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## GIST OF KURUKSHETRA

FEBRUARY 2019

**Shankar IAS Academy™**

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# **I N D E X**

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## KURUKSHETRA – FEBRUARY 2019

### 1. NEW DIMENSIONS OF DEVELOPMENT IN AGRICULTURE

#### *What is the status of Agriculture in India?*

- Agricultural sector plays a significant role in any economy.
- Referring to it as the backbone of the economic system is not an exaggeration.
- In fact, agricultural sector not only provides food and raw material, but it also provides employment opportunities to a large segment of the population.
- In India, the main occupation of our working population is agriculture.
- About 70 per cent of our country's population is directly engaged in agriculture and allied sectors.
- On the contrary, the proportion of agricultural sector is very low in the economy of developed countries.
- On an average, it is 5 per cent in the UK, 4 per cent in the US, 14 per cent in France, 1-6 per cent in Australia, 21 per cent in Japan and 32 per cent in Russia.

- The high proportion of agriculture sector in Indian economy is due to the fact that non-agricultural sector has not been adequately developed in proportion to the requirement of rapidly growing population.
- According to the Central Statistics Office, the contribution of agriculture and allied sectors in national income during the year 1960-61 was 52 percent.

#### *What are the key interventions taken by GOI to promote Agriculture?*

- 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 **eNAM 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.
- The restructured **National Bamboo Mission** was launched for development of the value chain of bamboo as a measure to strengthen rural economy by linking the producer (farmer) to markets (industry).
- 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.
- The revised strategy document for 2018-2030 was prepared for enhancing preparedness of the agriculture and allied sector towards the challenges posed by climate change.

## 2. NEW PROCUREMENT POLICY FOR ENHANCING FARMERS INCOME

### *What is the existing procurement procedure?*

- It is an annual exercise that the commission for Agricultural Costs and Prices announces the minimum support prices of two dozen of crops, prior to their sowing, but only four are being procured by the Government, at those announced prices.

- Wheat and paddy are procured by Food Corporation of India along with the State Agencies to maintain the buffer food stocks at the central level.
- The cotton is procured by Cotton Corporation of India and Sugarcane by the Sugar Mills of the State.

### *Why there is a need for new procurement policy?*

- As Paddy and wheat, both require adequate quantity of water for irrigation, so the area under those crops escalated much higher in Punjab, Haryana and U.P. which had abundant water and particularly the groundwater on which, 60 percent of the irrigation was dependent.
- The farmers of those states diverted towards the cropping pattern of wheat and paddy.
- The Punjab and Haryana saw the staggering results in the output of these crops that is why these two states had been contributing about 80 percent in the total food stocks of the country.
- Pulses and oilseeds are the high valued crops those could be helpful to enhance the income of the farmers, but as shown by data concerned with these



crops where the area under pulses had increased marginally.

- As the states where the assured marketing was provided to wheat and paddy, the area under pulses remained stagnant and the import bills for pulses went on rising.

### ***What are the changes in the procurement policy?***

- In this new Procurement Policy, the government has envisaged the three alternatives.
- In first, the additional crops would be procured by the Central Government with partnership of the concerned State Government.
- In second case, the seller of those crops would be paid the balance of M.S.P. and the market price by the government, but the farmers would have to register themselves with the regulated market of the area.
- In the third option, the private traders can procure those products but those traders would have to pay the minimum support prices as announced by the Central Government.

### ***What are the possible impacts of this policy?***

- The policy looks as the most prudent and appropriate to enhance the

confidence of the farmers because the Government either Central or State, would be responsible to pay the announced minimum support price.

- The areas as well as output of those high value crops that includes pulses and oil seeds in the country would escalate.
- Once the area under the area of pulses and oil seeds are escalated, it would reduce the import of these crops.
- It would not only save the precious foreign reserves, but even the consumers would be secured to purchase adequate quantity at reasonable prices.
- State procurement of some other high value crops must have its favorable impact in the enhancement of the income of the farmers particularly the small farmers.
- The diversification of crops along with traditional crops would promote the level of employment, adequate and regular use of machinery, proper use of inputs including water and enhancing income through new policy of assured marketing.



