



GENERAL AGRICULTURE FOR JRF, SRF & OTHER EXAMS- 2020

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General Agriculture for JRF, SRF & Other Exams- 2020

- ❖ Total Geographical Area of the country- **329 Mha**
- ❖ Net sown area of the country- **140.82 Mha (42.57% of total area)**
- ❖ Gross sown area of the country- **198.36 Mha**
- ❖ Barren land area in the country- **41 Mha**
- ❖ Degraded land area in the country- **63.85 Mha**
- ❖ Waste land area in the country- **178 Mha**
- ❖ *Total forest cover in India is- **80.73 million ha (24.56% of geographical area)**
(Source: Forest report-2019)
- ❖ State with highest forest area in the country is- **Madhya Pradesh, followed by Arunachal**
- ❖ For maintaining ecological balance percentage of the land area should be under forest is-**33**
- ❖ Irrigated area in India- **64.7 Mha (2019)**
- ❖ *Total Micro irrigation area in India is – **11.58 Mha (Drip -5.75 Mha)**
- ❖ State with highest Micro irrigation area is- **Rajasthan**> Andhra Pradesh> Maharashtra
- ❖ State with highest area under Drip irrigation is- **Andhra Pradesh**> MH> Gujarat
- ❖ State with highest area under Sprinkler irrigation is- **Karnataka**> Gujarat> Haryana>
- ❖ **Cropping Intensity of India is - 136%**
- ❖ **Government of India declared “2018” as- National year of Millets**
- ❖ **India is the largest producer of Millets in world, harvesting about 11 million tones and accounts for 40 percent of the world’s output.**
- ❖ Contribution of Livestock to National GDP is- **5.1%**
- ❖ **Contribution of Livestock to Total Agricultural GDP- 27%**
- ❖ The United Nations General Assembly has declared **2019** as the- **International Year of Indigenous Languages.**
- ❖ The United Nations General Assembly has declared **2020** as the- **International Year of Plant Health**
- ❖ The UN General Assembly adopted resolution designating **2021** as the **“International Year of Fruits & Vegetables”.**
- ❖ ***The first state in the country to flagged off India’s First fruit train was- Andhra Pradesh**
Note: A fruit train was flagged from **Tadipatri railway station in A.P.** carrying a load of 980 metric tonnes of locally grown bananas to Jawaha lal Nehru Port in Mumbai from where the consignment will be exported to Iran (Bananas exported under brand name **Happy Bananas**)
- ❖ ****A joint initiative of the Indian Meteorological Department (IMD) and Indian Council for**

Agriculture Research (ICAR) to bring high resolution 'Vernacular Agro advisory App' based on weather forecast to farmers is- **Meghdoot (Aug, 2019)** (Imp)

- ❖ National Research Centre for Chikoo/Sapota to be set up in- **Thane, Maharashtra**
- ❖ Economic survey 2018-19 suggested that central government focus on agriculture should shift from- '**Land Productivity to Irrigation water productivity**' (89% of ground water extracted is used for irrigation, 6% for Industries & 5% for domestic purpose).
- ❖ **Power house of Nutrients/Nutri-Cereals/Climate resilient crops are – Millets**
- ❖ ***Rural Retail Outlets opened by Indian Oil Corporation** Limited to provide rural customers with facilities like Micro ATM, Fertilizers/Pesticides, farm equipments is- **Kisan Seva Kendra (KSK operating in the country is 8044, functioning under Min.of petroleum & Natural Gas)**
- ❖ ***Total number of KVKs at present is- 716** (as of April, 2020)
- ❖ For effective functioning and monitoring of KVKs, KVKs are divided into- **11 ATARI Zones**
- ❖ ***Six Month Cross border Agri-tech Incubation programme** launched jointly by Pusa Krishi Incubator, ICAR & embassy of Indo-Brazil is- **MAITRI (Dec 9, 2019) (Imp)**
- ❖ Percentage of **Farm mechanization utilization** in India is about-**40%**
- ❖ Growth rate of Agriculture sector during 2018-19 is- **2.9%**
- ❖ The estimated growth rate of agriculture during 2018-19 was- **2.7%**
- ❖ **Overall economic growth rate during 2018-19– 6.8 %**
- ❖ *****Contribution of Agriculture and allied sectors to GDP is- 15.87%**
- ❖ ***Total Food grain production in the country during 2018-19 was- 284.95 MT (Kharif production- 141.71 MT; Rabi Production- 143.24 MT)**
Note: India's share in global total food grain production is **25%**
- ❖ The advanced estimated total food grain production for the year 2019-20 is- **291.95 MT**
- ❖ ***Total Pulse production for the year 2018-19 is- 23.4 MT**
- ❖ Among Pulses the crop with highest production and largest area under cultivation is- **Bengal gram/Chick pea/Chana/gram** (Second is Arhar/Pigeon pea)
- ❖ Among Oil seeds the crop with highest production and largest area under cultivation is – **Soya bean** (Second is Groundnut)
- ❖ **International Rice Research Institute (IRRI) South Asia Regional Centre established at- Varanasi, U.P. (Dec, 2018)**
- ❖ **First Director of IRRI South Asia Regional Center- Dr. Arvind Kumar**
- ❖ **The buffer stock maintained/Procurement made by FCI is- 56.75 MT (Rice-30.7MT; Wheat-30.7 MT)**
- ❖ **Rice Knowledge bank** launched (an agriculture web portal) launched on- **28 Feb, 2019** at Assam. Funded by World Bank for enhancing knowledge on Rice production techniques and technologies.

- ❖ **Farm Science congress held for the first time in- Bengaluru, Jan 3, 2020**
- ❖ **The Programme launched by Prime Minister for eradicating the Foot and Mouth Disease (FMD) and Brucellosis in the livestock is - National Animal Disease Control Programme (NADCP)**
- ❖ **National Animal Disease Control Programme launched on- 11th September, 2019 from Mathura in Uttar Pradesh.**
- ❖ **The main aim of NADCP is- to control Foot & Mouth Disease (Viral Disease) of cattle and Brucellosis (Zoonotic disease caused by bacteria) by 2025 and eventual eradication by 2030.**
- ❖ **World Bank assisted project SMART launched by which state to Augment agribusiness in rural areas is- Maharashtra. SMART-State of Maharashtra's Agribusiness and Rural Transformation (SMART)**
- ❖ **Union Ministry of Agriculture and Farmers Welfare launched online software for processing applications, Agmark quality certification mark for agricultural products is- AGMARK Online system**
- ❖ **Monthly pension scheme launched by Central govt. for benefit of Small & marginal is- Pradhan Mantri Kisan Man Dhan Yojana (Sep 12 2019); Monthly Pension of Rs.3000 will be provided to farmers on attaining the age of 60 Yrs.**
- ❖ **India's first high oleic acid groundnut varieties developed by ICAR-DGR, Junagadh is- Girnar 4(ICGV 15083) & Girnar 5 (ICGV 15090)**
- ❖ **First SAARC Agri Cooperative Business Forum held in-28-30 August, 2018 at Kathmandu, Nepal.**
- ❖ **Khadi and Village Industries Commission (KVIC) has opened its first Silk processing plant at- Surendranagar, Gujarat**
- ❖ ****The World Food Prize 2019 was awarded to- Simon N. Groot (Vegetable breeder from Netherlands (Dutch), Founder of East-West seed company) (M.Imp)**
- ❖ ***Egg production of the country for the year 2018-19 was- 95 billion**
- ❖ **Egg Production of the country for the year 2019-20 was- 103.93 billion (India 3rd largest egg producer in the world)**
- ❖ **Per capita availability of eggs in India is- 74 per person per year**
- ❖ **Position of India in terms of Egg Production- 3rd (1-China; 2- USA)**
- ❖ **Total commercial poultry population in India was- 534.7 Million**
- ❖ ***Total milk production in the year 2018-19 was- 188 Mt**
- ❖ **Per capita availability of Milk in India- 376 gm per person per day**
- ❖ *****India's share in World Milk production- 17%**
- ❖ **Minimum Support Price recommended by- Commission for Agricultural Cost and Prices (CACP)**
- ❖ **MSP announced by- Government of India; MSP is calculated based on Avg. Cost of**

