their agro-climatic conditions so as to effectively address their local needs and priorities, rather than continuing with business as usual mode of “one size fits all” formula.

Besides planning and execution of projects, RKVY provides complete flexibility and autonomy to States to customize interventions as per local requirements.

- Government launched a revised RKVY Scheme in 2014-15 to provide more flexibility to States for boosting investment and enhancing productivity in agriculture and allied sectors.
- During 2014-15 to 2016-17 Maharashtra, Karnataka and Odisha have taken up 34 projects under Public Private Partnership for Integrated Development of Agriculture (PPPIAD).
- Geo-tagging of assets created under RKVY has been initiated with technical support from National Remote Sensing Centre. More than 75,000 assets geotagged.
- The Central share of allocation for implementation of the scheme during the current year (2017-18) is Rs. 4750 crore.

The cabinet on 1st November 2017 has approved continuation of the ongoing centrally sponsored scheme (State Plan)-Rashriya Krishi Vikas Yojana (RKVY) as Rashtriya Krishi Vikas Yojana- Remuneration Approaches for agriculture and Allied sector Rejuvenation (RKVY-RAFTAAR) for three years i.e. 2017-18 to 2019-20 with a financial allocation of Rs. 15722 crores.

RKVY-RAFTAAR's broad objectives are making farming a remunerative economic activity through strengthening the farmer’s effort, risk mitigation and promoting agri-business entrepreneurship.

Animal Husbandry

6.2. National Programme for Dairy Development (NPDD)

i. To create and strengthen infrastructure for production of quality milk including cold chain infrastructure linking the farmer to the consumer;

ii. To create and strengthen infrastructure for procurement, processing and marketing of milk;

iii. To create training infrastructure for training of dairy farmers;

iv. To strengthen dairy cooperative societies/Producers Companies at village level;

v. To increase milk production by providing technical input services like cattle-feed, and mineral mixture etc;

vi. To assist in rehabilitation of potentially viable milk federations/unions;

Progress

Under the programme, 32 projects in 18 States have been approved with the total outlay of Rs.353.49 crore (Central Assistance Rs249.06 crore) against which Rs.155.99 crore has been released till 08.03.2017. This Department has approved establishment/modification of 18.60 LLPD capacity dairy plant, installation of 4.91 LLPD capacity chilling plant and creation of
4516 dairy cooperative society (DCS). Till date, 654.6 Thousand Liters per day (TLPD) of milk processing capacity and 186.5 TLPD milk chilling capacity have been created under the project and 1259 DCS have been organized.

6.3. Intensive Dairy Development Programme (IDDP) Component of NPDD

The scheme was launched during 8th plan period for creating infrastructure for milk procurement, processing & marketing through providing technical inputs for increasing milk production and also improve social, economical and nutritional standards of people living in rural areas. The scheme was mainly implemented in non-Operation Flood areas of the country.

Progress:

Since inception of the scheme, 114 projects have been approved. Out of these, 54 projects are under implementation and 60 projects have been completed. 264 districts have been covered in 27 States and 1 UT with a total cost of Rs.716.40 crore. A total sum of Rs.639.75 crore has been released to the concerned State Governments and Milk Unions/Milk Federations for implementation of projects upto 08.03.2017.

These projects have benefited about 35.46 lakh farmers in 44948 villages in various States, procuring over 44.72 lakh kgs of milk per day (TKgPD) and marketing milk of about 31.86 lakh litres per day (LLPD). Milk chilling capacity of 37.14 lakh litres per day and milk processing capacity of 48.96 lakh litres per day have been created under this scheme as on 31.12.2017.

6.4. Strengthening Infrastructure for Quality & Clean Milk Production (SIQCMP): Component of NPDD

The scheme started during 2004-05 for Creation of necessary infrastructure for production of quality milk and milk products at the farmers level up to the points of consumption by Improvement of milking procedure at the farmers level, Training and Strengthening of infrastructure to create mass awareness about importance of clean milk production. The scheme was implemented through the State Government by District Cooperative Milk Union/ State Level Milk Federation. The scheme has been subsumed under NPDD.

Progress:

Since inception, the Department has approved 176 projects spread over 22 States and one UT at a total cost of Rs. 345.00 crore with a Central share of Rs 288.36 crore till 31.03.2014, out of it, 144 projects have been completed and remaining 32 projects are at various stages of implementation. An amount of Rs. 256.28 crore has been released upto 31.01.2017 for implementation of approved projects. Since inception 8.35 lakh farmer members have been trained, 2551 number Bulk Milk Coolers (BMCs) installed with a total milk chilling capacity of 54.0 lakh litres and strengthened 1926 existing laboratories.

6.5. Assistance to Cooperative Component of NPDD

This scheme was started during the year 1999-2000, with the objective to rehabilitate the sick dairy cooperative Milk Unions at the district level and Milk Federations at the State level. The scheme is being implemented on 50:50 sharing basis between Govt. of India and the concerned State Government through NDDB. The rehabilitation plan was prepared by National Dairy Development Board (NDDB) in consultation with the concerned State Milk Federation/District Milk Union. Each
we are committed to doubling of farmers' income by 2022

rehabilitation plan is prepared in such a manner that the net worth of the sick cooperative will become positive within a period of seven years from the date of its approval.