### **3. INSTITUTIONAL CREDIT FOR AGRICULTURE**

#### ***What is the status of agricultural credit in India ?***

- As per AIDIS 2012-13, nearly 86% of the farm capital investment in India is undertaken with institutional / non-institutional sources of funds.
- While the farmers' dependence on borrowings for investment is more than 50% across all States, it is relatively higher and in excess of 90% in developed States like Andhra Pradesh, Kerala, Tamil Nadu, Punjab, Karnataka, Maharashtra and Madhya Pradesh.
- Further, at the all India level, the share of such borrowings from institutional sources is estimated to be around 63%.
- However, it is also an accepted fact that in most of the States of the country, the marginal and small farmers are more dependent on the informal sources for meeting their credit needs.
- The percentage of credit that is met from informal sources is 40.6%, 52.1% and 30.8%, for the landless, marginal and small farmers, respectively.

#### ***What is the flow of credit mechanism in Agriculture?***

- India had adopted the multi-agency approach to purvey rural credit, since nationalization in the late 1960s.
- A large number of formal agencies like the Co-operative Banks, Commercial Banks and the Regional Rural Banks were actively involved in providing bank credit for agriculture and its allied activities.
- Even Non-Banking Financial institutions [NBFCs], Micro Finance institutions [MFIs] and Self Help Groups [SHGs] were also involved in purveying agricultural credit.
- Amongst the agencies, RRBs exhibited the highest CAGR, while the Co-operative Banks reported CAGR of nearly 70%.
- On analyzing inter-se share, it is seen that Commercial Banks have consistently maintained a share of more than 70 %, while the share of Co-operative Banks at 13% has witnessed a steady slide from as high as 40% during 1999-2000.
- The Share of RRBs is slowly inching upwards and stands at 12% during 2017-18.



### ***What are the measures taken by GOI to promote credit flow?***

- The Kisan Credit Card [KCC] Scheme was envisaged to provide easy and hassle-free credit to the farmer.
- It has met with admirable success and with the launch of Rupay KCC, became more cost-effective.
- Policy enablers in the form of interest subvention on crop loans and credit linked capital subsidy schemes have also contributed in providing a fillip to agricultural financing by banks.
- Financing to Self Help Groups and Joint Liability Groups [JLGs] are attempts to leverage on group collateral to provide credit to rural poor women and small and marginal farmers.
- Volunteers of Farmers' Clubs are encouraged to form JLGs for accessing institutional credit. Cooperative farming, collective farming, Farmer Producers Organizations [FPOs], JLGs, leasing out land or contract farming are some possible ways of aggregation, both for input supplies to reduce costs as also for marketing to ensure better prices.
- Recent amendments to the Priority Sector guidelines by the RBI providing

for specific sub targets in flow of credit to SF/MF is also a welcome step.

- The Union Budget 2018-19 also provides special focus for marketing of agricultural produce through electronically-linked Gram in agricultural markets.
- Riding on the achievements thus far, the Budget also envisages enhanced flow of institutional credit for agriculture of Rs. 11- lakh crore during 2018-19.

### ***What is the way forward?***

- Financial products aimed at supporting more climate resilient and adaptive farming practices is the need of the hour.
- Credit flow for agro processing units, storage facilities, marketing infrastructure, etc., will facilitate in providing last mile connect to enhance post-harvest value of agricultural produce.
- Simple insurance products that provides for hassle-free cover will also help improve resilience of the average Indian farmer and make agriculture a risk worth taking.
- A robust Negotiable Warehouse Receipt [NWR] system will enable



farmers to monetize their produce early and avoid distress sale.

- Higher investments in agricultural infrastructure from out of the dedicated Long Term Irrigation Fund [LTIF] and the Rural Infrastructure Development Fund [RIDF] will further boost credit flow to this sector, thereby ensuring realization of the mission to double farmers' income, in a manner ideally envisaged.

