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GIST OF KURUKSHETRA

OCTOBER 2019

Shankar IAS Academy™

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KURUKSHETRA OCTOBER 2019

1. AGRICULTURE REFORMS: TOWARDS DOUBLING FARMERS' INCOME

What are the various schemes and policies adopted by GOI to promote income of farmers?

- For Higher Production through Productivity Gains
- **National Food Security Mission (NFSM)** - for cereals, pulses, oilseeds, nutri-rich cereals, commercial crops.
- **Mission for Integrated Development of Horticulture (MIDH)** for high growth rate of horticulture crops.
- **National Mission on Oilseeds and Oil Palm (NMOOP)** launched in 2014-15 for increasing production of oilseeds and Oil palm.
- **For Reduction In Cost of Cultivation :**
- **Soil Health Card (SHC)** to ensure judicious and optimal use of fertilizer application thus saving the input cost for farmers.
- **Neem Coated Urea (NCU)** is being promoted to regulate the use of urea, enhance availability of nitrogen to the crop and reduce cost of superfluous fertilizer application.
- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** micro irrigation

component (1.2 million ha/yr target) with the motto of 'Har Khet Ko Paani' for providing end-to-end solutions irrigation supply chain, comprising water sources, distribution network and farm level applications.

- For Providing Assistance to Small and Marginal Farmers
- Government of India has launched the **Pradhan Mantri Kisan Samman Nidhi (PM KISAN) scheme** with an aim to provide assistance to small and marginal farmer families with an amount of Rs. 6000/- per year.
- **Pradhan Mantri Kisan Maan Dhan Yojna (PM-KMY)** has been launched which provides for a payment of a minimum pension of Rs. 3000/- per month to eligible small and marginal farmers on attaining the age of 60 years.
- **To Ensure Remunerative Returns :**
- **National Agriculture Market Scheme (e-NAM)** is an innovative market process to revolutionize agri-markets by ensuring real-time better price discovery, bringing in transparency and competition to enable farmers to get improved remuneration for their produce, moving towards 'One Nation One Market'.



- **Farmer Producer Organizations (FPOs)** have been on-boarded on e-NAM portal and they have started uploading their produce for trading from their premise.
- The **Model Agricultural Produce and Livestock Marketing Promotion and Facilitation) Act, 2017** has been released on the 24th of April, 2017 for its adoption by States/UTs, to promote alternative competitive marketing channels for better pricing for farmers and to encourage private investment in developing efficient marketing infrastructure and value chain.
- Existing 22,000 rural haats to be developed and upgraded **into Gramin Agricultural Markets (GrAMs)**.
- **Minimum Support Price (MSP)** is notified by the Government for certain crops periodically.
- Giving a major boost for the farmers' income, the Government has recently approved the increase in the MSP for Kharif crops for 2019-20 season.
- Procurement of oilseeds, pulses and cotton are undertaken by central agencies at MSP under
- **Price Support Scheme (PSS)** at the request of the State Government concerned.
- **Market Intervention Scheme (MIS)** for procurement of agriculture and horticulture products, which are perishable in nature and are not covered under PSS.
- **For Risk Management and Sustainable Practices :**
- **Pradhan Mantri Fasal Bima Yojana (PMFBY)** and Restructured Weather Based Crop Insurance Scheme (RWCIS) provides insurance cover at all stages of the crop cycle including post-harvest risks in specified instances and available to the farmers at very low rates of premium.
- Government provides **total interest subvention** up to 5 per cent (inclusive of 3 per cent prompt repayment incentive) on short-term crop loans up to Rs. 3.00 lakh.
- **Paramparagat Krishi Vikas Yojana (PKVY)** is being implemented with a view to promote organic farming in the country.
- **Mission Organic Farming in North-East- MoVCD (NE)** for realizing the potential of organic farming in the North Eastern Region of the country.
- **Allied Activities :**
- **'Har Medh Par Ped'** launched during 2016-17 to encourage tree plantation on farmland along with crops/cropping system.



- **National Bamboo Mission** has been announced in the Union Budget 2018-19 for value chain based holistic development of this sector as a supplement to farm income.
- Bee-Keeping has been promoted under **Mission for Integrated Development of Horticulture (MIDH)** to increase the productivity of crops through pollination, and increase the honey production as an additional income to the farmers.
- For dairy development, there are three important schemes: **National Dairy Plan-1 (NDP-1)**, **National Dairy Development Program (NPDD)** and **Dairy Entrepreneurship Development Scheme**.
- Foreseeing high potential in fisheries sector, a **Blue Revolution** with multi dimensional activities mainly focusing on fisheries production, both inland and marine is being implemented.
- **Rashtriya Gokul Mission** launched in December 2014 for gene pool of indigenous cattle and buffaloes.
- **National Livestock Mission** launched in 2014-15 to ensure intensive development of livestock especially small livestock (sheep/goat, poultry, etc.) along with adequate availability of quality feed and fodder.