**Progress:**

Since inception, the Department had approved 42 rehabilitation projects for the sick Milk Unions at a total cost of Rs.289.64 crore with the central share of Rs.144.81 crore in 12 States viz of Madhya Pradesh, Chhattisgarh, Haryana, Karnataka, Uttar Pradesh, Kerala, Maharashtra, Assam, Nagaland, Punjab, West Bengal and Tamil Nadu. A total sum of Rs.138.90 crore as Central share has been released to the sick cooperative milk unions upto 08.03.2017.

6.6. National Dairy Plan

National Dairy Plan, Phase-I is projected to meet the national demand of 150 million tonnes of milk by 2016-17 through productivity enhancement, strengthening and expanding of village level infrastructure for milk procurement and providing producers with greater access to the organised milk-processing sector.

The NDP-I was launched during March, 2012 for implementation during 2011-12 to 2016-17 with total outlay was of Rs.2242 crore. Subsequently, the project period and number of States covered under NDP-I was extended till 2018-19.

**Objective:**

- To help increase the productivity of milch animals and thereby increase milk production to meet the rapidly growing demand for milk.
- To help provide rural milk producers with greater access to the organised milk-processing sector.

6.7. Dairy Entrepreneurship Development Scheme

The Department of Animal Husbandry, Dairying and Fisheries is implementing Dairy Entrepreneurship Development Scheme (DEDS) from 01.09.2010 with the objective of generation of self employment opportunities in the dairy sector, covering activities such as enhancement of milk production, procurement, preservation, transportation, processing and marketing of milk by providing back ended capital subsidy for bankable projects through NABARD.

**Objectives**

i. to generate self-employment and provide infrastructure for dairy sector.

ii. to set up modern dairy farms and infrastructure for production of clean milk.

iii. to encourage heifer calf rearing for
conservation and development of good breeding stock.

iv. to bring structural changes in the unorganized sector, so that initial processing of milk can be taken up at the village level.

v. to upgrade traditional technology to handle milk on a commercial scale.

vi. to provide value addition to milk through processing and production of milk products.

6.8. Entrepreneurship Development And Employment Generation

Objective

To encourage entrepreneurship in various poultry, sheep, goat and piggery activities and provide capacity building for employment opportunities.

Farmers, individual entrepreneurs, NGOs, Self Help Groups (SHGs), Joint Liability Groups (JLGs) etc.

Subsidy:

<table>
<thead>
<tr>
<th>Categories</th>
<th>Back ended capital subsidy %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normal Areas</td>
</tr>
<tr>
<td>BPL/SC/ST</td>
<td>33.33%</td>
</tr>
<tr>
<td>Above Poverty Line</td>
<td>25.00%</td>
</tr>
</tbody>
</table>

Progress

- Under Entrepreneurship Development and Employment Generation (EDEG), all together 32,981 beneficiaries were assisted with back ended subsidy for entrepreneurship in poultry, sheep, goat, rabbits and piggery; and for the purpose a fund of Rs.272.64 Crore has been released to NABARD.

- Under EDEG, 7824 women beneficiaries and 10677 SC/ST beneficiaries have been assisted.

Indian Council of Agricultural Research (ICAR)

6.9. Attracting and Retaining Youth in Agriculture (ARYA): ICAR

The ARYA project was implemented to empower the Youth in Rural Areas to take up various Agri-enterprises in Agriculture, allied and service sector for sustainable income and gainful employment. The project is running in 25 districts of 25 States through KVKs. With the target of 5000 youths, the project has been started. A total of 3242 rural youth were trained during 2016-17.

6.10. Farmer FIRST (ICAR)

The Farmer FIRST aims at enriching Farmers – Scientist interface, technology assemblage, application and feedback, partnership and institution building and content mobilization. It provides a platform to farmers and scientists for creating linkages, capacity building, technology adaptation and application, on-site input management, feedback and institution building. Under this scheme, from the outlay of Rs. 14.22 crores, 52 projects have been sanctioned to the ICAR institutes / Agriculture Universities. The scientists are working with more than 45000 farm families directly under this project.

6.11. Pandit Deen Dayal Upadhyay Unnat Krishi Shiksha Yojna )- (ICAR)

Agricultural Education Division, Indian Council of Agricultural Research, Department of Agriculture Research and Education,
Ministry of Agriculture and Farmers’ Welfare, Govt of India is actively participating in the Unnat Bharat Abhiyan of Ministry of Human Resources Development since 2015-16. Ministry of Agriculture and Farmers’ welfare has been given responsibility to extend activities of Organic Farming, Natural Farming and Cow based Economics. During 2015-16 ICAR has initiated Unnat Bharat Abhiyan activities related to capacity building of different progressive farmers in the field of Organic Farming, 130 training programmes were organised by different Agricultural Universities on Natural Farming/Organic Farming/Cow Based Economy. It has made a great impact at National level and the farmers have been greatly benefited and are coming forward to make it mass movement.

Keeping this in view and the interest shown by the farmers, it was decided to identify 100 farmers across the country having knowledge, skill, ability and experiences related to Organic Farming, Natural Farming and Cow based Economy and having facilities to conduct training programmes.