#### 4. MICRO IRRIGATION FOR AGRICULTURAL GROWTH

##### *What is the need for water management?*

- India accommodates more than 17% of world's population, but the country has only 4% water resources and 2.5% land resources of the world.
- Water is a scarce natural resource and there is a huge demand-supply gap to meet the requirements of various sectors.
- The highest water demand is from irrigation, a critical input for agriculture production and its current demand in the country is around 80%.
- Since the demand from agriculture sector and other sectors (industrial demand, public water supply etc) are ever increasing and it is difficult to

identify additional sources of water, optimal use of available water is essential.

- Demand management is the most appropriate strategy to manage the scarce resources and according to National Water policy (201-2) by Ministry of Water Resources, Government of India, water saving in irrigation has been given vital importance to achieve water use efficiency.

##### *What are the benefits of Micro Irrigation?*

- **Increase in water use efficiency:** Micro irrigation helps in significant reduction of water conveyance losses, runoff, evaporation losses, and seepage & deep percolation losses.
- This ensures higher water use efficiency up to 50-90%.
- **Energy Efficiency:** Micro irrigation requires minimum pressure and low flow rate only.
- Hence, this ensures energy consumption saving up to 30.5%.
- Even small wells and tanks can also be used as a source of water.



- Since this system requires very low pressure, off-grid farmers can use solar pumps or diesel pumps.
- **Fertilizer Use Efficiency:** Proper mixing of fertilizers and water, control of optimum dosage and direct application of fertilizers to the root zone result in the saving in fertilizer consumption upto 28.5%.
- **Productivity increase:** The crop yield (quantity and quality) is increased and the enhancement in productivity is estimated for fruits / crops up to 42.4 % and for vegetables up to 52.7%.
- This ensures good economic return for the better yields.
- **Irrigation cost saving:** This technology reduces the overall cost of irrigation due to decrease in labour requirement for irrigation, weeding and fertilizer application.
- Irrigation cost saving is up to 31.9%.
- **New crop introduction:** Farmers can judiciously add more new crops due to improved water scenario and it was estimated that as many as 30.4% farmers have done it.
- Some of the farmers have tried intercropping and crop rotation also.
- **Increase in farmers' income:** The average income of all beneficiaries in all 13 districts was found to be increased up to 42%.
- More focused and judicious use of water & nutrients result in good quality produce and increase in farmers' income.
- Moreover, the reduction in spacing between the plants can accommodate more number of plants.

#### ***What are the constraints in adopting Micro irrigation?***

- Energy crisis due to power outages and unscheduled interruptions across rural and urban India.
- Some of the MI technologies are costly and they are affordable only to the wealthy and big farmers. Declining land holding and farm income is another major constraint which act as impediment in favoring for these technologies.
- The major disadvantage of solar panel enabled micro irrigation system is that farmers have to schedule irrigation during sunshine hours only, which otherwise they would be using the time for other productive works.

#### **5. STREAMLINING STORAGE AND MARKETING**



### **What is Agricultural Marketing?**

- Agricultural Marketing is a process that starts with a decision to produce a saleable farm commodity, and it involves all aspects of market system (functional and institutional), based on technical and economic considerations.
- It includes pre and post-harvest operations, assembling, grading, storage, transportation and distribution or marketing.
- Besides the physical and facilitating functions of transferring the goods from producers to consumers, the marketing system also performs the function of discovering the prices at different stages of marketing and transmitting the price signals in the marketing chain.
- Agriculture Marketing in India promotes the efficient use of resources in the production and distribution systems.
- Therefore, agricultural market policies are treated as an integral part of development policies and their functioning has remained an important part of public policy in India.

### **What are the GOI measures to improve agricultural marketing?**

- **Agriculture produce Marketing Committee Regulation (APMC) Act:** All the wholesale markets for agricultural produce that adopted the Agricultural produce Market Regulation Act (APMRA) are termed as "regulated markets".
- All the states of India have enacted APMC Act except Kerala, J&K and Manipur.
- The Act is implemented and enforced by APMCs established under it.
- The Act mandates that the sale or purchase of agricultural commodities, notified under the Act, is to be carried out in specified market areas, yards or sub-yards.
- These markets are required to have the proper infrastructure for sale of farmers, produce.
- Prices in regulated markets are to be determined by open auction, conducted in a transparent manner in the presence of an official of the market committee.
- Market charges for various agencies, such as commissions for commission agents, statutory charges such as market fees and taxes and produce



handling charges, such as for cleaning of produce, loading and unloading, are clearly defined, and no other deduction can be made from the sale proceeds of farmers.