2. EMPOWERING WOMEN FARMERS

What is the status of role of women in Agriculture?

- Women's role in agriculture has been verily vital in the production, processing and distribution sector.
- Domestically, women play an important role in the management and rearing of livestock and other activities like fodder collection, post-harvest activities and farm cleaning activities.
- According to the 2011 Census, the total number of female workers engaged in agricultural activities in India stood at 65 per cent, with 30.3 per cent of the total cultivators and 42.6 per cent of total agricultural labourers being women.
- Furthermore, the Agriculture Census conducted every five years by the Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW), Ministry of Agriculture and Farmers Welfare, established that the 12.78 per cent of the female operational holdings in agriculture during the year 2010-11 have increased to 13.78 per cent during 2015-16.
- This shows that women participation in the organized agricultural sector is increasing and therefore, support and thrust on the part of the government



becomes quite necessary to empower them and provide them with further opportunities to encourage their larger involvement.

- What are the special provisions taken by GOI for empowering women farmers ?
- **Support for Women Food Security Groups (FSGs) :** Women farmer groups are recognised under ATMA Cafeteria as a compulsory activity at Rs. 0.10 lakh per group/year for attaining food security at the domestic or the household level, by setting up of kitchen garden, promoting off-farm activities with cattle (activities that otherwise evade the GDP computation).
- **Procurement of Agricultural Machinery and Equipments (Subsidy Pattern) :** Women farmers can avail benefits in tandem with, or over and above the benefits offered to men. For purchasing an essential agricultural equipment, say, tractor (up to 20 PTO HP), women get additional benefits, subsidies and cost reduction, for instance, 35 percent of the subsidy to the total cost, as compared with 25 percent of cost for men.
- **Representation of Women Farmers :** It is imperative for women farmers to be included in the decision making

bodies - the State, District, Block Farmer Advisory Committees, ATMA governing committees etc.

- **Promoting Women Groups :** Women's groups, Cooperatives, Self Help Groups (SHGs) to be incorporated by the States for the distribution of Certified Seeds (under the aegis of the National Mission on Oilseeds and Oil Palm (NMOOP)).
- **Integrated Scheme for Agricultural Marketing (ISAM):** Women are endowed with subsidies for storage infrastructure that includes a 33.33 percent subsidy (on capital cost) for women as compared to 25 per cent for men.
- **Agricultural Insurance:** Safeguarding coverage of women farmers along with a budget allocation and utilization in accordance with the population proportion.
- **What are the other interventions by GOI ?**
- Being mindful of the crucial role that women play in agriculture industry, the Agriculture and Farmers Welfare Ministry established Indian Council of Agricultural Research, ICAR, a Central Institute for Women in Agriculture in Bhubaneswar, Odisha in the year 1996.
- The Institute has been undertaking numerous studies on gender



implications in the agricultural sector and developing women centred technology.

- The condition of women in the unorganised farming sector is also being improved through various research projects of this Institute that mainly cater to the provision of improved agricultural tools to women so as to reduce the toil they have to put into farm operational activities.
- It is also working to mobilise the Self-Help Groups with a view to increase the income generation of female participants in agriculture and animal husbandry.
- Technology has become a crucial part of policy making when it comes to information dissemination and creation of a far-reaching knowledge base.
- The Institute develops softwares and interfaces to facilitate mass media communication and carries out outreach programmes for educating and empowering rural women.
- A gender knowledge portal, displaying all the relevant data and information related to women farmers has also been created.
- With the aim to fortify agricultural research and enhance agricultural productivity to bolster farm income,

ICAR has initiated the All India Co-ordinated Research Project (AICRP).

- Its Krishi Vigyan Kendras (KVKs) have successfully trained about 3.1 lakh women agriculturists and besides this, one female scientist in every Kendra has been made mandatory in 668 KVKs across the country.
- There is also a provision under the National Food Security Mission (NFSM) that provides training based on cropping system to farmers including the SC, ST and women farmers to generate awareness on augmented technology for increasing crop production and yield.

3. E - NAM : GAME CHANGER IN AGRICULTURAL MARKETING

What is meant by e - NAM?

- E-NAM or Electronic National Agriculture Market is a pan - India trading portal launched in April 2016.
- It is a trading portal for farm produce which aims to create a unified national market for agricultural commodities by integrating Agriculture Produce Market Committees (APMC).
- E-NAM is a device to create a national network of mandis which can be accessed online.