Subsequently in year 2016-17, ICAR has initiated a new scheme Pandit Deen Dayal Upadhyay Unnat Krishi Shiksha Yojna (PDDUUKSY) in Unnat Bharat Abhiyan with the following objectives:

- To build skilled Human Resource at village level relevant to national needs towards organic farming and sustainable agriculture.
- Provide rural India with professional support in the field of Organic Farming/Natural Farming/Rural Economy/Sustainable Agriculture.
- To extend other activities of Unnat Bharat Abhiyan at village level through these established centres.

Ministry of Rural Development

6.12. Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)

A right-based programme, aims at enhancing livelihood security by providing at least one hundred days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. MGNREGS resulted in creation of productive assets of prescribed quality & durability.

The mandate of the Act is to provide at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.

Progress

It also ensured social inclusion and strengthening of Panchayat Raj Institutions. During this year, 4.67 crore households were provided employment in 140.24 lakh works and in the process 187.91 crore person-days of employment were generated. There was very high participation from marginalized groups like SC/ST (39%) & women (56%). For disbursement of wages around 11.42 crore Bank & Post Office Accounts of MGNREGA workers have been reported.

6.13. Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)

Ministry of Rural Development’s placement-linked skill training programme announced on 25th September, 2014, refocuses and re-prioritises NRLM’S skilling component so as to build the capacity of rural poor youth to address the needs of both national and global skill requirements. The scheme is expected to
promote 'Make in India' campaign by preparing skilled workforce required for it. DDU-GKY has been aligned with the, Common Norms notified by Government. A total of 544 projects are being undertaken in the country by 268 Project Implementing Agencies (PIAs) selected in terms of guidelines.

The Department of Rural Development implements schemes for generation of self employment and wage employment, provision of housing and minor irrigation assets to rural poor, social assistance to the destitute and Rural Roads. Apart from this, Department provides the support services and other quality inputs such as assistance for strengthening of DRDA Administration, Training & Research, Human Resource Development, Development or voluntary action etc. for the proper implementation of the programmes.

The major programmes of the Department of Rural Development are Pradhan Mantri Gram Sadak Yojana, (PMGSY), Rural Housing (RE), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), National Rural Livelihoods Mission (NRLM) and National Social Assistance Programme (NSAP). New schemes of SAGY and Rurban Mission have been initiated.

Department of Land Resources is mandated to all land based development programmes. It implements area development programmes on watershed basis. The three watershed development programmes of the Department i.e.. Integrated Wasteland Development Programme (IWDP), Drought Prone Areas Programme (DPAP) and Desert Development Programme (DDP) have been consolidated into a single modified programme namely Integrated Watershed Management Programme (IWBP).


National Rural Livelihoods Mission, renamed as Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) was launched on 3rd June, 2011. It has a mandate to reach out to 8-10 crore rural poor households spread across 2.5 lakh Gram Panchayats in the country. The purpose of mobilization of women from poor households was to help them come together, collectively discuss their issues of poverty and deprivation, save a little regularly and improve sustainable livelihood options and capitalize on opportunities though credit linkages and technical assistance, Thus, the primary focus of the mission is to help women unleash their entrepreneurial capabilities by complementing them with capacities (knowledge, information, tools, collectivization, finance and technical assistance). The Programme was revamped and named Deendayal Antyodaya Yojana-National Rural Livelihood Mission in December, 2015.

Mobilization of rural poor women into Self Help Groups (SHGs) and their federations is NRLM’s key strategies for addressing rural poverty. SHGs are homogenous groups of 5-20 women that functions on the principles or mutual cooperation and collective action, These SHGs are federated at the village/Panchayat, cluster and block level. The institutions provide services (savings, credit, technical assistance for livelihood promotion) to their members that help them strengthen and sustain livelihoods.

It is envisaged that as the SHGs and their federations mature, they create a strong demand system for efficient and quality services, including accessing schemes and national social security assistance, programmes. Linkages
with mainstream institutions such as banks, local governance bodies, and government departments help them address multiple dimensions of poverty and deprivation. These activities enable women to improve their access to entitlements, rights, resources and livelihood opportunities and gradually come out of poverty.

Key processes of NRLM are driven by the institutions of rural poor women, especially by women who have come out or poverty by this very process. Thus, it is a programme for the poor women, of the poor women and by the poor women, NRLM aims at empowering not only financially but also socially and politically. Being a women-centric programme and also led by women, NRLM provides a strong foundation for women’s empowerment. These institutions serve as channels for disseminating useful information to rural women.

6.15. Mahila Kisan Sashaktikaran Pariyojana (MKSP)

Launched in 2010-11, is a special program for livelihood enhancement under DAY-NRLM. It is a concerted effort to recognize the role of women in agriculture. Investment is made to enhance their capacities, increase their income, and encourage participation in agriculture and allied activities. It also aims at ensuring nutrition for poorest of the poor by securing and strengthening the primary livelihoods basket of poorest households. The primary objective of MKSP is to empower women in agriculture by making systematic investments to enhance their participation and productivity in agriculture based livelihoods.

6.16. Creation and Marketing Support

DAY-NRLM ensures that infrastructure needs for major livelihoods activities of poor are met with. It also provides support for marketing to in of poor. The range of activities in marketing support include market research, market intelligence, technology extension, developing backward and forward linkages, building livelihoods collectives and supporting their business plans. About 20% of the state’s program outlay (25% in case of North Eastern states and Sikkim) is earmarked for this purpose.

