

National Conference on Agriculture for
Kharif Campaign, 2018

25th -26th April, 2018

Vigyan Bhawan, New Delhi

AGENDA NOTE



सत्यमेव जयते

Government of India
Ministry of Agriculture and Farmers Welfare
Department of Agriculture, Cooperation and Farmers Welfare
Krishi Bhawan, New Delhi - 110001
www.agricoop.nic.in

CONTENTS

| GROUP | TOPIC | PAGE No. |
|------------|---|----------|
| I | Organic Farming (New Guidelines) | 1-2 |
| II | Procurement of Commodities (PSS/ MAS/ PDPS/ Problem Solving/ Issues of State Governments) Part I- Price Support Scheme (PSS) Part II-Market Insurance Scheme (MIS) Part III-Price Deficiency Procurement Scheme (PDPS) | 3-7 |
| III | Agriculture Extension - Awareness Campaign for Farmers and Implementation of Extension Schemes | 8-10 |
| IV | MIDH - Use of Specific Technologies and Best Practices in Horticulture | 11-13 |
| V | NRM / RFS - Micro Irrigation / Agro Forestry/ Restructured National Bamboo Mission Part I- MICRO IRRIGATION Part II- SUB-MISSION ON AGROFORESTRY Part III- Restructured National Bamboo Mission | 14-20 |
| VI | Marketing / E-Nam & Marketing Reforms | 21-22 |

TOPIC – I: ORGANIC FARMING (NEW GUIDELINES)

1. Background:

1.1 Paramparagat Krishi Vikas Yojana (PKVY) is a sub-component of Soil Health Management (SHM) scheme under National Mission of Sustainable Agriculture (NMSA), which aims at development of models of excellence, ensure long term soil fertility buildup, resource conservation and offer safe and healthy food without the use of agro-chemicals. It also aims to empower farmers through cluster approach, input production, quality assurance, value addition and direct marketing through innovative means. This scheme was initiated in 2015 and at by now 11,891 clusters and 2.38 lakh ha have been covered. Participatory Guarantee System (PGS) under PGS-India programme is the key approach for quality assurance under the PKVY.

2. Need for New Guidelines:

- The States wants simplification in guidelines and for providing more flexibility in implementation.
- The Group of Secretaries has decided to increase the cluster size up to 1000 ha to have enough marketable surplus.
- To make the programme project oriented with end to end provisions ranging from cluster formation, training, capacity building, input supply for production, post harvest management and marketing.

3. Main Highlights of Revised guidelines:

- Each State to develop Annual Action Plan (AAP) in end to end project mode from farmer's mobilization to marketing of organic produce.
- States to focus on implementation of organic farming in larger area of 1000 ha so as to ensure availability of organic agriculture surplus for marketing purpose.
- The cost norms have been calculated on per ha basis in revised guidelines.
- Flexibility has been provided to States for choice in method of organic farming.
- The States have been provided flexibility for input management so as to ensure reduction in input cost.
- The scheme has to be implemented by the State Govt. or by the alternative Service Provider (SP) / Regional Council (RC).
- Service Provider / RC cannot certify the organic produce within the same cluster.
- New initiative has been taken to put in place 2-Clusters Coordinator over 25 clusters so as to ensure proper supervision and implementation of the scheme.
- Incentives to farmers for organic conversion, organic inputs, on-farm input production infrastructure etc shall be provided as Direct Benefit Transfer (DBT) to their respective bank accounts.
- The State will execute the activities through State officials or duly appointed professional service providers and RCs.
- Convergence with other Central Sector Schemes like MIDH, NFSM of DAC&FW and schemes of other ministries like MOFPI, SMES, MoRD etc for

relevant components.

- The farmers in a group can avail benefits to a maximum of one ha as per provision of PKVY.
- The farmers will have option to adopt any form of organic farming in compliance of PGS-India standards. While adopting a system, it must be ensured that the system adopted is compatible to the area and crop and assures optimum yield and provides adequate measures to manage nutrients, pests and diseases.
- The farmers will have the flexibility to use appropriate Package of Practices best suited to their situations.
- States can issue necessary guidelines and suggest inputs as recommendatory measures. Farmers can choose inputs out of the recommendations as per their choice.
- In any case farmers should not be forced to buy the recommended inputs by the implementing department and service providers.
- Farmers will also be free to utilize the assistance fully for creation of on-farm input production infrastructure.
- The financial assistance will be given for direct marketing by the groups and clusters including for procuring common packing material, printing of packing material, brochures, leaflets, preparation of labels, holograms, transportation expenses to local markets, hiring spaces on rent for specific organic markets and branding of organic products.

**TOPIC – II: PROCUREMENT OF COMMODITIES (PSS / MAS / PDPS
PROBLEM SOLVING / ISSUES OF STATE GOVERNMENTS)**

PART-I: PRICE SUPPORT SCHEME (PSS)

1. Background:

1.1 Price Support Scheme (PSS) is under implementation for procurement of oil seeds and pulses through Central nodal agencies. This 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, working capital for state agencies, creation of revolving fund for PSS operations, etc as required under the scheme guidelines. Procurement of these commodities are undertaken by Central agencies at Minimum Support Price (MSP) announced by the Government as and when prices fall below the MSP as well as compliance of State Govt. to PSS guidelines.

2. Status of PSS:

2.1 The DAC&FW provides Government Guarantee to Central nodal agencies for smooth procurement of commodities under PSS. At present, NAFED has been provided Rs. 19000 crore Government Guarantee from State Bank of India (SBI). Against the Government Guarantee, banks are authorized to release the funds as per the requirement of Central agencies. Bank opens individual account for each commodity and fix a limit based on the value of stocks procured under PSS and hypothecated the same to the bank. From this limit, Central agencies are expected to repay all their procurement cost such as payment to farmers (MSP value), transportation expenses, gunny bags, stitching charges, labour etc. Thereafter, Central agencies are expected to dispose the PSS stock and deposit the sale proceeds to bank account and submit a final audited account of each individual PSS operation separately to this Department for onward submission the same for vetting the accounts from the office of Chief Adviser Cost, Department of Expenditure, Ministry of Finance.