- **E-NAM-An Electronic Portal for Agriculture Marketing:** The electronic National Agriculture Market (e-NAM) was launched in April 2016.
- National Agriculture Market or e-NAM is an electronic trading portal which networks the existing Agricultural Produce Market Committees (APMC) mandis to create a unified national market for agricultural commodities.
- Small Farmers Agri-business Consortium (SFAC) is the leading agency for implementation of e-NAM under the guidance of Ministry of Agriculture and Farmers' Welfare, Government of India.
- The main purpose of establishing e-NAM is to promote uniformity in agriculture marketing by streamlining of procedures across the integrated markets, removing information asymmetry between buyers and sellers and promoting real time price discovery based on actual demand and supply.
- Integration of APMCs across the country through a common online

market platform facilitates pan India trade in agriculture commodities and provides better price discovery through transparent auction process based on quality of produce along with timely online payment.

- It also provides access to a nationwide market for the farmer and availability of better quality produce at more reasonable prices to the consumer. At present, 585 regulated mandis in 14 states are linked with the electronic
- National Agriculture Market (e-NAM), which helps farmers/producers to discover real time price in a transparent manner.
- There are about 2,700 APMC mandis and 4,000 sub-market yards in India.
- Government also plans to enable trade among states' agriculture markets to enhance transparency in the sale and purchase of agricultural produce which enhances competition among the trade and leads to better prices for farmers.



## **6. BOOSTING AGRICULTURE THROUGH AGRI BUSINESS**

### ***What are the efforts taken by GOI to promote Agri Business?***

- **National Agriculture Market (e-NAM) :**
- 115 wholesale regulated markets have been integrated with e-NAM platform to achieve the target of total 585 e-NAM markets in 16 States and 2 Union Territories.
- The financial assistance has been sanctioned for cleaning, grading, sorting and packaging facilities in 320 existing e-NAM mandis and for compost unit in 245 existing e-NAM mandis.
- Cabinet Committee on Economic Affairs (CCEA) has approved the proposal for integration of additional 415 wholesale regulated markets with e-NAM platform during 2018-20.
- **Venture Capital Assistance :**
- In order to encourage Agri-prenures to set up Agri-based processing Units directly or indirectly benefiting the small and marginal farmers, SFAC has sanctioned VCA to 484 Projects amounting to Rs. 140.81 crores having Project Cost of Rs. 1631.25 crores during January to December 2018.
- **Formation of Farmer Producer Companies:**
- 22 Farmer Producer Companies (FPCs) were formed and registered involving 22000 farmers during January to December 2018.
- Upgradation and development of rural haats as Gramin Agricultural Markets (GrAMs) :
- A survey of 9477 rural haats has been conducted through Directorate of Marketing & Inspection (DMI), an attached office under Department of Agriculture, Cooperation & Farmers Welfare, for finding the status of infrastructure, type of commodities etc. in rural haats for better formulation of strategy of developing of rural haats.
- Proposal for creation of Agri-market Infrastructure Fund (AMIF) of Rs. 2000 crore for developing marketing facilities in Gramin Agriculture Markets (GrAMs) has been approved by Expenditure Finance Committee (EFC) headed by Secretary (Expenditure).
- **Model Contract Farming Act :**
- In order to optimize the use of scarce resources and mitigate the uncertainty in price and marketing, the



Government has formulated and released a progressive and facilitative Model Act “The ---State/ UT Agricultural Produce & Livestock Contract Farming and Services (Promotion & Facilitation) Act, 2018” in May, 2018 for its adoption by the states/Union Territories (UTs).