6.17. Roshni

Roshini was launched by Ministry of Rural Development on 10th June 2013 in a bid to further reach out to rural youth in the country’s 27 most critical Left Wing-Extremism-affected districts. It will support a minimum of 50000 youths in these vulnerable districts.

Key features of the Roshni initiative are as under

- Training will be imparted through public-private and public-public partnerships with registered PLAs.
- Four residential training models with duration ranging from 3 months to 1 year shall be taken up to meet diverse needs of youth depending on their entry level qualifications.

6.18. Himayat for Youths in J&K

Ministry of Rural Development is undertaking scheme for skill empowerment and employment of J&K youths called Himayat. Himayat was launched in Srinagar on 21st August 2011 for giving training and placement to one lakh youth in Jammu & Kashmir over a period of 5 years. The scheme is a 100% centrally funded scheme. The Scheme is available to youth from both BPL as well as non-BPL categories and youth from urban as well as rural areas. Himayat is available to youths from border areas of Jammu & Kashmir also
6.20. Skill Development in Agriculture

Initiatives of DAC&FW to promote Skill Development activities:

1. Four Meetings of Coordination Committee on Skill Development held on 13.10.2016, 6.2.2017, 10.4.2017 and 12.1.2018 under the chairmanship of Additional Secretary (Extension)/ Joint Secretary (Extn). One National level and four Regional level workshops on skill development in agriculture to orient various stake holders were organized in 2017.

- During 2016-17, 100 Krishi Vigyan Kendras (KVKs) and 8 National Training Institutes of DAC&FW have been accredited with Agricultural Skill Council of India (ASCI) for conducting 216 training courses. A budget of Rs. 3.52 crore was allotted under Rashtriya Krishi Vikas Yojana for conducting skill training courses during 2016-17.

- During 2017-18, additional KVKs, ICAR Institutes, SAUs and National Training Institutes of DAC&FW have been identified for affiliation with ASCI for conducting 115 training courses. A budget of Rs. 2.00 crore has been concurred by IFD under 1% contingency fund of Rashtriya Krishi Vikas Yojana.

Workshops on Skilled Development

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Date</th>
<th>Place</th>
<th>State participated</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Workshop – “Kaushal Vikas se Krishi Vikas”</td>
<td>5.1.2017</td>
<td>NASC Complex, Pusa, New Delhi</td>
<td>All States</td>
</tr>
<tr>
<td>Regional Workshop – Southern States</td>
<td>12.2.2017</td>
<td>Hyderabad</td>
<td>AP, Telangana, Kerala, Karnataka, Tamilnadu, Goa, Maharashtra</td>
</tr>
<tr>
<td>Regional Workshop – Eastern States</td>
<td>25.5.2017</td>
<td>Kolkata</td>
<td>Bihar, Jharkhand, Odisha, Sikkim &amp; West Bengal</td>
</tr>
<tr>
<td>Regional Workshop – Western States</td>
<td>18.08.2017</td>
<td>Jaipur</td>
<td>Rajasthan, Gujarat, Madhya Pradesh &amp; Chhattisgarh</td>
</tr>
<tr>
<td>Regional Workshop – Northern States</td>
<td>15.09.2017</td>
<td>Chandigarh</td>
<td>Haryana, Punjab, Uttar Pradesh, Himanchal Pradesh, Uttarakhand and Jammu &amp; Kashmir</td>
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We are committed to doubling of farmers' income by 2022.

Women empowerment through various schemes and programmes of the Government
We are committed to doubling of farmers’ income by 2022.

Sustainable Agriculture Management

OBJECTIVES

- To restoring soil fertility and productivity at the individual farm level on sustainable basis.
- To promote eco-friendly concept of cultivation by mobilization of indigenous traditional techniques for reducing the dependency on agro-chemicals and fertilizers.
Sustainable Agriculture Management

7.1. Paramparagat Krishi Vikas Yojana (PKVY)

Paramparagat Krishi Vikas Yojana (PKVY) is one of the schemes under National Mission for Sustainable Agriculture (NMSA) to promote certified organic cultivation in 2 lakh ha covering 10,000 clusters. Financial assistance of Rs 50,000 per ha per farmer is provided in 3 years to develop the organic cluster of 20 hectare each and to cover certified area by 2 lakh hectare during 2015-16 and 2017-18.

Objectives of PKVY Scheme

v) To promote eco-friendly concept of cultivation reducing the dependency on agro-chemicals and fertilizers.

vi) To optimally utilize the locally available natural resources for input production.

vii) To promote use of local indigenous traditional techniques for management of plant nutrition and plant protection.

viii) To develop potential markets for organic products

Target:

• To develop 10,000 clusters (20 ha each) over 3 years and to increase certified area by 2 lakh ha in 3 years

Aims At:

• Realizing yield potentials in rainfed/hilly areas.

• Improving and sustaining soil health.

• Reducing cost of cultivation.

• Cluster based approach-Each cluster 20 ha @ Rs. 50,000 per farmer/ha.

• Decentralized and participatory approach.

Contours:

• Rs. 14.95 lakh to each cluster over 3 years period.

• Assistance on mobilization, training, inputs, certification, labelling and marketing.

Mobilization of farmers: training of farmers and exposure visit by farmers.

• Quality control: soil sample analysis, process documentation, inspection of fields of cluster members, residue analysis, certification charges and administrative expenses for certification.