2.2 Under the PSS, procurement of horticultural / agricultural commodities which are perishable in nature are not covered. The DAC&FW covers these perishable items under another scheme namely, Market Intervention Scheme (MIS) to protect the growers from 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.

PART-II: MARKET ASSURANCE SCHEME (MAS)

1. Background:

1.1 Government proposes to strengthen the procurement mechanism to ensure that farmers do not suffer from marketing inefficiencies, as commonly reflected in the prices ruling lower than notified MSP for many commodities. Hence, the need for a suitable market intervention mechanism, that enables quick assessment of market fluctuations, advanced preparation and timely procurement commencement as soon as the prices breach the MSP on its negative side. This can happen if the decision making and procurement authority is one and the same. It is against this background, that the Government has proposed a new scheme called Market Assurance Scheme (MAS) which will address the shortcomings in the existing schemes and offer a robust alternative for procurement of various agri-commodities (except wheat & paddy) of farmers, for which MSPs are notified by Government of India.

2. Main Features of MAS:

- i. MAS will be for all Pulses, Oilseed and Coarse Grains produced in the respective state whose Minimum Support Price (MSP) are declared by Central Government each year/season
- ii. The ownership of the scheme including the decision to procure and its actual operation shall be decentralized and vested with the respective State/UT Governments
- iii. The State/UT governments shall decide when to begin procurement and shall enter the market and start procurement accordingly through their own public sector agencies or through other empanelled & authorized private agencies or central procuring agencies authorized to do so by them, which shall then procure on behalf of the authorizing State/UT.
- iv. It shall be the responsibility of the State/UT to dispose off the procured commodities in an appropriate manner. However, losses, if any, sustained in these operations by the State/UT shall be compensated for, by the Central Government upto a maximum value of 40 per cent (50% for Himalayan and North Eastern State) of MSP value for that particular commodity notified for the season/year in which the commodity was procured. The State/UT Governments are free to retain any surplus generated during this exercise. In case of losses between 40% to 50% of MSP value, the loss will be shared equally between Center and State Govt. and losses above 50% of MSP value has to be borne by State Govt. The Central share of losses will be reimbursed with 6 month from the date of last disposal date subject to receipt of audited account in prescribed format from the State.
- v. Considering the comment of some States regarding the limitation of financial resources with the states/ states procuring agencies and arrangement of working capital, it is proposed to create a Central Corpus for providing interest free advance towards working capital to the states/UTs. Working capital shall be used by State for making procurements at MSP and other procurement related expenses like interest on working capital, arrangement of gunny bags, transportation, storage, handling and other logistics & management related expenses under MAS. The interest free working capital advance, as evaluated by the concern State/UT Level committee and approved by MAS Central

Corpus Fund Committee, will be provided to the States/UTs based on their request. In case of North East and Himalayan States the working capital advance will be 75% of states/UTs revolving fund.

- vi. Regarding decision of Import duty of commodities procured under MAS, State representative where MAS procurement has been made may be nominated as one of the member of Committee for recommending the import related provisions /steps in Inter Ministerial Committee(IMC)
- vii. For Disposal related activity and other handhold support, services of NAFED (the Central Agency for PSS) can be taken by States. NAFED can provide services in procurement and disposal activity of MAS stock by charging service charges which can be fixed by State with mutual agreement with NAFED.

3 Advantages of MAS

- i. It is a decentralized system operated by the State/UT governments, wherein they have the flexibility to decide and rollout procurement operation in time and engage different agencies to undertake such procurements.
- ii. The liability of the Central Government will arise only if prices fall below MSP, and such obligation is limited to a maximum of 40 to 50 per cent of MSP, as the case may be.
- iii. The State/UT governments will have the latitude to dispose of the procured commodities in the manner they find it most suitable.
- iv. The State/UT governments are likely to integrate these procurements into their PDS, Mid Day Meal scheme, ICDS feeding programme, ration distribution scheme for Police and such other forces.
- v. The State/UT governments can also sell in the open market or/and export (subject to export & trade regime of Government of India).
- vi. The farmer-producers will stand to benefit on account of timely and speedy market intervention.
- vii. Market price stabilization will happen with greater probability due to timely intervention.

PART-III: PRICE DEFICIENCY PROCUREMENT SCHEME (PDPS)

1. Background:

1.1 Government proposes to ensure that farmers do not suffer from marketing inefficiencies, as commonly reflected in the prices ruling lower than notified MSP for many commodities. Hence, it is proposed to implement a new scheme called "PDPS". The scheme will be an alternative available to the States/UTs to ensure remunerative price to its farmers in addition to the existing Price Support Scheme. The scheme envisages direct payment of the difference between the MSP and the selling price to the pre-registered farmers selling his produce in the notified market yard through a transparent auction process. The payment will be done directly into their bank account.