- The aforesaid Model Contract Farming Act covers the entire value and supply chain from pre-production to post harvest marketing including services contract for the agricultural produce and livestock.
- **Attracting and Retaining Youth in Agriculture (ARYA):**
- Realizing the importance of rural youth in agricultural development especially from the point of view of food security of the country, ICAR has initiated a programme on “Attracting and Retaining Youth in Agriculture”.
- ARYA project will be implemented in 25 States through KVKs, one district from each State.
- In one district, 200-300 rural youths will be identified for their skill development in entrepreneurial activities and establishment of related micro-enterprise units in the area of Apiary, Mushroom, Seed Processing, Soil testing, Poultry, Dairy, Goatry,

Carp-hatchery, Vermi-compost etc., KVKs will involve the Agricultural Universities and ICAR Institutes as Technology Partners.

- At KVKs also one or two enterprise units will be established so that they serve as entrepreneurial training units for farmers.
- The purpose is to establish economic models for youth in the villages so that youths get attracted in agriculture and overall rural situation is improved.
- **STUDENT READY:**
- The term READY refers to “Rural and Entrepreneurship Awareness Development Yojana”.
- Student READY is Skill development initiative to strengthen students with skills, so as to enable them to tackle global challenges, and to improve both their employability as well as ability to set up a venture.
- Student READY concept signifies this as a Finishing school for the undergraduate students.
- The students also stay in villages with farm families, agro based industries, cooperatives during phases of the RAWE programme to enable them to get real life field experience, understating of the problems and



enable them to gain confidence to tackle these problems.

- The programme will attract youth towards agriculture and allied sector and such ventures, when established will help improve economic conditions in rural areas.

## **7. IRRIGATION : KEY INPUTS FOR AGRICULTURE**

### ***Why irrigation is necessary?***

- irrigation facility encourages the farmers to use better varieties and other bio chemical technologies which obviously led to increased productivity.
- The cropping pattern followed in the irrigated area is superior to that of unirrigated area and therefore, the output of the crop in the irrigated area is higher.
- Irrigation facility allows the farmers to use the land more intensively throughout the year more intensively with higher level of cropping intensity, which is not possible under the unirrigated land.
- Risk in getting the assured output from the crops cultivated due to moisture stress is very high under unirrigated land while it is much less in the irrigated land.

- Given the high inelastic supply of land and reduced net sown area the future growth of agriculture will have to heavily rely on irrigation facility as it allows for multiple cropping on the same piece of land.

### ***What is Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)?***

- Launched on 1st July, 2015 with the motto of "Har Khet Ko Paani", the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) is being implemented to expand cultivated area with assured irrigation, reduce wastage of water and improve water use efficiency.
- PMKSY not only focuses on creating sources for assured irrigation, but also creating protective irrigation by harnessing rain water at micro level through "Jal Sanchay" and "Jal Sinchan".
- Micro irrigation is also incentivized through subsidy to ensure "Per drop- More crop".

### ***What are the objectives of PMKSY?***

- Achieve convergence of investments in irrigation at the field level (preparation of district level and, if required, sub district level water use plans).
- Enhance the physical access of water on the farm and expand cultivable area



under assured irrigation (Har Khet Ko Pani).

- Integration of water source, distribution and its efficient use, to make best use of water through appropriate technologies and practices.
- Improve on - farm water use efficiency to reduce wastage and increase availability both in duration and extent.
- Enhance the adoption of precision - irrigation and other water saving technologies (More Crop Per Drop).
- Enhance recharge of aquifers and introduce sustainable water conservation practices.
- Ensure the integrated development of rainfed areas using the watershed approach towards soil and water conservation, regeneration of ground water, arresting runoff, providing livelihood options and other NRM activities.
- Promote extension activities relating to water harvesting, water management and crop alignment for farmers and grass root level field functionaries.
- Explore the feasibility of reusing treated municipal waste water for peri-urban agriculture.

### ***What are the components of PMKSY?***

- **Water Resource:** Source augmentation, distribution, ground water development, lift irrigation, diversion of water from water plenty to water scarce areas, supplementing rain water harvesting beyond IWMP, MGNREGA, repair, restoration, renovation of traditional water bodies.
- **Per Drop More Crop (Micro Irrigation):** Installation of Micro Irrigation Systems (Drip & Sprinkler) in fields, extension activities, coordination & management.
- **Watershed:** Ridge area treatment, drainage line treatment, soil and moisture conservation, water harvesting structure, livelihood support activities and other watershed works.