Production

Note: MSP was first announced for **Wheat crop in the year 1966-67**

- ❖ ****At present MSP is announced for– 23 crop commodities only**
 - ❖ *The state that produces highest food grains is- **Uttar Pradesh**
 - ❖ *The State that produces **highest Pulses** is- **Madhya Pradesh**
 - ❖ The state that ranks first in Oilseed production is- **Rajasthan**
 - ❖ **2018- National year of Millets**
 - ❖ ****The First Ever world Pulse Celebrated on-10 Feb,2019**
 - ❖ ****First ever World cotton day celebrated on- 7th October, 2019**
 - ❖ **First ever World Food Safety Day celebrated on- 7th June, 2019**
 - ❖ **FAO of the UN declared the annual observance of World Pulses day starting from the year-2019**
 - ❖ **WTO hosted First Edition of World cotton Day on 7 October in- Geneva, Switzerland**
 - ❖ ***Institutional credit for Agriculture sector for the year 2020-21-15 lakh crore**
 - ❖ **Time period for achieving Sustainable Development Goals (SDG) set up by UN is- 2015-2030**
 - ❖ **Number of Sustainable Development goals- 17**
 - ❖ **Main aim of Sustainable Development Goals laid by the United Nations is - to ensure food security vis-à-vis nutritional security**
 - ❖ **Chairman of 15th Finance Commission (2017-2022) was- NK Singh**
 - ❖ **Chairman of International Egg Commission (IEC)- Suresh Chitturi**
 - ❖ **Total number of regulated markets in India- 7320**
 - ❖ **Total number of APMCs (Agricultural Produce Market Committees)- 585**
 - ❖ **Total number of GRAMs (Gramin Retail Agriculture Markets)-22,000**
 - ❖ **Model Contract farming Act bill passed on-May, 2018**
 - ❖ **** The first state to enact law on Contract Farming in India is- Tamil Nadu**
- Note:** (i). Model Agriculture Produce and Livestock Contract Farming and Services (Promotion & Facilitation) Act drafted in the year- **May 22, 2018**
- (ii). Model Contract farming Act will provide adequate confidence to farmers and incentives to sponsors to enter into contract.
- ❖ ***The First state in the country to implement “Land Leasing Policy” – Uttarakhand**
 - ❖ **“Agricultural Produce and Livestock Marketing” (Promotion & Facilitation) Act was enacted in the year- 2017**
 - ❖ **Govt. of India Constituted Agri export policy for farmers on- 9 Dec, 2018 (aim: to double agri exports to 60 billion\$ by 2022)**

Note: (i). APEDA Nodal agency for implementing Agri Export Policy.

(ii). **A Farmer Connect Portal** has been set up by **APEDA** for providing a platform for FPOs to interact with exporters.

Land Leasing Act	2016
Agriculture Produce & Livestock Marketing Act	2017
*Contract Farming Act	2018
Agri Export Policy	2018
Pesticide management bill Drafted in the year 2017 & passed in Parliament	Mar, 2020

- ❖ India's **First Agromet Forecast Centre** Inaugurated at- **UAS, Dharwad, Karnataka**.
(Main objective is to give accurate reports on weather which would enable the farmers to protect the crops and get a good yield.)
- ❖ **First state in India to use Automated Weather Stations (AWS)** to provide accurate report on Weather to farmers is- **Maharashtra**
- ❖ 4th Agri Leadership Summit 2019 held at- **Sonipat, Haryana**. (Theme: Entrepreneurship & Agri business; Agri Allied- A Promising sector and AGri Service-Direct Marketing.)
- ❖ Ministry of Tribal Affairs launched **Minimum Support Price for Minor Forest produces and Value Addition as component of Van dhan Scheme**.
- ❖ India has become the fourth country in the world to Launch **Anti Satellite Missile** to Hit a Low Earth Orbit (LEO) Satellite in Space under **Mission Shakti on 28 March, 2019**.
- ❖ **India ranks in terms of Cultivation of GM Crops/Biotech crops- 5th**
- ❖ Nodal Agency that deals in **Procurement, Processing, Distribution, export & import** of selected **agricultural commodities- NAFED (Oct, 1958)**
- ❖ Nodal agency for undertaking **price support operations for pulses & oilseeds and market intervention operation** for other agricultural commodities is- **NAFED**
- ❖ Nodal agency for procurement, storage and distribution of food grains is- **FCI**

Procurement Agencies:

- **Wheat & Rice – FCI**
- **Oilseeds & Pulses- NAFED**
- **Cotton- CCI; Jute- JCI**

- ❖ Implementing agency for National Programme for Organic Production (NPOP)- **APEDA**
- ❖ Nodal Agency for **Promoting export-oriented production and development of the Scheduled products – APEDA (1985)**
- ❖ **New scheme launched by National Cooperative Development Corporation (NCDC) for giving Cooperative Enterprise support and Innovation Scheme- Yuva Sahakar Scheme (Nov, 2018)**
- ❖ **The first ever 'India International Cooperatives Trade Fair (IICTF)' organized by NCDC was inaugurated on - 11th October, 2019 New Delhi**

- ❖ In January 2020 the states that faced severe attack by Locusts is- **Gujarat & Rajasthan**
- ❖ ***First Pashu Kisan Credit cards** were distributed to 101 animal farmers in the state of **Bhiwanai , Haryana** (Imp)
- ❖ To provide Digital mobile extension services for coffee stakeholders, Union Ministry of Commerce & Industry launched- **Coffee Connect & Coffee Krishi tharanga**
- ❖ **14 products** received **Geographical Indication (GI) tag** from Government of India in 2019.
Note: The First Product to get a GI Tag in India was- **Darjeeling Tea in 2004**
- ❖ Asian tea Alliance launched in China on- **April 19, 2019** (Members of this association are India, China, Srilanka, Indonesia and Japan.)
Main objective: To enhance tea trade, cultural exchanges and promoting tea.
- ❖ The third edition of **Global Potato conclave** was held at- **Gandhinagar, Gujarat on 28-31 Jan, 2020.**
- ❖ National Sugar Institute (NSI) of India will establish Sugar Institute at- **Nigeria**
- ❖ 5th Pulses conclave held at- **Lonovala, Maharsatra, 12-14 Feb, 2020.**
- ❖ The Scheme launched by FSSAI on the eve of **World Food Day, 2019** is- **Food Safety Mitra**
Note: **Food Safety Mitra** is an individual professional certified by FSSAI who assists in compliances related to FSSAI act.
- ❖ The main aim or objective of Food Safety Mitra is- for **Strengthening and scaling up 'Eat Right India' movement**
- ❖ Headquarter of International Solar Alliance- **Gurugram, Haryana**
- ❖ National Nutrition Mission launched on- **8March, 2018**

*****Agriculture Census: 2015**

- ❖ Total number of Operational Holdings in India – **146.45 million**
- ❖ *Average Land Holding size is- **1.08 hectare** (The average size of operational holdings is highest in Nagaland (5 hectares) and lowest in Kerala (0.18 hectares). (Imp)
- ❖ Gross Cropped Area in India - **198.36 million ha**
- ❖ Net Sown Area in India - **140.82 Mha (48% of total area)**
- ❖ Percentage of population depending on agriculture for their livelihood is- **54%**
- ❖ Percentage of workforce depend on agriculture is- **50%**
- ❖ Gross Irrigated area in India is- **96.46 Mha (29% of total cultivated area)**
- ❖ Net Irrigated area in India is- **68.38 Mha (20% of total irrigated area)**
- ❖ Maximum number of operational (landholdings) holdings are in – **U.P. (23.82 million)**
- ❖ Minimum number of operational (landholdings) holdings are in- **Sikkim (72,000)**
- ❖ Percentage of Small and marginal landholdings (below 2 hectares) constituted is – **86.21%**

- ❖ Percentage of rural women depend on agriculture for their livelihood- **84%**
- ❖ Percentage of women landholders (Cultivators) in agriculture is – **13.87%**
- ❖ Agricultural census conducted for every **5years**, first Ag.Census conducted in **1970-71**

Indian Food Processing Sector at a glance:

- ❖ Total number of Mega Food Parks in India- **42**
- ❖ Cold storage capacity of Mega food parks- **32 Mt**

India's First Aqua Mega Food Park established at- **Bhimavaram mandal of West Godavari, Andhra Pradesh. (14 Feb, 2019)**

- ❖ Minimum Land required for setting up a Mega Food Park is- **50 acres**
- ❖ The Food Processing Industry contribution to Agricultural sector is- **9%**
- ❖ The Food Processing Industry contribution to Manufacturing sector is- **11%**

Schemes Regarding Food Processing Sector:

- A. **Gram Samridhi Yojana**: “To help Unorganized Food Processing sector” concentrated in rural areas.

Funding: Rs.3,000 crore (1500 cr by World Bank, 1000 cr by Central Govt and 500 cr by State Govt.)

Launched by: World bank +Central Govt

- B. **Pradhan Mantra Kisan SAMPADA Yojana- May, 2017**

SAMPADA - Scheme for Agro Marine Processing and Development of Agro processing Clusters

Objective: **Holistic development of the food processing sector**

Other Important Snippets

- ❖ Target year fixed by Govt. of India for Doubling of Farmers Income is- **2022** (75th Independence of India)
- ❖ Chairman of the **Committee on Doubling of Farmer Income (DFI)- Ashok Dalwai**
- ❖ Govt. of India formulated _____point strategy to double farmers income- **Seven point strategy**
- ❖ All agricultural programs and policies shift their focus from- **Production oriented to Income oriented approach**
- ❖ Number of Insecticides/pesticides registered in India (as of Dec. 2018) is- **282**
- ❖ RKVY (Rashtriya Krishi Vikas Yojana)- renamed as- **Remunerative Approaches for Agriculture and Allied sector Rejuvenation (RAFTAAR)**