• Conversion practices: transition from current practices to organic farming, which includes procurement of organic inputs, organic seeds and traditional organic input production units and biological nitrogen harvest planting etc.


• Custom hiring centre charges: to hire agricultural implements as per SMAM guidelines.

• Labelling and Packaging assistance & Transport assistance.

• Marketing through organic fairs.

Progress:

• The Annual Action Plan of 29 states and 1 Union Territory was approved with total outlay for Rs. 496.62 crore for the year 2015-16 total 7208 clusters developed.

• During 2017-18, total Rs 145.55 crore has been released to the states till date (including fund released for 2792 new clusters) and 10,000 clusters have been sanction to the States.
We are committed to doubling of farmers’ income by 2022.

Benefits of Organic Farming under PKVY Scheme

1) Cost reduction (cost saving): There is an immediate reduction in the cost of cultivation (cost saving) up to 10 to 20% as the beneficiaries are not using purchased fertilizers and pesticides.

2) Due to reduction in costs, there was increase in net returns ranging from 20 to 50%.

3) Savings in purchased inputs (cash expensed): The benefits are significant in crops like paddy and cotton, for which farmers spend huge amount of money on purchase of fertilizers and pesticides before PKVY.

4) Price premium was observed in some clusters, which are nearer to large cities and have good linkages with large markets (the premium was ranged from 10% to 30% based on the type of market linkage, commodity and market linkage. In general price premium is not widely observed)

5) Yield improvement observed only in a few farmers who do all PKVY practices since last few years, but in general there was no significant yield increase in first year.

6) There was huge scope of area increase of organic area in tribal, rainfed, hilly and remote areas.

7.2. Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)

Realizing the potential of organic farming in the North Eastern Region of the country, Ministry of Agriculture and Farmers Welfare has launched a Central Sector Scheme entitled “Mission Organic Value Chain Development for North Eastern Region” for implementation in the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, during 2015-16 to 2017-18.

The scheme aims at development of certified organic production in a value chain mode to link growers with consumers and to support the development of entire value chain starting from inputs, seeds, certification, to the creation of facilities for collection, aggregation, processing,
marketing and brand building initiative. The scheme was approved with an outlay of Rs. 400 crore for three years.

**Progress**

- The scheme is being implemented in NER states of Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura through State Lead Agencies (SLA) to cover an area of 50,000 hectares in 3 years.
- As against target of 50000 ha are, 45863 ha area has brought under the organic farming. Against the target of 100 FPCs, 82 FPCs has been achieved, and against the target of 2500 FIGs, 2406 FIGs has been formed and 44064 farmers were mobilized.

**Output/ Benefit**

- It facilitate the partnership between farmers and organic business, local enterprises and or Farmers Producer Companies (FPC).
- It has developed North Eastern Region Organic product as brands/labels through brand building.
- It is an end to end programme i.e. production to marketing.
- It would enhance the income of farmers.
- Upsurge of export of Organic Producer from NER.

**7.3. National Mission for Sustainable Agriculture (NMSA)**

National Mission for Sustainable Agriculture (NMSA) is one of the eight Missions outlined under National Action Plan on Climate Change (NAPCC). NMSA as a programmatic intervention made operational from the year 2014-15 aims at making agriculture more productive, sustainable, and remunerative and climate resilient by promoting location specific integrated/composite farming systems; soil and moisture conservation measures; comprehensive soil health management; efficient water management practices and mainstreaming rainfed technologies.

**7.4. Primary Agricultural Co-operative Society (PACS)-Computerization**

The PACS/LAMPS/FSCS are the bottom-tier of the Short Term Cooperative Credit Structure functioning at the grassroots (Gram Panchayat) level. These are Primary Societies owned by farmers, rural artisans etc. and intended to promote thrift and mutual help among the members; cater to their credit requirements and provide credit-linked services like input supply, storage and marketing of agricultural produce etc. These Cooperative Credit Institutions with their wide out-reach in the rural areas and accessibility to the small and marginal farmers and the other marginalized populations have been playing a vital role in dispensation of agricultural credit.

**Objectives**

- To cater to the credit need, mostly, farm credit and income generation activities of farmers, artisans and other members.
- To extend selected banking services to members.
- To implement Kissan Credit Card Scheme for providing timely and adequate farm credit to members.
- To take up marketing of agricultural produce of member farmers.
- To cater to the consumer needs, mostly, essential commodities of members.
- To create awareness among farmers to adopt improved farming practices.
- To reach upto the unprivileged section of the community through SHGs, JLGs and TFGs.
**Computerization of PACS**

“About 40% of the small and marginal farmers avail credit from the cooperative structure. The Primary Agriculture Credit Societies (PACS) act as the front end for loan disbursements. DAC & FW will support NABARD for computerisation and integration of all 63,000 functional PACS with the Core Banking System of District Central Cooperative Banks. This will be done in 3 years at an estimated cost of Rs. 1,900 crores, with financial participation from State Governments. This will ensure seamless flow of credit to small and marginal farmers.”

The project is envisaged as a Central Sector Scheme to be implemented through NABARD. The objective of the project is to computerize 63,000 viable PACS and to put in place standard business processes and practices, increase the efficiency, reduce inherent delays, efficient use of Rupay Kisan Cards, timely PMFBY data upload and facilitate integration of a wide range of services to farmers. This will bring in transparency and accountability and support in establishing MIS for governance and help monitor, determine and prevent leakages and imbalances in the system.