- It seeks to influence the physical infrastructure of the mandis through an online trading portal.
- It also enables buyers situated in state or even outside the state to participate in trading.
- The main aim of e-NAM is to improve the marketing aspect of the agriculture sector with one license for the entire state and with single point levy.
- Through e-NAM an entire state becomes a market for sellers and the market fragmentation within the same state gets abolished.
- Working with e-NAM improves the supply chain of commodities and reduces wastages which can be seen in some states involve in online trading.
- e-NAM driving agricultural trade towards the remunerative prices for farmers by plugging the trade malpractices in mandis.
- While the farmer is the primary stakeholder, e-NAM also provides traders, commission agents and exporters better business opportunities through a unified and extensive marketplace.
- Bulk buyers, processors, exporters etc. benefited by being able to participate directly in trading at the

local mandi level through the NAM platform, thereby reducing their intermediation costs.

What is the performance of e - NAM since its launch from 2016?

- E-NAM is transforming the way India trades in farm produce and has roped in 585 mandis across the 16 states and 2 Union territories, linking more than 1,65,04,866 farmers, 1,25,167 traders and 69,842 commission agents.
- E-NAM trades in 150 commodities, and goods worth Rs 52,173 crore have been traded so far.
- The portal is available in 8 languages like Hindi, English, Telugu, Odiya, Bangla, Tamil, Gujarati and Marathi.
- Through interconnection of mandis, farmers have just been exposed to an entirely new way of conducting business which enabling them to get higher returns, induce more transparency and use technology for maximum benefits.

How e - NAM became a game changer?

- Many advantages of e-NAM which can change Indian agriculture trade sector for ever:
- No middlemen involved in buying-selling of agri products; hence better deal for farmers
- Less transaction cost



- Single license valid across all connected mandis
- Single point levy of all products
- Quality testing procedure introduced for buyers and sellers
- These advantages of e-NAM continuously attract the farmers to trade their produce through this online portal.
- The higher registration of traders and APMCs with more transaction on the portal made it a big game changer in agriculture trading sector.
- In future NAM not only becomes the big service provider to the farmers and traders but consumers will also benefited by produce price stability and availability.

4. IRRIGATION TECHNIQUES TO GET PER DROP MORE CROP

What is the status of irrigation in India?

- According to NITI AAYOG, GOI statistics, irrigation consumes 84 percent of water and it is estimated that 52 percent of cropped areas are without irrigation.
- The share of ground water sources for irrigation has been increased from 28.7 percent to 62.4 percent in these seven decades.
- Ground water sources are over exploited in many regions and are

chronically water stressed in some regions.

- The annual utilizable water sources in the country are estimated at 690 Billion Cubic Metre from surface water and 447 BCM from groundwater.

What are Micro irrigation technologies?

- Micro irrigation technologies mainly sprinkler irrigation and drip irrigation not only helps in water saving but also in reduction in fertilizer usage, labour expenses and other inputs and input costs.
- It enhances crop productivity and improves soil health.
- The saved water can be used for extended coverage of area under irrigation for a longer duration.
- All these advantages will ultimately lead to environmental sustainability.
- Many research studies have shown that Micro irrigation systems can save water up to 40 50 per cent over conventional flood irrigation methods along with enhanced agricultural productivity.

What is Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) and its current status?

- Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) has been launched



with the motto of providing 'Har Khet Ko Paani'.

- The scheme aims at providing end- to-end solutions in irrigation supply chain viz., water resources, distribution network, farm level applications and improved water use efficiency.
- Both Central and State Governments promote this technology and in the FY 2015-16 the funding pattern under PMKSY has been fixed as 50:50 per cent between Central and State Governments.
- The main objective of PMKSY is to achieve convergence of investments in irrigation sector at field level.
- A Micro irrigation Fund (MIF) with an initial corpus of Rs. 5000 crore was allocated in the Union Budget 2017-18.
- This budget is to help the States to mobilize additional resources for increasing the coverage under Micro irrigation through special and innovative initiatives by State Governments.
- As per the data given in the official website of PMKSY total area covered under Micro irrigation by the year 2018-19 is 11.58 Lakh Ha.

- The area covered under drip irrigation is 5.75 Lakh Ha and that of sprinkler irrigation is 5.83 Lakh Ha.
- The other interventions such as the potential created for protective irrigation is 1.30 Lakh Ha.

What is the impact of Micro Irrigation?

- Global agriculture System has conducted an impact study in the year 2014 on NMMI and the adoption of MI and the following benefits were reported.
- MI offers enhancement of crop productivity due to judicious use of water and other inputs.
- The benefits are noticed in terms of
 - Increase in irrigated area 8.41 per cent from the same source of water.
 - Crop productivity was increased in fruits and vegetables 42.3 per cent and 52.8 per cent respectively.
 - Reduction in irrigation cost by 20 per cent -50 per cent with an average 32.3 per cent.
 - Reduction in energy consumption by about 31 per cent.
 - Reduction in the use of chemical fertilizers by 7 per cent- 42 per cent with an average 28 per cent.
 - Overall Farmers income was increased by 20 per cent-68 per cent with an average increase of 48.5 per cent.