- ❖ Time period of RKVY- RAFTAAR increased from- **2017-2020**
- ❖ ****To Incentivize states to increase allocation for agriculture and allied sector is the main objective of- RKVY**
- ❖ **100% FDI is allowed in – Cold storage, ware houses and Food Processing sector**
- ❖ **Govt. of India has increased MSP of Kharif crops by- 1.5 times of cost of production**
- ❖ The average size of land holding in India is- **1.08 ha** (The average size of operational holdings is highest in Nagaland (5 hectares) and lowest in Kerala (0.18 hectares).
- ❖ Total number of operational holdings in the country according to 2015-16 Ag.census is- **146 Million**
- ❖ **Nodal Agency to coordinate the efforts on the Agriexport zones- APEDA**
- ❖ Total no. of Agri Export Zones in India -**60**
- ❖ **_____is the key approach for doubling farmers income by 2022 – Integrated farming System (IFS)**
- ❖ **Total number of Mega food parks in India- 42 (Operational Mega Food Parks- 17)**
- ❖ **Agricultural Mechanization for Insitu management of crop residue in- Punjab, Haryana, UP, Delhi.**
- ❖ ****A Machine developed by PAU, Ludhiana that allows a farmer to harvest Paddy & plant Wheat without delay is- Combo Happy Weeder**
- ❖ **NAFED procures “Oilseeds and Pulses” from state government at MSP through- Price Support Scheme (PSS)**
- ❖ **Portal launched by central government of India for e-marketing of Organic products is- Jaivik kheti portal**
- ❖ **A Company owned by DARE, under Ministry of Agriculture and farmers Welfare is- Agriinnovate india**
- ❖ **Statutory body related to food safety and regulation, protecting and promoting public health through the regulation and supervision of food safety in India is – FSSAI, 2011 (Food Safety and Standard Authority of India) (FSSAI Act 2006)**
- ❖ **The highest number of Custom Hiring Centers are in- Odisha (2960) followed by Madhya Pradesh (1922)> Chhattisgarh (782)**
- ❖ **Target number of Farmer Producer Organizations (FPOs) set by central government to register is - 10,000 (to promote cooperative farming)**
- ❖ **According to a study by National Productivity Council (NPC) Soil Health Card Recommendations has led to a- decrement of- 8-10% in use of chemical fertilizers as well as**

increased productivity by 5-6%.

- ❖ Asia's First Rice Technology Park established at-**Karnataka**
- ❖ Total Cold storage Capacity of our country is- **34 MT** (Million Tonne)
- ❖ **Grass root level Informal fora organized & Promoted by NABARD**, Rural bank branches, NGOs & KVKs is- **Farmers Clubs**

Food grain production Scenario (2018-19):

Food grains Production for the year 2018-19 (Final Estimates):

Food grain production includes Cereals and Pulses only	
Total Cereals Production	261.545MT
Total Pulses Production	23.40 MT
Total Food grain Production	284.95 MT

Cereals	Production (Million Tonnes)
**Rice	116.42 MT (record)
**Wheat	102.19 MT (record)
Nutri/Coarse cereals	42.95 MT
Small Millets	0.37 MT
Maize	27.23 MT
Total Cereals Production	261.55 MT
Pulses	
Gram/Bengal gram/Chickpea	10.13 MT
Tur /Red gram/Arhar	3.59 MT
Urad/Black gram	3.26 MT
Green gram/Moong	2.35 MT
Total Pulses Production	23.40 MT
Total food grain Production	284.95 MT
Kharif- 141.71 MT	
Rabi- 143.24 MT	

(Source: Directorate of Economics & Statistics, 2019)

- ❖ The government has renamed Jowar, Bajra, Ragi and Other millets as “Nutri Cereals” dispensing with the nomenclature “Coarse Cereals”. **Nutri cereals include Jowar, Bajra, Ragi, Small millets such as Barnard millet, Proso millet, Kodo millet, Little millet, Foxtail Millet.**
- ❖ **Sorghum, Maize, Bajra, Barley, Finger millet and Small millets such as (Barnard millet, Proso millet, kodo millet, Little millet, Foxtail Millet) together Called as “Coarse Cereals”.**

Commercial crops:

- **Oil seeds:** Includes Nine crops i.e., Ground nut, castor, Mustard and Rape seed, Niger, linseed. Safflower, Sunflower, soyabean and Sesamum.

Crop	Production (Million Tonnes)
Soyabean	13.79 MT
Groundnut	6.69 MT
Rape seed & Mustard	9.34 MT
Castor seed	1.2 MT
Total Oil seeds production (9 Oilseeds)	32.26 MT

- **Other Commercial Crops**

Crop	Production
** Cotton	28.71 Million bales #
Sugarcane	400.16 MT
Jute & Mesta	9.76 Million bales ##

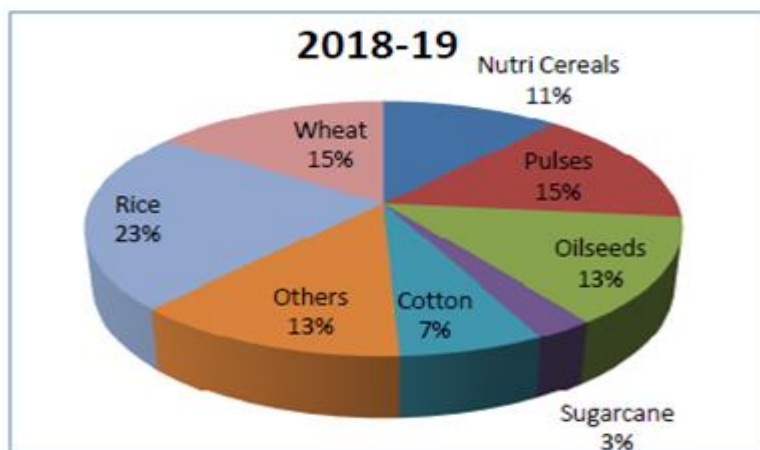
(Note: #1bale= 170 Kgs; ##1bale= 180 Kgs)

- ****BT cotton area in India is – 12.66 Mha (96% of cotton area)**
- **BT cotton area is Highest in Maharastra followed by Gujarath.**
- **Bt cotton is the only GM/Trangenic crop cultivated in India).**
- India ranks **5th in global cultivation of GM crops** with only Bt cotton in cultivation.
- **India** is the **largest producer** of **BT Cotton** in the World.

Area and Yield of Major Food crops 2018-19:

Crop	Area (in Mha)
Rice	43.79
Wheat	29.14
Pulses	29.03
Oilseeds	25.50
Cotton	12.66
Nutr-Cereals	21.98

Crop	Yield (quintal/ha)
Rice	25.78
Wheat	33.71
Maize	30.32
Pulses	8.41
Oilseeds	12.65
Cotton	4.77
Nutri-Cereals	19.41



Percentage Share of Area under Major Crops

The Second Advanced estimates of total food grain production: 2019-20

Crop	Production (MT)
Paddy	117.47 Mt
wheat	106.21 MT
Maize	28.08 MT
Jowar	4.38 MT
Bajra	8.90 MT
Nutri/Coarse Cereals	45.24 MT
Total cereals	268.93 MT
Pulses	
Tur/Arhar/red gram	3.69 MT
Bengal gram	11.22 MT
Urad/Black gram	2.25 MT
Moong gram/Greeng ram	2.27 MT
Total Pulses	23.02 MT
Total Food grain Production	291.95 MT

Commercial Crops: 2019-20

Crop	Production (Million Tonnes)
Soyabean	13.62 MT
Groundnut	8.24 MT
Rape seed & Mustard	9.11 MT
Castor seed	2.04 MT
Total Oil seeds production (9 Oilseeds)	34.18 MT
Cotton	34.89 Million bales
Sugarcane	353.8 MT
Jute & Mesta	0.98 Million bales

Horticulture Scenario-2018-19

- Area Under Horticulture Crops, 2018-19 was - **25.61 Mha**
- Production of Horticulture crops during 2018-19 was- **310.74 MT**
- Productivity of Horticulture crops, 2018-19 was- **12.10 tonnes/ha**
- India's share in world production of Fruits is- **13%**
- India's share in world production of Vegetables- **10.7%**
- Percentage of Gross Cultivated Area Utilized by Horticulture is- **16%**
- Contribution of Horticulture to Gross Value Addition (GVA)/GDP of Agriculture is-**38%**
- Contribution of horticulture to Agriculture GVA/GDP is- **38%**
- ****Total Fruit production in India – 97.97 Mt**
- ***Total Vegetable production in India- 183.17 Mt**
- India's rank in terms of Production of Fruits and Vegetables- **Second** (First Brazil)
- Leading producer of Fruits in India- **Andhra Pradesh** (Ranks First)
- Leading producer of Vegetables in India- **West Bengal** (Ranks First)
- The fruit crop with highest production in India- **Banana**
- The fruit crop with highest area under cultivation- **Mango**
- The vegetable crop with highest area and production is- **Potato**
- The state with production of fruits and Vegetables is high in- **Uttar Pradesh**
- Largest producer of Kiwi fruit in India- **Manipur**
- Largest producer producer of Lychee and Mesta in India- **Bihar**
- National Horticulture Board located at- **Gurugram (Haryana)**

Horticulture Crops	2018-19 Area	(Final) Production	2019-20 (First Advanced Estimate)	
	Area (Mha)	Production (MT)	Area (Mha)	Production (MT)
Total Fruits	6.5 Mha	97.96 MT	6.6	95.74
Onion	1.2 Mha	22.8 MT	12.93	24.45
Potato	2.17 Mha	50.19 MT	2.14	51.94
Tomato	0.7 Mha	19.00 MT	0.8	19.32
Total Vegetables	10.07 Mha	183.17 MT	10.29	188.08
Flowers	0.3 Mha	2.9 MT	0.29	2.87
Aromatic & Medicinal	0.627	0.795	0.63	0.82
Honey		120		120
Plantation Crops	3.8 Mha	16.3 MT	3.86	16.41
Spices	3.95	9.42 MT	3.86	9.37
Total	25.43	310.7 MT	25.61	313.35