The architecture of the project includes a single software for the entire country run on stand-alone basis in all the PACS. The PACS data for backup and restore purpose as well as MIS purposes will be maintained in a National level data repository, which will help in getting required information on credit and non-credit business of the PACS to various stakeholders viz., GoI, State Governments, NABARD, StCBs, DCCBs, PACS and other stakeholders.

The estimated cost of the project is Rs. 2142.50 crore with a Central Government share of about Rs. 1343.67 crore. The project cost will be shared by GoI, State Governmens and PACS in the ratio of 60:35:5. The 3 Himalayan States of Jammu & Kashmir, Uttarakhand and Himachal Pradesh and North Eastern Region States will have a fund sharing pattern of 80:15:5 between GoI, State Governmens and PACS. Whereas in case of Union Territories, the entire 100% will be borne by GoI.

Governance of the project will be done by National Level, State Level and District Level Implementation and Monitoring Committees with representatives from Department of Agriculture, Cooperation and Farmers Welfare (DAC & FW), Department of Financial Services (DFS), National Bank for Agriculture and Rural Development (NABARD), State Governments, State Cooperative Banks (StCBs)/ District Central Cooperative Banks (DCCBs), Primary Agriculture Cooperative Societies(PACS), National Informatics Centre (NIC) and technical vendors. A core team in NABARD will manage the project. The project will have National Level PACS Software Vendor (NLPSV), National Level Data Repository Vendor (NLDRV) and System Integrators (SIs) at the State level as part of the strategy.

The project implementation will be done from 2017-18 to 2020-21. The actual Computerization of PACS will roll out from 2018-19 with computerization of 13,000 PACS in the first year (2018-19) at the total cost of Rs. 420.43 crore, 20,000 PACS (2019-20) at the total cost of Rs. 657.65 crore, and 30,000 PACS (2020-21) at the total cost of Rs. 997.76 crore,. However, handholding support would be extended beyond the implementation period up to 2022-23 at a cost of Rs. 66.66 crore.

**7.5. Sub-mission on Agroforestry**

- The Sub-Mission on Agroforestry (SMAF) has been made operational from 2016-17 to promote “Har Medh Par Ped”/ “Trees on
Farm Bund”.

- So far 16000 ha area is reported by states under Agro-forestry.
- 8 states relaxed the transit regulations during 2016-17.
- 13 more states relaxed the transit regulations in 2017-18 to take forward the national initiative on growing green cover.
- Due to continuous pursuance Ministry of Environment, Forests & Climate Change vide Gazette Notification No 43 dated 23 November, 2017 has amended section 2 of Indian Forest Act 16 of 1972, in clause (7) the word “ bamboos” shall be omitted. Thus bamboo will not be considered as forest species; hence the transit regulations will not be applicable.
- To promote agroforestry, a dedicated National Agroforestry Policy was introduced in 2014.

### 7.6. International Cooperation

The mandate for international Cooperation is to foster mutually beneficial partnership with other countries of the world in multilateral as well as bilateral format. DAC&FW is a nodal contact point in Government of India for Food & Agriculture Organization (FAO) and World Food Programme (WFP) of the United Nations. Bilateral Agreements, Memorandum of Understanding (MoUs), Protocol and Work Plans with countries of strategic interests are signed and implemented for furthering cooperation in the field of Agriculture and allied sectors in coordination with the Ministry of External Affairs and other concerned Ministries and Departments.

#### Output

Benefits accruing from our Agreement/MoUs with other countries are in the nature of capacity building, knowledge exchange through visit of scientists and technicians, exchange of genetic resources etc. that aid in the development of appropriate technologies and farm practices for enhancing agriculture productivity at farmer’s field. Such cooperation also facilitates creation of opportunities for trade in agricultural commodities. India’s strategic interests are also served through partnership with other countries.

#### Bilateral Cooperation (MoU / MoC / Agreements / Work Plans)

DAC&FW has signed a Memorandum of Understanding (MOU) on cooperation in the field of agriculture and its allied sectors with 13 countries during the last three years:– Armenia, Madagascar, Lithuania, Japan, Kyrgyzstan, Portugal, Kenya, Mauritius, UAE, Poland, Palestine, Philippines and Italy. An MoU was signed by Govt. of India with UN-World Food Programme on 18th Aug. 2015 and the Global Crop Diversity Trust (GCDT), Bonn, Germany on 7th Nov. 2016 and an MOU between India_Taipei Association in Taipei and Taipei Economic and Culture Centre in India, on 12.09.2016

#### International Events

BRICS Agriculture Ministers’ Meeting: The Department successfully organized the 6th meeting of Agriculture Ministers of the BRICS countries on September 23, 2016 in New Delhi. Ministry of Agriculture and Farmer Welfare in collaboration with CII and FICCI successfully organized the India Africa Conference during 24-25, may, 217 in Gujarat on the margins of the 52nd AFDB Annual Meeting in which several Ministers, Government Officers and Company representatives participated.

#### 7.7. Climate Change & Agriculture

- A draft vision document for 15 years i.e.
upto 2030 with 7 years Strategy and 3 year action plan on Sustainable Development Goals (SDGs) has been submitted to NITI Aayog.