- Benefit-cost ratio was greater than one across the states.
- It also ensures additional benefits like non-exploitation of groundwater; reduction in the cost of weeding and relief from water scarcity induced labour migration.
- Micro Irrigation methods reduce conveyance losses, evaporation, runoff, deep percolation losses.
- Another advantage of this technology is that it will be functional with small water wells also.
- Due to focussed water application, the overall efficiency of water in drip irrigation and sprinkler irrigation are 80-90 per cent and 50 -70 per cent respectively.
- This is much higher than that of surface flooding (30 - 40 per cent).
- Water application efficiency was reported as 30 - 70 per cent for flooding, 60-80 per cent for sprinkler and 90 per cent for drip irrigation.
- Surface water moisture evaporation is same for sprinkler and flooding (30-40 per cent) whereas the same is only 20-25 per cent in drip irrigation.

5. INITIATIVES IN AGRICULTURAL SECTOR

What is the status of agricultural production in India?

- As per Fourth Advance Estimates for 2017-18, total Rabi Food grain production in the country is estimated at 144.10 million tonnes which is higher by 7.32 million tonnes than the previous record production of rabi food grain of 136.78 million tonnes achieved during 2016-17.
- Total production of Rabi Rice during 2017-18 is estimated at record 15.41 million tonnes.
- Production of Wheat, estimated at record 99.70 million tonnes, is higher by 1.19 million tonnes as compared to wheat production of 98.51 million tonnes achieved during 2016-17.
- Production of Rabi Nutri / Coarse Cereals estimated at record 13.10 million tonnes is higher than the average production by 1.91 million tonnes.
- Total Rabi Pulses production during 2017-18 is estimated at record 15.89 million tonnes which is higher by 2.34 million tonnes than the previous year's production of 13.55 million tonnes.
- Total Rabi Oilseeds production in the country during 2017-18 is estimated



at 10.31 million tonnes which is marginally higher by 0.55 million tonnes than the production of 9.76 million tonnes during 2016-17.

What are the new initiatives in the agricultural sector?

- Initiating market reforms through the State Governments by amending the agriculture marketing regime.
- Encouraging contract farming through the State Governments by promulgating of Model Contract Farming Act.
- 22,000 Gramin Haats are to be upgraded to work as centers of aggregation and for direct purchase of agricultural commodities from the farmers.
- Launch of e NAM initiative to provide farmers an electronic online trading platform.
- Implementation of flagship scheme of distribution of Soil Health Cards to farmers so that the use of fertilizers can be optimized. So far more than 15 crore Soil Health Cards have been distributed in two cycles.
- “Per drop more crop” initiative under which drip/sprinkler irrigation is being encouraged for optimal utilization of water.
- “Paramparagat Krishi Vikas Yojana (PKVY)” under which organic farming is being promoted. North East is being developed as organic hub.
- A revised farmer friendly “Pradhan Mantri Fasal Bima Yojana (PMFBY)” have been launched. The scheme covers various types of risks from pre-sowing to post harvest and the farmers have to pay very nominal premium.
- Under “Har Medh Par Ped”, agro forestry is being promoted for supplementing farm income, increase risk management and climate resilient agriculture as an important component of Integrated Farming Systems
- The Indian Forest Act, 1927 was amended to exclude bamboo from the definition of ‘trees’. Henceforth bamboo grown outside forest area will not be regulated under the provisions of felling and transit rules.
- Launch of PM-Asha scheme which will ensure MSP to farmers for oilseeds, pulses and copra.
- Giving a major boost for the farmers income, the Government has approved the increase in the MSPs for all Kharif & Rabi crops for 2018-19 season at a level of at least 150 percent of the cost of production.
- Bee keeping has been promoted under Mission for Integrated Development of Horticulture (MIDH) to increase the



productivity of crops through pollination and increase the honey production as an additional source of income of farmers.

- Rashtriya Gokul Mission has been implemented to enhance milk production and productivity of bovines and to make milk production more remunerative to the farmers.
- National Livestock Mission has been implemented to increase productivity and genetic improvement of livestock.

- Foreseeing high potential in fisheries sector, a Blue Revolution with multi dimensional activities mainly focusing on fisheries production, both inland and marine is being implemented.
- The National Mission for Sustainable Agriculture (NMSA), one of the eight Missions under the PM's National Action Plan on Climate Change is anchored in the Ministry of Agriculture and Farmers Welfare.