Horticulture	2018-19	2019-20 (First estimate)
Area (Million hectares)	25.43	25.61
Production (million tonne)	310.74	313.35
Productivity (Tonnes/ha)	12.3	12.36

Top "3" cultivated Vegetables in Area & Production	Top "3" cultivated Fruits in Area	Top "3" Fruits in Production
First- Potato (50.19 MT)	Mango	Banana
Second- Onion (22.82 MT)	Banana	Mango
Third- Tomato (19.01 MT)	Citrus	Citrus

Top "3" states in Vegetable Production	Top "3" states in Fruits Production
West Bengal	Andhra Pradesh
Uttar Pradesh	Uttar Pradesh
Madhya Pradesh	Maharashtra

(Source: agricoop.nic.in)

Leading producers of different crops in terms of Area and Production

Crop	Leading State
**Paddy	Uttar Pradesh
*Wheat	Uttar Pradesh
**Cotton	Gujarath
**Ground nut	Gujarath
**Sugarcane	Uttar Pradesh
Pulses & Oilseeds	Madhya Pradesh
Onion, Chilli	Maharashtra
Potato	Uttar Pradesh
Jute & Mesta	West bengal
Silk, Coffee, Sunflower, maize	Karnataka
Red gram,	Uttar Pradesh
Rape seed & Mustard	Rajasthan
Tea	Assam
Rubber, pepper, Cashew nut	Kerala
Total Food Grain Production	Uttar Pradesh
Total Spices	Andhra Pradesh
Total Pulses & Oilseeds	Madhya Pradesh
Total nutria-cereals	Rajasthan

India's Position in the World

India holds First rank in case of	Second rank	Third rank
Spices	Arable land	Tobacco
Ginger, Banana, Mango	Potato	Tomato
Pulses	Onion	Fertilizer
Cotton seed, Cashew nut	Tea	Egg
Milk	Cabbage	--
Millets	Cauliflower	--
Mango	Sugar cane	--
Spices	Rice	--
Pomaganate	wheat	--
Banana	Food grains	--
Sapota	Ground nut	--
Livestock	Cotton	--
Acid lime, Aonla	Fruits & Vegetables	--
Millets, Jute	Brinjal, Onion, Garlic, Silk	--
Coconut	Fish, Bamboo	--

*India's position in natural rubber is- 4th

Animal Husbandary, Dairy & Poultry:

- ❖ **Total livestock population in India- **535.78 million**
- ❖ Share of world livestock population in India – **15%**
- ❖ India's position in Livestock population- **First (Largest Livestock Population)**
- ❖ First livestock census (once 5years) conducted in India in the year- **1919-20**
- ❖ India's largest states with **highest livestock population** are- **Uttar Pradesh > Rajasthan**
- ❖ *Total Egg production during 2019-20 is- **103.93 billion**
- ❖ Largest egg producing state in India is- **Andhra Pradesh (19.1%) >Tamil Nadu (18.2%) >Telangana (13.2%)**
- ❖ **Per capita availability of eggs per person/annum- 74**
- ❖ *Total milk production in the year 2018-19 was- **186 Million Tonnes**
- ❖ ***India's share in World Milk production- **22%**
- ❖ India's rank in world Milk production- **First**
- ❖ **Per capita availability of Milk per person/day- 376 grams**
- ❖ **Contribution of Livestock to Agricultural GDP is- 25.8%**
- ❖ **Contribution of Livestock to Overall GDP is- 4.5%**
- ❖ **Target to double milk processing capacity** from existing 53 MT to **108 MT by 2025.**

20th Livestock Census highlights

20th Livestock Census

****Total Livestock population in India is- 535.78 million**

Livestock Headcount (in million)	
Cattle	192.49
Buffaloes	109.85
Sheep	74.26
Goats	148.88
Pigs	8.26
Total livestock population	535.78 Million

- ❖ Total Bovine Population- **302.79 Million**
- ❖ Total Exotic/Crossbreed population- **50.42 Million**
- ❖ Highest Cattle populating state in India is- **West Bengal**
- ❖ Highest Sheep population state in India- **Telangana**
- ❖ Highest buffalo populating state in India- **Uttar Pradesh**
- ❖ Highest Goat & Camel population state in India is- **Rajasthan**
- ❖ Highest Poultry population state in India is- **Tamilnadu**
- ❖ Total Livestock population highest in- **Uttar Pradesh**
- ❖ Share of world livestock population in India- **15%**
- ❖ India's position in Livestock population- **First (Largest Livestock Population)**
- ❖ First livestock census (**once 5years**) conducted in India in the year- **1919-20**
- ❖ India's largest states with highest livestock population are-**Uttar Pradesh > Rajasthan**

Livestock Highest Population	
Animal	Highest Population
Cattle	West Bengal
Buffaloes	Uttar Pradesh
Sheep	Telangana
Goat	Rajasthan
Pig	Assam
Poultry	Tamil Nadu
Exotic and cross breed	Tamil Nadu
Camel	Rajasthan
Yalk	Jammu & Kashmir
Mithun	Arunachal Pradesh
Total Livestock	Uttar pradesh



Aquaculture Scenario-2019:

- ❖ Percentage of India's fish production to the global fish production is- **6.3% (2nd in World production)**
- ❖ India is the **Second largest producer of fish and Fresh water fish** in the world.
- ❖ Total Fish production in India- **12.60 million tonne¹⁶ (Includes Inland and Marine)**
(Inland sector- **8.90 Million tonnes**; Marine sector- **3.69 Million Tonnes**)
- ❖ **Leading state in Marine Fish production- Gujarat**
- ❖ **Leading state in Inland Fish production- Andhra Pradesh**
- ❖ **World Fish Centre** headquarter located at- **Penang, Malaysia**
- ❖ **Central Marine Fisheries Research Institute- Kochin, Kerala**
- ❖ **Central Inland Fisheries Research Institute- Barrack pore, West Bengal**
- ❖ **Central Institute of Fisheries Education (CIFE)- Mumbai, Maharashtra**
- ❖ **Central Institute of Brackish water Aquaculture- Chennai**
- ❖ Central Government Launched "**Blue revolution scheme**" for overall development of fisheries sector including enhancement of production and productivity, improving the livelihood of the fishers and welfare of fishermen in- **2015**
- ❖ **The main aim of Blue revolution is to augment Fish production to about- 20 MT by 2022-23.**
- ❖ **National Fisheries Development Board (NFDB) Headquarter- Hyderabad**
- ❖ **Contribution of fisheries to Agricultural exports- 20%**
- ❖ **Fisheries and Aquaculture Infrastructure Development Fund (FIDF)** was set up on- **23rd October, 2018** with worth **Rs.7,522 crore** to fill the large infrastructure gaps in fisheries sector in the country.
- ❖ **Minister of animal husbandry dairying and fisheries is- Sri Giriraj Singh**
- ❖ Govt. of India setup **Fisheries export target of Rs.1lakh crore** to be achieved by- **2014-25**

Fisheries Statistics

Global position	2 nd in Fisheries 2 nd in Aquaculture
*Contribution of Fisheries to GDP	1.2%
*Contribution to Agril. GDP	5.23%
Per capita fish availability (Kg)	9.0
Present fish Production	12.60 mmt
Inland	7.4 mmt
Marine	5.2 mmt

(Source:<http://nfdb.gov.in>)

- ❖ An **Independent Department of Fisheries has been created in 2019** to provide sustained and focused attention towards the development of fisheries sector.

Minimum Support Prices (MSP) for 2019-20 Season

Kharif Crops		
Commodity		MSP (Rs./Quintal)
**Paddy	Common	1815
	Grade A	1835
	Hybrid	2550
Jowar	Maldandi	2570
Bajra		2000
Maize		1760
**Redgram/ Tur (Arhar)		5800
Moong/Green gram		7050
Urad/Black gram		5700
Groundnut-in-shell		5090
Soyabean		3710
Sunflower Seed		5650
Jute		3950
***Cotton	Medium Staple (Staple length (mm) 24.5- 25.5)	5255
	Long staple length (mm) 29.5- 30.5	5550

Rabi crops	
Commodity	MSP (Rs./Quintal)
**Wheat	1925
Gram/Bengal gram/Chana	4875
Rape seed/Mustard	4425
Safflower	5215
Barley	1525

(Govt. of India provided 50% return over cost of production)

**MSP of Milling Copra - 9,960 per quintal

**MSP of Raw/Ball Copra - 10,300 per quintal

NOTE:

➤ **Cotton:** Medium Staple length (mm) of 24.5-25.5 and micronaire value of 4.3-5.1

: Long Staple length (mm) of 29.5-30.5 and micronaire value of 3.5-4.3

➤ Sugarcane prices are based on a basic recovery rate of **10 percent**

❖ Government announces minimum support prices (MSPs) for 22 mandated crops and fair and remunerative price (FRP) for sugarcane. **Total= 23 (22 mandated crops+ FRP for Sugar cane)**