- Published booklet on initiatives related to climate change.
- During 2012-17, 18.70 lakh ha area under Organic Farming, 7.42 lakh ha under SRI/DSR against conventional rice cultivation, 2.60 lakh ha under Crop Diversification and 8.01 lakh ha additional area under plantation in arable land has been brought.
- 28.46 lakh ha area was covered under Micro-Irrigation/Precision Irrigation from 2012-17.
- 75 new genotypes with enhanced CO2 fixation potential and less water consumptions and nutrients have been identified/released from 2012-17.
- 73 climate resilient genotypes with greater adaptation to drought, flood, salinity and high temperature have been identified/released from 2012-17.
- 24.15 lakh milch animals were covered under Ration Balancing Programme from 2012-17.

**7.8. Capital Investment in Agriculture**

Various corpus funds for promotion of agriculture & allied sectors:

**7.8.1. Rashtriya Krishi Vikas Yojana (RKVY)**

The Cabinet on 1st November 2017 has approved continuation of the ongoing centrally sponsored scheme (State Plan)-Rashtriya Krishi Vikas Yojana (RKVY) as Rashtriya Krishi Vikas Yojana- Remuneration Approaches for agriculture and Allied sector Rejuvenation (RKVY-RAFTAAR) for three years i.e. 2017-18 to 2019-20 with a financial allocation of Rs. 15722 crores.

RKVY-RAFTAAR’s broad objectives are making farming a remunerative economic activity through strengthening the farmer’s effort, risk mitigation and promoting agri-business entrepreneurship.

**7.8.2. Agri-Market Infrastructure Fund (AMIF) with a Corpus of Rs. 2,000 Crores**

There are about 22,000 rural huts in the country which are reported to be not having adequate market infrastructure. These rural huts are mostly under the panchayats at village level. For development of these rural huts into grameen agricultural markets NABARD proposed to create agri market infrastructure fund of Rs. 2,000 crores by mobilizing funds from the market and give to state governments as loan at subsidized interest rate. This fund will also be utilized for further development of 585 APMCs in the country. Since these proposed grameen agriculture market will come up near the farm gate/villages, the farmers will have easy access to the market and the aggregated agricultural produce can be move to nearest APMCs or institutional buyers can also purchase the produce from these grameen huts.

MGNREGA under their rural infrastructure scheme have provision to set up village haat at the village or block level. Development of such permanent market centres will help rural farmers to promote marketing of their produce and boost socio-economic development. The basic infrastructure/facilities provided by MGNREGA include: (a) open raised platforms & covered platform, (b) toilets (separate for women and men), (c) drinking water facility, (d) drains, (e) brick/stone soling in the moving space (f) garbage pits at corner (g) office block (h) storage (small size) (i) boundary wall/fence with two gates one for incoming and second
for outgoing (j) parking space, (k) drinking water facilities for cattle. In addition to the above basic facilities, if a small assaying lab/equipment, weighing scale, IT facilities are provided. These grameen agricultural markets can also be integrated with e-NAM platform. Provision for value addition can also be made. Setting up of grameen agricultural market near farm gate may also reduce the loss and benefit both the farmers and buyers.

7.8.3. Long Term Irrigation Fund (LTIF) - long term benefits for Indian irrigation

The 2016-17 Union Budget made a path breaking announcement in the sector of irrigation - setting up of Long Term Irrigation Fund (LTIF) in NABARD with an initial corpus of Rs 20,000 crore for funding of irrigation projects which were languishing incomplete for want of funds for many years.

Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR, RD & GR), Government of India obtained Cabinet approval on 27 July 2016, for funding of 99 projects identified under LTIF. The overall estimated financial requirement towards Central Assistance and State Share has been assessed as Rs.77,908 crore (Central Share – Rs.31,342 cr and Rs.313 cr for concurrent evaluation, social audit etc ; State Share – Rs.46,253 cr) over 4 years i.e. up to December 2019.

Polavaram National Project has also been added for funding under LTIF for which an amount of Rs.3,960.90 crore (Rs.2,981.54 cr during 2016-17 & Rs.979.36 cr during 2017-18) has been sanctioned as Central share to NWDA. The likely irrigation potential of 78.941 lakh ha. (including Polavaram project – 2.91 lakh ha.) would be created on completion of these projects.

Features of LTIF loan:

(i) Tenure -15 years with 3 years moratorium @ 6%.

(ii) Pursuant to this announcement, displaying complete professionalism and speed NABARD has sanctioned Rs.49,889.60 crore and released Rs.9,086.03 crore during 2016-17. The cumulative sanction and release as on 30 September 2017, stands to Rs.50,872.37 crore Rs.12,029.86 crores respectively.

7.8.4. Micro Irrigation Fund

With a view to provide impetus to micro irrigation in the country, the Union Finance Minister, in his Budget Speech 2017-18 has announced creation of a dedicated Micro Irrigation Fund to be instituted with NABARD with an initial corpus of Rs. 5000 crore for encouraging public and private investments in modern irrigation methods such as sprinkler and drip irrigation and offering support for expanding coverage of Micro Irrigation by encouraging the States to avail this credit at a lower interest rate. The Scheme also aims to encourage water use enhancing practices to realize the objective of ‘Per Drop More Crop’.

Interventions

The corpus fund may be utilized by the States in any of the following manner so as to achieve the objective of the PMKSY Mission.