2. Salient Features of the Scheme:

- i. Scheme will be applicable to selected pulses, oilseeds and coarse grains by the States/UTs which are produced in the respective States/UTs and for which minimum support price is declared by Central Government each year/season.
- ii. Maximum of four selected agriculture commodities decided by the State/UT can be covered under this scheme in every season. In addition, States can also include cotton over and above the limit of four commodities per season.
- iii. 75% of the average production against the land holding of each farmer shall be eligible for benefit of price difference.
- iv. To get the benefit of the scheme, farmers must be registered on the portal to be specifically developed for this purpose by the respective State /UT Government within the stipulated time period.
- v. Farmers shall be allowed to sell their produce in the notified market yards within a pre-notified time period which could be 90 days (extendable to 120 days in exceptional cases by State Govt.) for being considered /eligible for benefit.
- vi. Only the fair average quality of produce sold in the notified market yard shall be eligible for benefit under the scheme.
- vii. Difference in actual sale price and MSP/Modal price will be paid to the farmers who have sold their produce in notified markets and received the payment through RTGS or other method of e-payment from the traders in the same bank account within one month from the sale of the commodity in the notified markets of the State/UT.
- viii. Only those States/UTs which have adopted the Model APLM Act, 2017 or give a commitment in writing to do so within a specified time frame shall be eligible to implement the scheme.
- ix. Entire process starting from pre-registration to payment of sale proceeds in the notified market yards and payment of difference into farmers accounts shall be done electronically through e-NAM platform.
- x. State/UT Government has to calculate the modal wholesale price of the selected commodity during the procurement period every month as under:

- (a) Weighted modal wholesale price for the crop in the notified market yards of the implementing State/UT will be calculated from the data available on AGMARKNET Portal.
 - (b) Weighted modal wholesale price of the same crops as per AGMARKNET portal for other two or more major producing States identified by implementing State/UTs Government.
 - (c) All the included States shall be given equal weightage in the calculation of average modal wholesale price.
- xi Price difference to be given under the scheme shall be determined as follows:
- (a) If the sale price of selected agriculture product in the notified market yards is at par or more than Minimum Support Price, no benefit would be admissible.
 - (b) If the sale price of agriculture produce sold in notified market yards is less than MSP but more than modal wholesale price declared by the State/UT Government, benefit would be admissible only to the extent of difference between MSP and actual sales price received by farmer. This amount will be transferred to the bank account of the farmer registered on the portal at the time of registration. If the sale price of agriculture produce in the notified market yard is less than the modal wholesale price declared by the State/UT Government, the benefit would be admissible to the extent of difference between MSP and modal wholesale price declared by State/UT Government which will be deposited in the registered bank account of farmer.
 - (c) However, if the average of modal wholesale price of the agriculture produces of two or more States (as mentioned above) is above MSP than this scheme will not be applicable to that commodity.
- xii The farmer would be paid the difference between the MSP and the monthly modal price subject to a maximum of 25% of the MSP value.
- (xiii) The liability under this scheme shall be shared in the ratio of 60:40 between the Government of India and the concerned State/UT Governments.

3. Advantages of PDPS:

- i. It is a decentralized system operated by the State/UT Governments, wherein they have the flexibility to decide and roll out operation for selected commodity.
- ii. The liability of the Government will arise only if prices fall below MSP, and such obligation is limited to a maximum of 25 per cent of MSP value.
- iii. The farmer-producers will stand to benefit on account of timely and speedy price support received in their Bank Account.

TOPIC – III: AGRICULTURE EXTENSION – AWARENESS CAMPAIGN FOR FARMERS AND IMPLEMENTATION OF EXTENSION SCHEMES

1. Background:

1.1 A multi-tiered extension strategy with a blend of following extension and outreach initiatives is being followed under the Sub-Mission on Agricultural Extension (SMAE) under Green Revolution – Krishonnati Yojna, so as to empower farmers with the latest knowledge and information in agriculture and allied sectors.

2. Progress of Schemes:

2.1 Support to State Extension Programmes for Extension Reforms

2.1.1 ATMA Scheme has been extended to cover 676 rural districts of 29 States & 3 UTs across the country. 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, District & Block level. 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, 4.44 crore farmers' have been benefited through various farmer oriented activities.

2.2 Mass Media Support to Agricultural Extension

2.2.1 The primary objective of the Scheme is to use electronic media, print media & social media with their massive penetration as a vehicle that could be exploited for the purpose of extension. Under this scheme existing infrastructure of Doordarshan and All India Radio is being utilized to make the farmers aware about modern technologies and researches related to agriculture and allied areas. A 30 minute programme named Krishi Darshan is being telecast 5 days a week through 18 Regional Kendras of Doordarshan. Similarly, 96 Rural FM Radio Stations of All India Radio are being utilized to broadcast 30 minutes of programme named KisanVani for farmers 6 days a week. Besides, DD – Kisan 24x7 Channel also disseminates the information and production technologies on Agriculture.

2.2.2 During telecast of Krishi Darshan, a capsule programme called Mandi Bhav and Agri-News are being produced in-house and telecast the same for the benefit of the farmers. The existing prices for different agri-products in the local Mandis linked with the network are being telecast for the local farmers.

2.2.3 **Focused Publicity & Awareness Campaign:** 'Focused Publicity & Awareness Campaign' is also executed to create awareness about the assistance available under various schemes of the Department of Agriculture, Cooperation & Farmers Welfare and also to create awareness on best agricultural practices. Audio-Video Spots are being broadcast/telecast through DD, AIR and Private TV Radio

Channels operating at National & Regional Level during news, entertainment programmes, serials etc for the benefit of the farmers. In addition, print advertisements of flagship programmes of DAC&FW are being published in leading newspaper across the country to create awareness among the farmers. Social Media platforms such as face-book, twitter, you-tube etc. are also being utilized for creating awareness.

2.3 Agri-Clinic and Agri-Business Centres

2.3.1 The scheme was launched in 2002 and provides extension services to farmers through setting up of economically viable self – employment ventures. Selected trainees are provided agri-preneurship training for a period of two months by MANAGE through identified Nodal Training Institutions in various states, which also provide handholding support for one year.

2.3.2 The scheme provides efficacious and cost effective mode of extension services. Since inception, 59190 unemployed candidates with agriculture qualification have been trained and 25751 agri-ventures have been set up by the trained candidates upto March, 2018. Subsidy has been extended to 1985 established agri-ventures as on February, 2018.