❖ The mandated crops are **14 crops of the Kharif season** viz. paddy, jowar, bajra, maize, ragi, arhar,

moong, urad, groundnut-in-shell, soyabean, sunflower, sesamum, nigerseed and cotton;

- ❖ **6 Rabi crops** viz. wheat, barley, gram, masur(lentil), rapeseed/mustard and safflower and two other commercial crops viz. jute and copra
- ❖ Pricing policy for sugarcane is known as- **FRP (Fair and remunerative price)**

Chairman's/Heads/Presidents of different Institutes

Institute	Year of establishment	Chairman /Head/president	Headquarter
**ICAR	16 th July, 1929	President- Narendra Singh Tomar	New Delhi
		DG - Trilochan Mahopatra	
**NITI Ayog	1 Jan, 2015	Chairperson- Narendra Modi	New Delhi
		Vice Chairperson- Rajiv Kumar	
		CEO- Amitabh kanth	
❖ **ASRB	1 November, 1973	Aditya Kumar Misra (A.K. Mishra)	New Delhi
❖ Doubling of Farmer Income	2016	Ashok Dalwai	New Delhi
❖ NABARD	12 th July, 1982	C. Govinda Rajulu	Mumbai
**ASCI (Agriculture Skill Council of India)	2015	Sanjeev Asthana	Gurugram, Haryana
❖ FCI	1965	D.V.Prasad	New Delhi
❖ APEDA	1986	Paban Kumar Borthakur	New Delhi
❖ ***CACP	1965	Vijay Paul Sharma	New Delhi
❖ United Nations	1945,	Antonio Guterres	Newyork
❖ ICRISAT	1972	Dr. David bergvinson	Hyderabad
❖ PPV&FR	**2001	Dr.K.V.Prabhu	New Delhi
❖ MANAGE	**1986	Usha Rani	Hyderabad
❖ FAO	Oct 24, 1945	Qu Dongyu	Rome, Italy
❖ *NAFED	**Oct 2, 1958	Bijender Singh	New Delhi
❖ FICCI	1927	Pankaj patel	New Delhi
❖ CCI	2003	Dr.Alli Rani	New Delhi
❖ NDDB	1965	Dilip rath	Anand, Gujarath
❖ RBI	**1 April, 1935	Shaktikanta Das	Mumbai
❖ IARI	*1905	AK Singh	New Delhi



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❖ World bank	1945	David Malpass	Washington
❖ IFFCO	1967	Balvinder Singh Nakai	Newdelhi
❖ GST council	2015	Nirmala Sithraman	Newdelhi
❖ IMF	1945	Kristalina Georgieva	Washington
❖ FSSAI	2011	Ashish Bahuguna	Newdelhi
❖ IRRI	1960	Matthew Morell	Manila
❖ IRRI South Asia Regional Center- IRRI SARC & CERVA	Dec, 2018	Dr. Arvind Kumar	Varanasi

Note: CCI- Competition Commission of India

*****APEDA**- Agricultural and Processed Food Products Export Development Authority

FICCI- Federation of Indian Chambers of Commerce & Industry

PPV&FR- Protection of Plant varieties and Farmers Right Act

NAFED- National Agricultural Marketing Cooperative Federation

FSSAI- Food Safety and Standards Authority of India

CERVA- Centre of Excellence in Rice Value Addition

List of Important cabinet Ministers:

Minister of Agriculture & Farmers Welfare, Ministry of Rural Development, Ministry of Panchayati Raj	Shri Narendra Singh Tomar
Minister of Food Processing Industries	Smt. Harsimrat Kaur Badal:
Minister of Animal Husbandry, Dairying and Fisheries	Shri Giriraj Singh
Minister of Jal Shakti	Shri Gajendra Singh Shekhawat
Minister of Environment & Forest, Climate Change	Shri Parkash Jawedkar
Minister of Chemicals and Fertilizers	Shri D.V. Sadananda Gowda
Minister of Consumer Affairs, Food and Public Distribution	Shri Ramvilas Paswan

Ministry of Jal Shakti: Formed in May, 2019

This was formed by merging of two ministries; Ministry of Water Resources, River Development and Ministry of Drinking Water and Sanitation

- Campaign launched by Government of India for **Water conservation and Water security** with an emphasis on **1592 water stressed blocks in 256 districts** is- **Jal Shakti Abhiyan (JSA)**
- Jan Andolan for Water conservation- **Jal Shakti Abhiyan**
- Jal Shakti Abhiyan launched on- **1 July, 2019. (First Phase of JSA- 1st July, 2019 to 15th September, 2019; Second Phase of JSA- 1st October, 2019 to 30th November, 2019.**

Percapita Availability of Food grains-2018-19:

Food grain	PCA of food grains per day (gm/day)
Fruits	201.50
Vegetables	388.72
*Milk	376
*Eggs	74
Fish	9.8
*Pulses	54.7
Paddy	183
Wheat	182
Other cereals	80
Total food grains	488.7

- ❖ Agriculture contributes at least- **10% of GHG emissions**
- ❖ **Contribution of agriculture to GDP (2018-19)- 15.87%**
- ❖ Sector that contributes highest to GDP is- **Service sector followed by Industrial sector**

India's Rank in Different Indices- 2019

Index	Rank
***Human Development Index	129 (First rank- Norway)
Global Innovation Index (Switzerland-First rank)	52
Global Hunger Index	102
***Gender Gap Index	112 (Iceland- First rank)
***Gender Equality Index	95 (out of 129)
Global entrepreneur Index	68
Environmental Performance Index	178

Organic Farming Statistics:



- Total area under organic certification in India is- **1.5 million ha**
- Total Organic production in India- **1.35 Million tones**
- Total number of organic producers in India- **8.35 lakh**
- The state with largest area under organic certification is- **Madhya Pradesh**> Himachal Pradesh> Rajasthan
- India's First organic state- **Sikkim** (Declared on Jan 18,2016); Second organic state- Uttarakhand
- The country with largest area under organic farming – **Australia (27.15 Mha)**
- The country with highest number of organic producers in the world – **India** (More than 30 per cent of world's organic producers are in India)
- India's rank in terms of organically cultivated area is- **9th**; **First rank in terms of Organic Producers.**
- World's first wholly Organic country is- **Bhutan**
- Largest exported organic product in India- **Oilseeds (50%)**> Processed food products>Cereals & millets> Tea>Pulses>Spices

Research Institutes Working on Organic farming:

National Organic Farming Research Institute (NOFRI) in- **Sikkim**

National Centre for Organic Farming - **Ghaziabad, U.P.**

India's First Organic farming University going to be set up in- **Vadodara, Gujarath**

Indian Institute of Farming System Research - **Modipuram, U.P.**



- ****Total number of KVKs at present is- 716** (as of April,2020)
- KVKs are under the administration control of- **DDG of Agricultural extension**
- Present DDG of Agricultural Extension- **AK Singh**
- For **effective functioning and monitoring of KVKs**, KVKs are divided into- **11 ATARI Zones**

- Acronym of ATARI – **Agricultural Technology Application Research Institutes**
(ATARIs formerly called as Zonal Project Directorates)
- **Highest number of KVKs are in- Uttar Pradesh**
- **Zone with highest number of KVKs is- Zone VIII**
- **KVKs 100% fully funded by- ICAR**
- **Number of On Farm Trails (OFTs) conducted by KVKs (2018-19) for Technology Assessment & Refinement (TAR) is – 42,361**
- **Number of Frontline Demonstrations (FLDs) conducted by KVKs (2018-19) for showcasing potentials on improved varieties, modern technologies & practices is- 2,74,736**
- **Technology Assessment and Refinement done through- On Farm Trails (OFTs)**
- **Showcasing potentials on Improved varieties, modern technologies for creating awareness/popularizing technologies among farmers done through- Front line Demonstrations**
- **OFTs and FLDs were conducted on- Farmer's Fields**
- **Improved mandate of KVK is- Technology Assessment and Demonstration for its Application & Capacity Development (TADA-CD)**
- **Pandit Deendayal Upadhyaya Krishi Vigyan Puraskar (Best KVK award, 2019) given to- KVK, Chinyalisaur (Uttarakhand)**
- **11th National Conference of KVK held on- Feb 28-Mar 01, 2020, New Delhi (theme: Empowering Youth for Technology Led Farming)**
- **Krishi Kalyan Abhiyan (KKA) : Launched on 1st June, 2018**

It was launched to aid **assist and advice farmers on how to improve their farming techniques** and raise farm incomes.

It was coordinated and **implemented by KVKs** in selected Aspirational districts (**115 Districts**).

KKA will be implemented in **25 Villages of the Aspirational district** with more than 1000 population.

- **mKisan Portal: Launched on 2013**

Platform which provides **Web-based mobile agro advisories (Weather, Market, Outbreak of pest & diseases and their control)** to farmers with

technological backstopping from KVKS and Research Institutes of SAUs.

- **KVK Mobile App** developed by- **ICAR-IASRI**
- **District Agro-Met Units (DAMUs) : Feb, 2019**

Indian Council of Agricultural Research (ICAR) and India Meteorological Department (IMD) has jointly initiated District Agro-Met Units (DAMUs) to provide Agro meteorological services to farmers to set up in KVKs.