- To provide extra budgetary support to the states for meeting state share, top up subsidy if any, innovative projects, area expansion and project mode implementation in irrigation commands.

- The states were supposed to access the loan at about 8% interest rate (interest rate for raising fund from market and NABARD margin/service charges. The loan is to be
7.8.5. Creation of Fisheries and Aquaculture Infrastructure Development Fund (FIDF)

The Union Government in its Budget 2018 has set aside Rs.8000 crore for setting up of a dedicated Fisheries and Aquaculture Infrastructure Development Fund (FIDF). FIDF will provide concessional finance to the State Governments/Union Territories, State entities, cooperatives, individual entrepreneurs, etc. for development of fisheries infrastructure facilities both in marine and inland fisheries sector. The infrastructure facilities to be funded under the FIDF will broadly cover development of fishing harbours/ fish landing centres, fish seed farms, fish feed mills/plants, cage culture in reservoirs, mariculture activities, introduction of deep sea fishing vessels, setting up of disease diagnostic and aquatic quarantine facilities, creation of cold chain infrastructure facilities such as ice plants, cold storage, fish transport facilities, fish processing units, fish markets etc.

The fund has the potential to benefit over 4 million marine and inland fishers especially women, SHGs, weaker sections, due to availability of modern infrastructure and added value of produce. The fund would (i) fill the large infrastructure gaps in fisheries sector, (ii) create employment opportunity to the rural population in fishing and allied activities, (iii) contributes towards enhancement of fish production and productivity, (iv) offers manifold benefits and (v) fulfill the requirements of tapping the full fisheries potential and achieving the vision given by the Hon’ble Prime Minister for doubling farmers’ income.

The Fund would be created in collaboration with NABARD, NCDC and Specified commercial banks. National Fisheries Development Board (NFDB) will be the Nodal Implementing Agency for overall coordination of the FIDF activities.

7.8.6. “Dairy Processing & Infrastructure Development Fund” (DIDF) with an outlay of Rs 10881 crore

Consequent to the Union Budget 2017-18 announcement, Dairy Processing & Infrastructure Development Fund has been set up as a corpus of Rs 8004 crore with National Bank for Agriculture and Rural Development (NABARD). The CCEA in its meeting dated 12.09.2017 has approved the Scheme. Administrative approval of the scheme has been issued on 21.12.2017.

Out of Rs 10881 crore of financial outlay for project components of DIDF, Rs 8004 crore shall be loan from NABARD to NDDB/NCDC, Rs 2001 crore shall be end borrowers contribution, Rs 12 crore would be NDDB’s share and Rs 864 crore shall be contributed by DADF towards interest subvention. NABARD shall disburse Rs 2004 Cr, Rs 3006 Cr and Rs 2994 Cr during the year 2017-18, 2018-19 and 2019-20 respectively. Allocation of Rs 864 Crore for meeting interest subvention will be made over a period of 12 years from 2017-18 to 2028-29.

The project will focus on building an efficient milk procurement system by setting up of processing and chilling infrastructure & installation of electronic milk adulteration testing equipment at village level.

With this investment, 95,00,000 farmers in about 50,000 villages would be benefitted. Additional Milk processing capacity of 126 lakh litre per day, milk drying capacity of 210 MT per day, milk chilling capacity of 140 lakh litre per day, installation of 28000 Bulk Milk Coolers (BMCs) along with electronic milk adulteration testing equipment and value added products manufacturing capacity of 59.78 lakh litre per day of milk equivalent shall be created.
7.8.7. Fund For Integrated Development of Sheep, Goat, Piggery & Poultry

A “Small Animal and Poultry Development Fund (SAPDF)” is proposed to be set-up in NABARD with the following objectives:

a) To enable doubling of farmers income.

b) To fulfill the objective of protein enriched food requirement of the growing population of the country and prevent malnutrition in one of the highest malnourished children population in the world.

c) To promote poultry exports.

Investment activities under the Fund

The fund will be utilised broadly for the following investment activities:

i. Encourage entrepreneurship in the sector through various small animal and poultry activities.

ii. Setting up, expansion, modernization of Poultry farms, hatcheries, poultry feed mixing units etc.

iii. Establishment or Strengthening of District level Semen Stations for Goat, Sheep and Pig.

iv. Import of High Genetic Merit (HGM) Porcine Germplasm.

Eligible borrowers/ entities

All categories of borrowers shall be supported under the fund and following are eligible:

i. Individuals.

ii. Partnerships, Joint Liability Groups.

iii. Private limited companies.

iv. Public limited companies.

v. Self-help groups.

vi. Cooperatives.

Source of funds and implementation

The sources of finance for implementation of the proposed SAPDF would be through raising of funds to the tune of around Rs. 2000 crore by NABARD from the market/any other sources for financing to eligible entities and activities and budgetary support of GoI to meet the interest subvention.

The modalities of further implementation and guidelines will be worked out in consultation with NABARD and other stakeholders.
Kisan Call Centre

Started on 21st January 2004

Features

- Nationwide single toll free number: 1800 180 1551.
- 365 days from 6 AM to 10 PM.
- Reply to farmers queries in local languages.

Ministry of Agriculture & Farmers Welfare

Celebrated KCC Foundation Day on 21st January 2018 across the Country
We are committed to doubling farmers’ income by 2022.
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