2.4 Kisan Call Centres

2.4.1 Agriculture and allied sector related information is provided to the farmers through Kisan Call Centres (KCCs) having toll free telephone line 1800-180-1551 accessible through all mobile phones and landlines of all telecom networks including private service providers. Replies to the farmers' queries are given in 22 local languages between 6.00 am to 10.00 pm on all seven days of the week. The KCCs set up at 14 locations have been restructured in 2012 to make it more effective. Since inception of the scheme, in the year 2004 over 364.42 lakh live calls have been registered at the KCC till March, 2018.

2.5 Information Dissemination through Agri Fairs

2.5.1 The Extension Division is participating / supporting the exhibition/ fairs / seminars / conference etc. at the different level in the country. promoting/ organizing agriculture fairs at different levels. At the national level, the Division participates in India International Trade Fair organized annually. The Division also supports five regional agricultural fairs, agriculture fair at Block, District and State levels under the Extension Reforms (ATMA) scheme.

2.6 Capacity building components under “Extension Support to Central Institutes/ DOE”

2.6.1 The Ministry of Agriculture &FW has established four Extension Education Institutes on regional basis at Nilokheri (Haryana); Hyderabad (Telangana); Anand (Gujarat) and Jorhat (Assam) to cater to the training needs of middle-level field extension functionaries working under agriculture and allied departments of States/UTs of respective regions. These EEIs organize of on-campus/off-campus trainings, workshops, conferences etc. in the areas of communication technology,

extension methodology, training, management, Agriculture Knowledge Information System (AKIS) and Information and Communication Technology.

2.7 Model Training Courses (MTCs)

2.7.1 The Directorate of Extension, DAC&FW sponsors Model Training Courses (MTCs) of 8 days duration to be organized by reputed National/ Central Institutes, ICAR Institutes and State Agricultural Universities (SAUs) in specialized areas for capacity building of middle-level extension functionaries of agriculture & allied departments of States/ UTs. 55 training programmes have been organized during 2017-18 till December, 2017.

2.8 Skill Training of Rural Youth (STRY)

2.8.1 The component launched in 2015 aims at training rural youths/farm women, rural artisans (blacksmiths, carpenter etc. designing/ manufacturing farm implements) across the country. The training under this component is of 7 days duration for 15 trainees per batch focusing on specific vocational areas in agriculture & allied sectors. Both public and private/ Non-Governmental Institutions including Vocational Training organizations, Youth Organizations (like Nehru Yuva Kendra) will be actively involved in implementation of this programme.

2.9 Diploma in Agricultural Extension Services for Input Dealers (DAESI)

2.9.1 DAESI is of one year (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 assigned to them. This programme was earlier implemented through MANAGE and 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.

TOPIC – IV: MIDH- USE SPECIFIC TECHNOLOGIES AND BEST PRACTICES IN HORTICULTURE

1. Infestation of Codling Moth in Apricot:

1.1 Apricot is one of the important horticultural crops grown in the valley of Leh & Ladakh of Jammu & Kashmir having good export quality and it provides livelihood to the farming community of the region. The 'Codling Moth' is injurious to apple, apricot and walnut crop. Due to the infestation of 'Codling Moth', the quality of apricot is also reduces. Presently, export of fresh apricot has been banned by the State of Jammu & Kashmir due to infestation of Apricot by "Codling Moth". Proper controlling measures are required to protect the apricot fruits in the valley. Hence, research institution may take up programme to find proper control measures for Codling Moth.

2. Control measures and development resistance varieties for controlling of Fusarium-Wilt caused by Tropical-Race 4 affecting Cavendish banana in India

2.1 India is the world's largest producer of bananas (*Musa* sp.), contributing 29.1% to global production. The country grows more than 20 banana varieties/cultivars commercially on an area of 0.88 million hectares in different parts of India, with an annual production of approximately 30 million tons. The national average productivity is 38.25 tonnes per hectare and a maximum of 66 ton/ha was recorded in Madhya Pradesh followed by Gujarat (63.5ton/ha), Maharashtra (58.2 ton/ha) and Tamil Nadu (47.9 ton/ha) by adoption of high yielding Cavendish clones coupled with improved technologies like high density planting, fertigation and use of tissue cultured plants. The most traded bananas in India are Cavendish (AAA) group cultivars (especially Grand Naine and Robusta), which are produced on 52% of the total area under banana cultivation which contributes 64% of all bananas produced.

2.2 Among the biotic constraints of banana production, Fusarium wilt caused by a fungal pathogen *Fusarium oxysporum* f. sp. *cubense* (*Foc*), is considered as one of the most devastating diseases of banana in India. At global level, the disease is ranked as one of the top 6 important plant diseases and in terms of crop destruction, it ranked with the few most devastating diseases such as wheat rust and potato blight. The pathogen of Fusarium wilt disease persists in soil for decades and extremely difficult to manage.

2.3 In the past among 3 types of races (race 1, race 2 and 4) affecting banana, only race 1 and 2 of Fusarium wilt pathogen were affecting most of the commercial cultivars except Cavendish group. However, in July 2015, a roving survey conducted revealed major banana growing districts like Vaishali, Khagaria, Bhagalpur, Katihar and Purnia districts of Bihar state indicated the occurrence of Fusarium wilt disease in cv. Grand Naine and Robusta in Katihar and Purnia districts and the incidence was ranged from 0.5% to 26% and the maximum was observed in Katihar districts particularly in Falga block. The analyses of the samples collected from the wilt affected banana growing areas by different methods confirmed the presence of Tropical race 4 (TR4) in cvs Grand Naine, Robusta and Chinia in the entire Katihar and Purnia districts of Bihar. Besides, a recent survey conducted in September 2017, in Faizabad district, in Uttar Pradesh indicated the presence Tropical race 4 of

Fusarium wilt disease in cv. Grand Naine and the incidence was ranged from 30-45 percent and about 95 % of the area under banana was affected.