New Schemes of KVK (2018-19)

- **NARI- Nutrisensitive Agricultural Resources and Innovations**
- **KSHAMTA- Knowledge Systems and Homestead Agriculture Management in Tribal Areas**
- **VATICA- Value Addition and Technology Incubation Centres in Agriculture**
- **FIRM- Farm Innovation Resources Management**



- **Farm Science congress was conducted for the first time in the city- Bengaluru, Jan 3, 2020**

Farm Science Congress held at Indian National Science Congress in Bengaluru

Farm Science Congress was conducted for the first time in 107 yr history of the Indian science congress. The event highlighted the importance of farmer's innovations and their Scientific Validity.

- Six Month Cross border **Agri-tech Incubation Programme** launched jointly by Pusa Krishi Incubator, ICAR & embassy of Indo-Brazil is- **MAITRI (Dec 9, 2019)**
- **Agri Start-Up/Agri Incubator programme of ICAR-IARI is- Pusa Krishi Incubator, 24 Dec, 2018.**
- The Indian Council of Agriculture Research (ICAR) has signed **an MoU with which bank to develop Climate Resilient Technologies for Farmers– NABARD on Dec 13, 2019**

- **Third edition of Global Potato Conclave** was held at **Gandhinagar, Gujarat on 28 to 31 January, 2020. Launched by P.M. Sri Narendra Modi**
 - Aim to highlight achievements and opportunities in the area of potato research, trade, industry and Value chain.
 - Earlier Two Potato Conclaves were organized in 1999 and 2008.
 - Potato conclave jointly organized by **Indian Potato Association, ICAR & ICAR-CPRI, Shimla & International Potato Center, Lima, Peru.**
- The theme of ICAR tableau at its first ever participation in the republic day parade on 2018 is- **Integrated Farming System for doubling farmers income**
- Number of **Organic farming models** developed by ICAR is- **45**
- Number of **Integrated farming Systems validated** by ICAR is- **51**
- Total Number of **Biofortified varieties** developed by ICAR is- **18** (Biofortified varieties are rich in Iron, Zinc, Protein,, glucosinolates & Kunitz Trypsin Inhibitor (KTI) free.
- **'Farmers Innovation Fund'** to scientifically validate, scale-up and propagate the innovations of Progressive farmers is set up by- **ICAR in the year 2020-21**
- **National Innovation Centre** will be established by ICAR in- **New Delhi, 2020-21.**
(Innovations will be scientifically validated and farmers will be allowed to pursue research work.)
- **Diagnostic Kits Developed** (Useful for SRF)
 - ICAR-CIFT Developed **Raid detection Kit** for detecting the presence of 'Ammonia and Formalin' in Fish.
 - ICAR-IVRI Developed **Japanese Encephalitis (JE) ELISA Kit (IgM)** is helpful for assessing the active infection of JE virus in the swine (Pig) population which predicts the outbreak of JE in the humans.(15 Oct, 2019)
 - ICAR IVRI **Bluetongue Sandwich ELISA (sELISA)** for detection of antigen in sheep, goats, cattle, buffaloes and camels for blue tongue which is insect-transmitted viral disease.
 - **Sandwich ELISA & Japanese Encephalitis ELISA** developed under **Make In**

India programme.

- ICAR-CIFT developed **Freshness DOT**- Smart and easy to use paper based indicator to detect Freshness of Fish & Shell fishes.

Conferences/Fairs/Melas: (Useful for SRF)

- The ICAR was awarded First Prize for its Tableau, '**Kisan Gandhi**' in the Republic Day Parade 2019 for displaying the **importance of dairy farming, use of indigenous breeds and livestock based organic agriculture for rural prosperity.**
- **Pusa Krishi Vigyan Mela (farmers fair) held at- 1-3 March, 2020. New Delhi.**
- **International conference on Banana** (theme:Innovations in Sustainable Production & Value Chain Management in Banana) held at- **22-25 Feb,2020. Trichy, TN.**
- **Second Brackish water Aquaculture farmers Conclave 2020 held at- Surat, Gujarat during 19-20, February, 2020.**
- **Country's biggest Horticulture Fair held at- 05-08 Feb, 2020. Heasrghatta, Bengaluru.**
(Theme: **Making Farming An Enterprise**)
- ****The third edition of Global Potato conclave** was held at- **Gandhinagar, Gujarat on 28-31 Jan, 2020.**(Theme: Road Map for a better world)
- **Farm Science congress was conducted for the first time** in the city- **Bengaluru, Jan 3, 2020**
- The workshop and Exhibition on '**Bamboo- A Wonder grass**' was held at- **Jammu & Kashmir (World Bamboo Day celebrated on- September 18)**
- **Workshop on Hydroponics and Soil less Culture** held at- **ICAR CISTH, Lucknow on 24 Jan, 2020.**
- **3rd International Symposium on Genomics in Aquaculture (ISGAIII)** from **21-23 January 2020 at ICAR-CIFA, Bhubaneswar**
- **International symposium on spices as flavours, fragrances & functional foods** on **06th to 09th May, 2020 at Kochi Kerala, India.**
- ****8th International Conference on Agricultural Statistics** (Theme: Statistics for sustainable transformation of Agriculture to Achieve the Sustainable Development Goals) held at- **18-21 November, 2019, New Delhi** (Inaugurated @Bill Gates)

Other Information: (Useful for SRF)

- **Currently ICAR is researching Zero Budget Natural Farming Methods (ZBNF) on-
Wheat and Basmati Rice**
- The IIFSR, Modipuram developed One Acre **Integrated Organic Farming System (IOFS) models** under the scheme-**All India Network Programme on Organic Farming**
- **IRRI South Asia regional centre set up at- Varanasi (Dec, 2018)**
- The amount of National Talent scholarship for UG and PG students has been increased to **Rs.3000 for UG and Rs. 5000 per month for PG**
- ICAR launched Deen Dayal Upadhyay Unnat Krishi Siksha Yojana (PDDUUKSY) - **to train farmers in Organic farming, natural farming and cow based economy.**
- Icar launched the Agricultural Education Portal for Centralised uniform solution called- **EKTA portal (Ekikrit Krishi Shiksha TankiAyaam)**
- ICAR launched **NAHEP (National Agriculture Higher Education Portal)** sponsored by World bank and Govt. of India for- **Attracting talent and further strengthening of higher agriculture education.**
- An Ambitious initiative in Agri Education for **improving student learning outcome & Market orientation** is- **ICAR-NAHEP (funded by World Bank)**
- **Present DDG of Agricultural Education- Narendra Singh Rathore**
- **National Phenomics Research Center established at- New Delhi**
- **Number of KVKs conducted exclusive Front line demonstrations on Pulses- 549**
- **Number of KVKs conducted exclusive Front line demonstrations on Oilseeds- 516**
- **“Lipoxygenase-2 free Soyabean”** with reduced Off-flavour developed by ICAR was- **NRC 109**
- **Genetically Modified Cotton variety developed by Punjab Agricultural University (PAU), Ludhiana is- PAU Bt 1 and F1861**
- **Genetically Modified Cotton variety developed by Rajasthan Agriculture University is- RS 2013**
- **International Horticulture Innovation and Training Centre is located in - Jaipur, Rajasthan**
- ICAR- Central Institute for Women in Agriculture is located at Bhubaneshwar, Odisha. Launched following Schemes for women development: **1. Ujjawala 2. Beti Bachao Beti**

Padhao 3. One Stop Centre 4. STEP 5. SWADHAR

- IARI has developed ‘**Pusa Soil Testing and Fertilizer Recommendation Meter**’ for facilitating the reach of soil testing at the farmers’ doorstep.
- 4th Agriculture Leadership Summit held at- **19 Feb, 2019 at Sonipat, Haryana**. (theme: Entrepreneurship & Agribusiness; Agri Allied- A Promising Sector and Agri service- Direct marketing.)
- New Fish Species **Barilius torsai (Teleostei: Cypriniformes: Cyprinidae)** identified by **ICAR-CIFRI, Barrackpore**.
- ****Technology Business Incubator (TBI)** hosted by **ICAR-NAARM** is- **a-IDEA (Association for Innovation Development of Entrepreneurship in Agriculture)**
- An innovative approach, introduced by IWMI, Bhubaneswar, CGIARclimate to alleviate crop loss through floods is - **Index-based flood Insurance (IBFI)**
- Gaint Leaf of **Macaranga nicobarica** holds potential as an **alternative to plastics food wrappers/plates**.
- **Godetia** : A source of natural dyes

ICAR Varieties and technologies Making Impact:

Revolutionary basmati Rice **Pusa Basmati 1121** Forex earning- **Rs.32,805 cr** (2018-19)

CRRI Rice varieties covering **18-20% of rice area** of the country; gross value worth **Rs.48,000 Cr** per year

Co-0238 (12% Sugar Recovery) worth gross value- **Rs.28,795 Cr** every year

- ****RAWEP programme formulated by - MS Randwa committee**
- **Stifend provided for students under RAWEP programme is Rs.3,000**

ICAR PUBLICATIONS:

English Publications	Hindi Publications
1. Indian Journal of Agricultural Sciences (Monthly)	Kheti (monthly)
2. Indian Journal of Animal Sciences (Monthly)	Phal Phool(Bi Monthly)
3. Indian Farming (Monthly)	Krishi Chayanika
4. ICAR News (Quarterly)	
5. ICAR Reporter (Quarterly)	
6. Indian Horticulture (Bi Monthly)	
7. ARIS (Quarterly)	