2.4 At global level, Cavendish cultivars succumb to TR4 in many banana producing countries such as China, Taiwan, Philippines, Indonesia, Malaysia, Australia, and Pakistan and most recently in Jordan, Mozambique and Vietnam. In Australasia more than 1,00,000 ha of commercial banana plantations have been devastated by the fungus, causing global concerns to multimillion-dollar banana export industry. The disease poses a serious threat to multibillion-dollar export industry and also to the livelihoods of millions of small-scale banana growers.

2.5 In India as most of the farmers use suckers as planting material and they don't have awareness about the serious nature of TR4 in banana, the percent incidence of Fusarium wilt will be increasing in the years to come. Besides, as the banana bunches are transported to Madhya Pradesh, Maharashtra and UP states of India and pathogen can spread through peduncle of the bunches, there is a chance for the spread of this virulent TR4 strain of Fusarium wilt in these states as well. Therefore creation of awareness and providing training to all the stakeholders on the importance and identification of Fusarium wilt disease, preventive steps to be taken to arrest the further spread of the disease to the un-infested areas in Bihar and other states, diagnosis of Fusarium wilt pathogen by different methods including molecular analysis (especially to the researchers of different states) and integrated management practices for the effective management of the disease are desperately required.

3. Varietal development and package of practices for Dragon fruit:

3.1 Pitaya fruit, pitahaya fruit or commonly known as Dragon Fruit is among the most nutritious and wonderful exotic fruits. It is a favourite to many, particularly people of Asian origin. There are 3 types dragon fruit based on their colour.

- Red colour fruit with white colour flesh.
- Red colour fruit with red colour flesh.
- Yellow colour fruit with white colour flesh.

3.2 The dragon fruit can be made into juices, wines, flavorings and of course, medicine. Like many other fruits, the dragon fruit has medicinal benefits that a lot of people have grown to trust and depend on. Dragon Fruit production is gaining more and more recognition as an important crop. It is a nutritious fruit with a variety of uses. The fruit pulp can be eaten fresh and can be made into various valuable processed products. The fruit possesses medicinal properties: it is known to prevent colon cancer and diabetes, neutralizes toxic substances such as heavy metals, reduce cholesterol and high blood pressure. It is also reported to control high sugar levels, prevent cancer and bleeding, and promote dental health. Dragon fruit helps improve digestion and reduce fat. It helps maintain the health of eyes.

3.3 There is a lot of demand for Dragon fruit in India. As consumers are getting more and more aware about this fruit; the demand is increasing steadily. Very few farmers in the Sates of Maharashtra, Gujarat, Andhra Pradesh, Karnataka & Tamil Nadu have taken up Dragon Fruit cultivation in India.

Considering the importance of the fruit, there is need to take up programme to develop variety and package of practices.

4. Tissue culture protocol date-palm:

4.1 Presently tissue culture date palm planting materials are being imported in the country as there is good scope for date palm cultivation in the country. In order to produce the required quantity of date palm within the country, there is need to develop tissue culture protocol for date-palm.

5. Package of practices to increase productivity and value chain development for Kiwi crop:

5.1 Kiwi is an exotic crop and introduced in India. Gradually demand of Kiwi fruits in the country is increasing due to its nutritional quality. Although Kiwi fruit is grown in few states like Himachal Pradesh, Arunachal Pradesh, Nagaland, Mizoram, Sikkim etc., good quality Kiwi fruits are being imported into the country. Considering the popularity and demand of Kiwi fruits in the country, there is need to develop sustainable package of practices to increase productivity and value chain development for Kiwi crop for concerned states.

6. Control Measure of Pomegranate Wilt:

6.1 Pomegranate an important fruit crop in India, is commercially cultivated in the states of Maharashtra, Karnataka, Andhra Pradesh, Gujarat, Rajasthan and Tamil Nadu. Wilt is one of the important diseases of pomegranate and is prevalent in these states adversely affecting the crop cultivation in all major growing areas of the country.

6.2 Factors conducive for the severity and spread of disease include planting material selection, soil borne nature and also association with shot hole borer and plant parasitic nematodes.

6.3 The botanical and biological control agents are also equally important components of the management. Therefore effort in this regard is required to develop the efficacy of some botanicals and biological agents against the pathogen. Wilt is complex involving more than one pathogen. Hence, proper control measures need to be developed for pomegranate wilt.

7. Technology for promotion of onion in non-traditional area & storage structures:

7.1 Onion is one of the important Horticultural crops in the country, technology is required for promotion in non-traditional growing areas and to spread the crop geographically especially near high consumption area. In the traditional growing areas, due to surplus production of onion, the storing of onion crop becomes major issue after production. Hence, sufficient storage facilities / structures are required to be made in the onion growing areas in the country.

TOPIC – V: NRM / RFS – MICRO IRRIGATION / AGRO FORESTRY/RESTRUCTURED NATIONAL BAMBOO MISSION

PART-I: MICRO IRRIGATION

1. Background:

1.1 The Government of India launched Centrally Sponsored Scheme on Micro Irrigation in January 2006 with the objective to enhance water use efficiency in the agriculture sector by promoting drip & sprinkler irrigation technologies. From 1st April 2015, Micro Irrigation component of OFWM has been subsumed under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) under the programme component “Per Drop More Crop”. This was up-scaled to National Mission on Micro Irrigation (NMMI) in June 2010, which continued till the financial year 2013-14. From 1st April, 2014, NMMI was subsumed under National Mission on Sustainable Agriculture (NMSA) and implemented as “On Farm Water Management” (OFWM) during the financial year 2014-15.

1.2 As per the report of National Task Force (2004) on Micro Irrigation, there is a potential of coverage of about 69.5 Million Hectares under Micro Irrigation in the country.

2. Achievement:

2.1 There has been significant growth in adoption of Micro Irrigation in the last 6-7 years. During 2017-18, an area of around 9.2 lakh ha has been brought under MI, which is the highest coverage achieved in a calendar year so far. Under the Centrally Sponsored scheme on Micro Irrigation, an area of 7.0 mha has been covered under Micro Irrigation so far. Apart from this, an area of about 3.12 mha has been brought under Micro Irrigation through other schemes/ sources, which brings a total of about 10.12 mha area under Micro Irrigation in the country so far.

3. Way Forward:

- Group of Secretaries (GoS) has recommended a target of 10 m ha under Micro Irrigation in coming 5 years starting from 2017-18. For 2018-19, a target of 1.6 m ha has been set.
- Micro Irrigation Fund: A dedicated Micro Irrigation Fund to be instituted with NABARD with an initial corpus of Rs. 5000 crore (Rs. 2,000 crore during 2018-19 and Rs.3,000 crore during 2019-20) 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.
- MIF to serve as resource mobilizer to keep up with the pace of implementation and achieving challenging target. This Department is in the process of finalizing /operationalising the MIF.

4. Issues regarding attention of States:

- To expedite conduct of SLSC meetings to ensure timely implementation.
- Regular reporting of progress on PMKSY MIS.

- To ensure timely submission of Beneficiary details for the purpose of DBT.
- Give momentum for Geo tagging of assets created under the programme on BHUVAN app.
- To encourage Fertigation.
- Additional incentivisation for promoting adoption of MI.

PART-II: SUB-MISSION ON AGROFORESTRY

1. Background:

1.1 The Sub-Mission on Agroforestry was launched in 2016-17 to encourage tree plantation on farm land “Har Medh Par Ped”, along with crops/ cropping system as per the recommendations of the National Forest Policy, 2014. The scheme is being implemented in the States which have liberalized transit regulations for selected tree species. So far 21 States have liberalized transit regulations and funds have been released to 20 States. Other States are also being encouraged to exempt agroforestry species from transit regulations. Agroforestry will not only help in creating additional source of income to farmers but also in contributing to the NDCs committed by India for combating climate change.

2. The Sub-Mission has four broad interventions:

2.1 Nursery Development for quality planting material (NDQPM) : Assistance shall be given for nurseries for producing quality planting material for setting up new small, big and hi-tech nurseries.

2.2 Peripheral and Boundary Plantation (PBP) : To make potential use of the area occupied by these bunds around the periphery of the farmers fields, tree species under Agroforestry can be grown as peripheral boundary plantations to supplement farm income. This will not only make productive use of the precious land for livelihood support and generating income opportunities to the farmers, but also help in stabilising the bunds, enriching the soil if leguminous trees are planted and reducing soil erosion.

2.3 Low Density Plantation on Farm Lands (LDPFL) : Low Density Block Plantation(HDBP) ranging from more than 100 plants/ha to more than 500 plants/ha without sacrificing the yield of the existing crops/cropping systems, shall be incentivized at the proportionate rates as applicable to per plant expenditure.

2.4 High Density Block Plantation (HDBP): High density Block Plantations on farm lands (HDBP) will be supported as a complementary source of income to the farmers. Differential planting densities ranging from 500 plants/ha to 1500 plants/ha as intermediate blocks or strip plantations would be supported. Farmers can take up block plantation in waste and degraded land not suitable for growing crops to make productive use of these lands in creating livelihood and income opportunities for them. In addition, the trees will help in enriching the soil and making it fertile & more productive thereby bringing land under crops in times to come.

3. For agroforestry to be a success it is important to have backward and forward linkages to set in place an assured market for the produce. Multipurpose trees should be planted so as to ensure short term, medium term and long term returns to the farmers. Medicinal and aromatic plants should also be given due importance keeping in view the increasing demand for herbal products.

4. Issues with States:

4.1 States to whom funds have been released during the year 2016-17 & 2017-18, may submit progress report and utilization certificate. Besides, States may prepare and submit Annual Action Plan for 2018-19 for SMAF.

4.2 Status of Scheme implementation in States:

- During 2016-17, funds to 08 States namely Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh, Karnataka, Madhya Pradesh, Punjab & Tamil Nadu have been released. Karnataka, Gujarat & Himachal Pradesh have reported physical & financial progress & funds to Karnataka, Gujarat & Himachal Pradesh have been released during 2017-18. Progress report from all states **except Karnataka, Gujarat & Himachal Pradesh is awaited.**
- During 2017-18 funds to Maharashtra, Bihar, Chhatishgarh, Kerala Odisha, Rajasthan, Meghalaya Jharkhand, Uttar Pradesh, Jammu & Kashmir, Nagaland & Mizoram have been released. **So far, no progress has been reported by the States.**

Statement showing State Wise / Year Wise details of Funds Released & Utilized under SMAF (Lakh Rs.)
(As on 31.03.2018)