****Monthly Journal Published by Min.of Agriculture – Agricultural Situation in India.**

Indian Council of Agriculture Research (ICAR) Umbrella covers	
Research Institutes	69
National Bureaus	06
State Agriculture Universities	69
Deemed Universities	04
Central Agricultural Universities	03
National Research centers	14
ATARIs (Agricultural Technology Application Research Institutes)/KVK Zones	11
Project Directorates	13
**Krishi Vigyan Kendras	716

ICAR Awards:

Swami Sahajanand Saraswati	Extension work
**NASI-ICAR	Farm implements
**Haldhar award-	Organic Farming
Lalbahadur sastry Award	Young scientist award
Rafi Ahmad Kidwai Award	Outstanding Research in Agril. & allied Sciences
Fakruddin ali ahmed-	Outstanding Research in Tribal areas
Chaudhary Devi Lal	Outstanding AICRP award
Sardar Vallabhai Patel award	Outstanding ICAR institute award
**Punjab rao deshमुख	Outstanding Woman Scientist Award
Pandit Deen Dayal Upadhyay Krishi Vigyan Puraskar	Best KVK
*King Baudoin International Prize	Green Revolution
Jawaharlal Nehru Award	Outstanding Doctoral thesis research in agricultural and allied sciences
Dr. Rajendra puraskar	Technical bulletins in Hindi
NG Ranga Award	Diversified agriculture
Jagjivan ram Puraskar	Innovative farmer
C. Subramanyam award	Outstanding teacher
Chaudhary Charan Singh Award	Excellence in Journalism in Agricultural Research and Development
Vasantrya Naik award	Outstanding research and application in Dry land farming

Varieties released by ICAR; Biofortified and Other Imp.Varieties (Imp)

➤ **** Climate Smart Varieties developed by NRRI, Cuttack - CR Dhan 801 & CR Dhan 802 (which are tolerant to both submergence and drought and few biotic stresses to face the challenges of climate change.)**

➤ **Two superior chickpea varieties developed for the first time by using Genomics Assisted Breeding is - "Pusa Chickpea-10216" and "Super Annigeri 1."**

(Note: Pusa Chickpea 10216 developed by ICAR- IARI in collaboration with the ICRISAT. Super Annigeri 1" has been developed by UAS, Raichur (Karnataka) and in collaboration with ICRISAT.

- **New Blockbuster wheat variety developed by IARI with high yield and protein content is- HD 3226 or Pusa Yashasvi**
- **India's first high oleic acid groundnut varieties developed by ICAR-DGR, Junagadh is- Girnar 4(ICGV 15083) & Girnar 5 (ICGV 15090)**
- **Anti Oxidant rich Purple Potato Variety developed by CPRI, Shimla is- Kufri Neelakanth**
- **Latest Wheat Variety developed by ICAR for irrigated timely sown conditions of NE Plains is - Karan Vandana (DBW-187)**
- **Outstanding Forage Hybrid released in 2019 for revolutionizing forage sorghum production in India is- CSH-24 (developed by GPBUAT & ICRISAT)**
- **** Protein rich rice varieties - CR Dhan 310 & CR Dhan 311**
- **Pigeon pea -PUSA Arhar 16 (determinate, extra early maturity, 120 days)**
- **Wonder variety of Sugarcane- Co-0238 (First wonder cane variety Co-205)**
- ***BT cotton varieties developed by PAU is : F1861, PAU Bt 1(for cultivation in Punjab & Haryana)**
- ***BT cotton variety developed by Rajasthan Agril. University is- RS2013**
- **Quality Protein Maize (QPM) -PUSA Breakfast Cereal**
- **First Hybrid variety of Tobacco in India is- GTH-1**
- **Low neuro toxin varieties of grass pea is -Rattan, Nirmal, Prateek**
- **Marigold-PusaBahar**
- ***Spineless variety of Safflower- NARI-6**
- **First ever short duration Moong (< 60 days)- Virat (IPM 205-7)**
- **BLB of rice disease resistant variety-PUSA 1592, Punjab Basmati-3**
- **Blast disease resistant rice variety-PUSA 109**
- **Nematode resistant variety of papaya- Pusa Majesty**
- **Day neutral and spineless variety of Okra- Pusa Sawani**
- **Black Variety of Carrot- Pusa Asita**
- **World earliest maturity variety of cotton genotype was identified by CICR scientist (2017) - Variety name: Yugank**

Crop	Biofortified Variety
**Rice	CR Dhan 310 –Protein rich variety)
	CR Dhan 311 (Mukul)- Rich in Protein & Zinc, suitable for rainfed shallow lowland & medium land.
	Zinco Rice MS Rich in Zinc (27.4 PPM) Highest Zinc Rich
	DRR Dhan 45 –zinc rich variety)
Wheat	WB 02 (Zinc & Iron rich variety)
	Pusa Tejas (HI 8759) durum (Rich in protein, Iron & Zinc, suitable irrigated timely sown conditions.
	HPBW 01 (Iron & Zinc rich variety)
Maize	**Pusa Vivek QPM9 – Provitamin-A, lysine & tryptophan rich hybrid)
	Pusa HM8 Improved (lysine & tryptophan rich hybrid)
	Pusa HM9 Improved (lysine & tryptophan rich hybrid)
Pearl millet	H HB 299 (iron & zinc rich hybrid)
	A HB 1200 (iron rich hybrid)
Lentil	Pusa Ageti Masoor (iron rich variety)
**Mustard	**Pusa Mustard 30- low erucic acid variety ; (<2% erucic acid)
	**Pusa Double Zero Mustard 31- low erucic acid & low glucosinolate variety
Cauliflower	Pusa Beta Kesari 1 (β -carotene rich variety)
**Sweet Potato	Bhu Krishna (anthocyanin rich variety)
Potato	Bhu Sona (β -carotene rich variety)
Pomegranate	Solapur Lal (Iron, zinc & vitamin-C rich variety)
**Tomato	**Arka Rakshak- India's first Triple disease resistant (Leaf curl, Bacterial wilt & early blight) F1 Hybrid

(Note: Cereals are deficient in “Lysine” amino acid, Pulses are deficient in “Methionine”)

- ❖ **Swarna Vaideh**- first ever variety of Makhana was developed and released by ICAR.
- ❖ **Virat**- Early maturing Summer Mungbean
- ❖ **Pusa Arhar 16**- dwarf pigeon pea, Short duration (120 day **redgram variety** (Miracle red gram variety)
- ❖ **Co-0238 (Karan 4)** - Wonder variety of sugar cane, released by Sugarcane Breeding Institute, Regional Centre, Karnal.
- ❖ **Pusa rudhira** is an improved variety of-**Carrot**
- ❖ Antioxidant rich, **red coloured Okra variety** developed by IIVR, Varanasi- **Kashi lalima**
- ❖ An **Arsenic resistant high yielding, thin aromatic rice variety** is- **Muktoshri (W.B.)**
- ❖ New Potato Varieties for Table Purpose- **Kufri Neelkanth, Kufri Mohan, Kufri Ganga & Kufri Lima.**

Popular Mega Varieties of ICAR

Rice Variety- Pusa Basmati 1121 (Breeder: Dr. Vijaypal Singh)	Superior cooking and grain quality.	The variety is extremely popular in foreign market and by way of export earned total of Rs.92117 crore during 2014-19.
Sugar Cane Variety - Co-0238 (wonder cane variety) (Breeder: Dr.Bakshi Ram)	Unique sugar variety with average sugar recovery of about 11.5 to 12%.	--
Wheat variety HD 2967 (Breeder Dr.K.V. Prabhu)	largely sown wheat variety	Cultivated in a area about 10 million ha (1/3 rd area of total area of the country). The highest ever demand of breeder seed for a single variety in Indian agriculture

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ICAR Programmes:

1. National Innovations on Climate Resilient Agriculture (NICRA), 2011- is a network project of the Indian Council of Agricultural Research (ICAR) launched in - **February, 2011.**

Three components: Strategic research, Demonstration & Capacity Building

2. AGRI UDAAN, 2017- Food and agribusiness Accelerator Start up Programme 2.0, launched by ICAR's NAARM in collaboration with IIM-Ahmadabad in- **August, 2017**

3. **ARYA- Attracting and Retaining Youth in Agriculture, July, 2015

✓ To attract and empower the Youth in Rural Areas and to prevent migration of youth from rural to urban areas, to take up various Agriculture, allied sector enterprises for sustainable income and gainful employment in agriculture.

4. *READY- Rural and Entrepreneurship Awareness Development Yojana- July, 2015.

To promote entrepreneurial skills among agril.students.

It will provide an opportunity for the students to learn and understand agricultural practices in collaboration with farmers.

5.Mera Gaon-Mera Gaurav, July,2015:

✓ To enhance the direct interface of scientists with farmers which will hasten the lab to land approach.

✓ Under this scheme, groups of scientists will select villages and will remain in touch

with that village and provide required information, knowledge and advisories to farmers on regular basis.

6. Farmer FIRST: Farmer's Farm, Innovations, Resources, Science and Technology (FIRST), July, 2015

- ✓ 'Farmer FIRST' is an ICAR initiative **“to move beyond the production and productivity and to privilege the complex, diverse & risk prone realities of majority of the farmers through enhancing farmers-scientists contact with multi stake holders-participation.**
- ✓ The focus is on Farmer's Farm, Innovations, Resources, Science and Technology (FIRST).