| Name of State | 2016-17 | | | 2017-18 | | | Total | | |
|---------------|----------|----------|-----------------|----------|----------|-----------------|----------|----------|-----------------|
| | Released | Utilized | Unspent Balance | Released | Utilized | Unspent Balance | Released | Utilized | Unspent Balance |
| Meghalaya | 0.00 | 0 | 0.00 | 100.00 | 0 | 100.00 | 100.00 | 0 | 100.00 |
| Mizoram | 0.00 | 0 | 0.00 | 50.00 | 0 | 50.00 | 50.00 | 0 | 50.00 |
| Nagaland | 0.00 | 0 | 0.00 | 90.89 | 0 | 90.89 | 90.89 | 0 | 90.89 |
| An. Pradesh | 315.00 | 0 | 315.00 | 0.00 | 0 | 0.00 | 315.00 | 0 | 315.00 |
| Bihar | 0.00 | 0 | 0.00 | 300.00 | 0 | 300.00 | 300.00 | 0 | 300.00 |
| Chhatishgarh | 0.00 | 0 | 0.00 | 250.00 | 0 | 250.00 | 250.00 | 0 | 250.00 |
| Gujarat | 450.00 | 308.95 | 141.05 | 270.00 | 0 | 270.00 | 720.00 | 308.95 | 411.05 |
| Haryana | 175.00 | 0 | 175.00 | 0.00 | 0 | 0.00 | 175.00 | 0 | 175.00 |
| Him. Pradesh | 115.00 | 77.95 | 37.05 | 48.69 | 0 | 48.69 | 163.69 | 77.95 | 85.74 |
| Jharkhand | 0.00 | 0 | 0.00 | 400.00 | 0 | 400.00 | 400.00 | 0 | 400.00 |
| J & K | 0.00 | 0 | 0.00 | 60.71 | 60.71 | 0.00 | 60.71 | 60.71 | 0.00 |
| Karnataka | 325.00 | 289.8308 | 35.17 | 450.00 | 0 | 450.00 | 775.00 | 289.8308 | 485.17 |
| Kerala | 0.00 | 0 | 0.00 | 206.47 | 0 | 206.47 | 206.47 | 0 | 206.47 |
| Mad .Pradesh | 420.00 | 0 | 420.00 | 0.00 | 0 | 0.00 | 420.00 | 0 | 420.00 |
| Maharashtra | 0.00 | 0 | 0.00 | 400.00 | 0 | 400.00 | 400.00 | 0 | 400.00 |
| Orissa | 0.00 | 0 | 0.00 | 400.00 | 0 | 400.00 | 400.00 | 0 | 400.00 |
| Punjab | 200.00 | 121.7 | 78.30 | 0.00 | 0 | 0.00 | 200.00 | 121.7 | 78.30 |
| Rajasthan | 0.00 | 0 | 0.00 | 600.00 | 0 | 600.00 | 600.00 | 0 | 600.00 |
| Tamil Nadu | 250.00 | 0 | 250.00 | 0.00 | 0 | 0.00 | 250.00 | 0 | 250.00 |
| Uttar Pradesh | 0.00 | 0 | 0.00 | 600.00 | 0 | 600.00 | 600.00 | 0 | 600.00 |
| Uttarakhand | 0.00 | 0 | 0.00 | 0.00 | 0 | 0.00 | 0.00 | 0 | 0.00 |

| | | | | | | | | | |
|---------------------|-------------|-----------------|----------------|----------------|--------------|---------------|----------------|-----------------|----------------|
| ISAF-ICAR-CARI | 2.00 | 2 | 0.00 | 0.00 | 0 | 0.00 | 2.00 | 2 | 0.00 |
| NSC-Delhi | 0.00 | 0 | 0.00 | 18.95 | 0 | 18.95 | 18.95 | 0 | 18.95 |
| CBTC-Guw. | 0.00 | 0 | 0.00 | 20.00 | 0 | 20.00 | 20.00 | 0 | 20.00 |
| CAFRI-Jhansi | 0.00 | 0 | 0.00 | 0.70 | 0 | 0.70 | 0.70 | 0 | 0.70 |
| TOTAL | 2252 | 800.4308 | 1451.57 | 4266.41 | 60.71 | 4205.7 | 6518.41 | 861.1408 | 5657.27 |

PART-III: RESTRUCTURED NATIONAL BAMBOO MISSION

1 Background:

1.1 National Bamboo Mission (NBM) was initially started as a Centrally Sponsored Scheme in 2006- 07 and was subsumed under Mission for Integrated Development of Horticulture (MIDH) during 2014-15 and continued till 2015-16. Funds have been released only for maintenance of bamboo plantations raised earlier under NBM, and no new work or annual action plan has been approved thereafter.

2 Progress

2.1 **Physical Progress:** Since 2006-07, 3,61,791 ha land has been covered with bamboo plantation, out of which 2,36,700 ha under forest area and 1,25,091 ha under non-forest area. An area of 91,715 ha of existing bamboo plantation has been improved for higher productivity. In addition, 1,466 no. of nurseries have been established to supply quality planting material. In different States, 61,126 no. of farmers and 12,710 no. of field functionaries have been trained in the area of nursery management and bamboo plantation. In addition, 39 no. of Bamboo wholesale & retail markets near villages, 29 no. of Retail outlets and 40 no. of Bamboo bazaars have been established.

2.2 **Financial Progress:** Since 2006-07, Rs. 892.44 crore has been released to various States (including Bamboo Technical Support Groups & R&D institutes), out of which Rs. 876.68 crore has been spent under NBM.

3 Restructured National Bamboo Mission

3.1 Bamboo has a tremendous untapped potential in our country for transforming rural economy. Earlier, the scheme was mainly limited to propagation and cultivation of bamboo, with limited efforts on processing, product development and value addition. The main weakness of the scheme was absence of a linkage between the producers (farmers) and the industry.

3.2 A restructured National Bamboo Mission has also been announced in the Union Budget 2018 at an outlay of Rs 1290 cr in the coming 2 years.

3.3 To facilitate the benefit flow to the farmers, bamboo outside forest areas has been excluded from the definition of tree by amending Section 2 (7) of the Indian Forest Act, 1927. Now, bamboo grown outside forests will not be subject to regulatory rules of felling and transportation. As a natural sequel, it was proposed to launch a restructured National Bamboo Mission based on a cluster approach to address the complete bamboo value chain for the holistic development of the bamboo sector. The restructured NBM focuses on the development of complete value chain of bamboo sector to link growers with consumers and to support the development of entire value chain starting from planting material, plantation, creation of facilities for collection, aggregation, processing marketing, micro, small & medium enterprises, skill development and brand building initiative in a cluster approach mode. Primary processing units specializing in pre-product processing should be established near areas of bamboo production. These units would converge into big units doing secondary processing, which would, in turn, converge into bigger

industries making finished products. This would reduce wastages, promote efficiency and develop expertise in specific areas thereby resulting reduce the cost of production per unit. This will contribute to doubling of farmers' income and also generate more employment opportunities for skilled and unskilled worker especially youths in rural areas.

3.4 Department of Agriculture & Farmers Welfare will be the Nodal Department for overall planning, coordination and implementation of the Mission. Since multi sectoral synergy will be required for optimizing outcomes, concerned Ministries and Departments of GOI including MoEFCC, DONER, MSME, Rural Development, Science & Technology, Power, Housing & Urban Development, MNRE, and Commerce have been assigned specific roles to assist the States in implementation through the respective Departments.

3.5 State Level Executive Committee (SLEC) is proposed to be headed by Chief Secretary of State/UT having representatives from Departments of State Government including Agriculture Industries, Forests, State Agricultural Universities (SAU), Institutes under Indian Council of Agricultural Research (ICAR), Growers' Associations/FPOs, etc to oversee the implementation of programmes of the respective States. **At operational level, State Governments will nominate the Department for anchoring the State Bamboo Mission (SBM) for implementing Mission programmes at State and District levels, with convergence with all related departments and other stakeholders.**

3.6 Before the new Mission is launched it is important to take stock of the progress in the earlier Mission so as to use the infrastructure, etc already created. Hence the following issues are being highlighted for the information and needful action by States

4 Pending Issues with the States

- Unspent balance is available with States like Gujarat Rs. 1.37 crore, Maharashtra Rs. 1.14 crore, Rajasthan Rs. 0.69 crore, Sikkim Rs. 1.19 crore Tripura of Rs. 1.51 crore.
- Audited Utilization Certificate & Progress report of most of the States have not been received so far of previous years

TOPIC – VI: MARKETING / E-NAM & MARKETING REFORMS

1. Background:

In order to enhance transparency in trading, quality based better price discovery and to provide multiple choices to the farmers to on-line sell their commodities to the buyers and in the markets of their choice, offering the best bid, department launched e-National Agriculture Market (e-NAM) in April, 2016. Under the scheme, a total of 585 regulated wholesale markets across the States are to be integrated to the portal by March, 2018, which has been achieved.

2. Progress:

- i. 585 mandis of 16 States and 2 UTs have been integrated with e-NAM (Andhra Pradesh-22, Chandigarh-01, Chhattisgarh-14, Gujarat-79, Haryana-54, Himachal Pradesh-19, Jharkhand-19, Madhya Pradesh-58, Maharashtra-60, Odisha-10, Pudducherry-02, Punjab-19, Rajasthan-25, Tamil Nadu-23, Telangana-47, Uttar Pradesh-100, Uttarakhand-16 and West Bengal-17).
- ii. 90.50 lakh Farmers, 1.07 lakh Traders & 0.59 lakh Commission Agents have been registered under e-NAM.
- iii. 166.95 lakh tonne quantity of trade value Rs. 42,265.22 crore have been traded under e-NAM.
- iv. Tradable parameters framed & uploaded on e-NAM portal for 90 commodities.
- v. e-NAM website is now available in eight different languages (Hindi, English, Gujarati, Marathi, Tamil, Telugu, Bengali and Odiya) while the live trading facility is available in six different language (Hindi, English, Bengali, Gujarati, Marathi & Telugu).
- vi. New and user-friendly features launched on 21st February, 2018 to strengthen the e-NAM platform.
- vii. Under the scheme Rs. 188.25 crore has been released till 31.03.2018.

3. New Upgraded User Friendly Features of e-NAM:

- i. e-NAM Mobile App:
- ii. BHIM payment facility :
- iii. New and improved Website with eLearning Module:
- iv. MIS Dashboard:
- v. Grievance Redressal Management System for Mandi Secretaries:
- vi. Integration with Farmer Database

4. Reforms in Agricultural Marketing Sector:

4.1 With the economic liberalization in the country during nineties, the Government felt need to reform the agricultural marketing sector also so as to ensure better and competitive price realization to the farmers and encourage capital formation in the sector. The Ministry of Agriculture & FW, thus, appointed an Expert Committee on 19th December, 2000 to review the present system of agricultural marketing. Further, the Ministry of Agriculture and FW constituted an “Inter-Ministerial Task Force on 04.07.2001”, which submitted its report in 2002. A Committee was also set up by this Ministry to formulate a Model Act “The (Name of State) State Agricultural Produce Marketing (Development & Regulation) Act, 2003.”

4.2 Formulation of Model Act: The Ministry of Agriculture & Farmers' Welfare constituted a Committee to formulate a model Act on "The (Name of State/ Union Territory) Agricultural Produce and Livestock Marketing (Promotion & Facilitation) Act, 2017". The Model Act provides for alternative marketing channels, direct marketing, setting up of private markets, farmer-consumer markets, commodity markets, declaring warehouses /silos/ cold storages as market sub yards to promote agriculture marketing. Act was released in April, 2017 for adoption by the States.

4.3 Formulation of Model Contract Farming Act: Pursuant to announcement in budget speech, 2017-18 to integrating fruits and vegetable growers with agro-processing units for better price realization and reduction of post-harvest losses and to create job opportunities in the rural areas, Ministry of Agriculture & FW constituted a Committee to formulate "Model Contract Farming Act" in February, 2017. The model contract farming Act is in its final stage of formulation.

5. Issues with States:

- i. Inefficient processes and insufficient gate entry capacity during peak arrivals. Promote use of tabs at gate entry.
- ii. Quality Assaying-
 - Existing equipments are not time efficient for assaying of all prescribed parameters
 - Designated manpower both in terms of numbers as well their skill level is inadequate
 - Third party accredited agency for quality assaying for ensuring standardization and trust.
- iii. Integration of electronic weighing scales (after bidding) is not happened in many states.
- iv. Inter-mandi and inter-state trading is not happening in most of the States.
- v. e-payment is minimal.
- vi. Competitive bidding is not happening in many states.