7. National Agriculture Higher Education Project- Sep, 2017

Funded by: World Bank, Implemented by: ICAR

To provide relevant and better quality higher education to students.

8. Mridaparikshak- July, 2015

A Mobile mini soil testing lab for distributing Soil health cards to farmers.

9. KIRAN (Knowledge Innovation Repository of Agriculture in North East)- 2012

Farmer FIRST, ARYA, Mera Gaon-Mera Gaurav, Mridaparikshak programmes implemented through KVKs

Indian State of Forest Report-2019:

- Top States in terms of forest cover as Percentage of total geographical area is- Mizoram (85.41%)>Arunachal Pradesh (79.65)>Meghalaya (76.33%)
- Total forest cover in India is- **80.73 million ha (24.56% of geographical area)**
- **State with highest forest area in the country is- Madhya Pradesh, followed by Arunachal Pradesh>Chattisgarh**
- India has **10th rank in global forest area** with 2% contribution
- **8h largest forest carbon stock**
- **The tree cover of the country is 95,027 sq Km which is 2.89% of total geographical area.**
- Top 3 states showing increase in forest area is- Karnataka>Andhra Pradesh>Kerala

Agricultural Exports and Imports:

- ****Share of Agriculture exports in the total exports of the country- 12.26% (fourth largest commodity in terms of exports)**
- ****Share of Agriculture imports in the total imports of the country- 4.09%**
- ***India's largest exported agricultural commodity in terms of its value- Basmati Rice (Rs.32,804 cr)**
- Highest exported : **Cereals (basmati rice & Non basmati rice) > Marine Products > Buffalo meat**
- Highest imported: **Vegetable oils and Fresh fruits**
- Share of India's Agriculture exports in the world exports – **2.5%**
- Share of India's Agriculture Imports in the world Imports – **1.5%**
- India's total agricultural exports accounts for- **2.71 Lakh crore**
- India's total agricultural imports accounts for- **1.42 Lakh crore**
- ****India's top Agricultural Export commodities in terms of value are-**
Basmati Rice > Buffalo Meat > Non basmati rice > Guar Gum
- ****India's top Agricultural Imports in terms of value are-**
Vegetable oils > Fresh fruits > Cashew > Pulses > Raw Cotton
(Source: <http://apeda.gov.in>)
- **India Exports Principal Agricultural commodities to- USA**
- **India Imports Principal Agricultural Commodity (Edible oils) from – Indonesia**
- **India's position in global export of agricultural, fishery, and forestry products is- 14th**

National Food Security Mission (NFSM)-2007

- National Food security Mission (NFSM) launched in the year- **2007**. The main objective is to increase production of **Rice by 10 MT**, **Wheat by 8 MT** and **Pulses by 2 MT** by the end of 11 FYP.
- **Revised Target of NFSM during 12 FYP** is to increase food grain production by **25 MT** i.e., 10 Mt of Rice, 8Mt of Wheat, 4Mt of Pulses, 3Mt of Coarse cereals.
- NFSM at present covers **7 crops** i.e., Rice, Wheat, Pulses, Coarse Cereals, Sugarcane, Cotton, Jute.

New Initiatives in NFSM: from 2018 onwards focusing on Nutri-cereals, Oilseeds and Oil palm

- New 'National Mission on Edible Oil' implemented from- **2018-19 (National Mission on Oilseeds & Oil Palm included under NFSM)**
- To Increase production of Oilseeds from 30.88 mt to **47.80 million tonnes** by **2024-25**
- Increase the production of edible oils from primary and secondary sources from 10.50 mt to **18 mt by 2024-25** that reduce imports on edible oil from 60 to 45%.
- **Oil seed production- 32.26 million tonnes (2018-19) & Productivity is 1265 Kg/ha**

National Food security Act/bill – 2013

- National Food Security Act/bill passed in the year- **July, 2013**
- As per Food Security Ordinance (2013) or Food security bill, food grain's planned to distribute among household is/are – **Rice, wheat and coarse grains**
- Amount of rice, wheat and coarse grain decided to distributed per households under Food Security Ordinance (2013) – **Rs. 3:2:1 kg per month.**
- Under Food Security Ordinance (2013), **amount of foodgrain decided to distributed per household per month is – 5 kg**, amount of food grain distributed per family living BPL is-**35 Kg**

NITI Ayog: 2015 (Policy Think Tank of GOI)

- Acronym for NITI Ayog- **National Institution for Transforming India**
- Policy making body of Govt.of India- **NITI Ayog**
- NITI Ayog formed in the year- **Jan.1, 2015**
- First CEO of NITI Ayog- **Sindhu Sree Kullar**
- Present CEO of NITI Ayog- **Amitabh Kanth**
- Governing council of NITI Ayog consists of- **Chief ministers of all states**
- Chairman of NITI Ayog- **Prime Minister**
- NITI Ayog vice chairman- **Rajiv Kumar**
- Full time members of NITI Ayog- **Bibek Debroy and V.K.Saraswat**
- Agricultural economist of NITI Ayog- **Ramesh Chand**

“NITI Aayog developed Agricultural Marketing and Farmer Friendly Reforms Index to comparing states on implementation of farm sector reforms “

Ranks : **Maharashtra-1st**, Gujarat 2nd, Rajasthan 3rd

GST: Goods & Service Tax

****Goods and Service Tax is an- Indirect tax**

- The genesis of the introduction of **GST** in the country was laid down in the historic Budget Speech of – **28th February 2006**
- ❖ **Amendment bill- 122**
- ❖ **Amendment Act- 101**
- ❖ **GST Council Headquarter- New Delhi**
- ❖ **GST Recommended by-Vijay Kelkar Committee**
- ❖ **1st state to ratify the GST bill- Assam**
- ❖ **Zero GST- for Food grains**
- ❖ **GST threshold limit for Normal states- 20 lakhs**
- ❖ **GST threshold limit for NE states- 10 lakhs**
- ❖ **1st state to pass GST bill- Telangana**
- ❖ **GST came into effect in India from- 1 July, 2017**
- ❖ **Highest tax contribution to Indian economy is from- GST**
- ❖ **GST council is the governing body of GST**
- ❖ **GST Council Chairman –Finance Minsiter (Smt. Nirmala Seetharaman)**
- ❖ **GST Council formation based on ARTICLE- 279A.**
- ❖ **GST was first introduced by- France, 1954**
- ❖ **GST implemented in India through- 4 tier structure (5%, 12%, 18%, 28%)**
- ❖ **28% GST for- Luxury goods**
- ❖ **GSTN-Goods & Service Tax Network.**

GST on agriCulture products

Commodities	GST Rate
Organic Manure	0%
Frozen vegetables and fruits, Dry flower, plants and roots, preserved vegetables, fruits and nuts.	5%
Fertilizers, Dry Fruits fresh or dried, Fruits and vegetable juices	12%
Tractors	12%
Pesticides, Tractor wheel, Tractor parts	18%
Rubber, Fruits, vegetables, nuts and other plants preserved by vinegar or acetic acid or sugar, Preserved Tomatoes, mushrooms or other vegetables, Fruit jam, jellies, pastes or nut puree.	18%
Plastic pipes	28%

List of Awardees in Agriculture sector 2018-19:

➤ **The First World Agriculture Prize (2018) awarded to- Dr. M.S.Swaminathan for his contributions to Indian Agriculture'**

❖ ****The World Food Prize 2019 was awarded to- Simon N. Groot (Vegetable breeder from Netherlands (Dutch), Founder of East-West seed company)**

Simon Groot played transformative role in empowering millions of smallholder farmers in more than 60 countries to earn greater incomes through enhanced vegetable production, benefitting hundreds of millions of consumers with greater access to nutritious vegetables for healthy diets. (First World Food Prize won by- MS Swaminathan in 1987)

❖ **First Prize of DD Mahila Kisan Award for 2018-19 awarded to- Swati Shingade**

Krihi Karman Awards:

- Krishi Karman awards were instituted in the year **-2010-11** (with cash Prize 5cr, trophy & citation)
- **To reward the best performing States in food grains** and individual crops of Rice, Wheat, Pulses, Coarse Cereals and Oilseeds.
- ****Krishi Karman Award for the highest production of food grain (>10 mt) awarded to- Chattisgarh**

ICAR Awards:

- ❖ **Jawaharlal Nehru Agriculture University (JNAU)** was decorated with prestigious **'Sardar Patel ICAR Excellent Agriculture University Award 2018**.
- ❖ **ICAR-Central Institute of Fisheries Technology, Cochin**, bagged **Sardar Patel Outstanding ICAR Institution Award 2018** in the **"Major Institutes' Category"**.
- ❖ **ICAR- Indian Institute of Millets Research, Hyderabad** bagged prestigious **"Sardar Patel Outstanding ICAR Institution Award 2018"** in the **Small Institute Category**.

Fertilizer Scenario (2018-19):

- Total consumption of fertilizers in India in 2018-19 is- **27.29** million metric tone (MMT)
- NPK use ratio in India in 2018-19 is- **7.1:2.7:1**
- Optimum use of NPK ratio is- **4: 2:1**
- Per hectare consumption of fertilizers in India during 2018-19 is-**137.4 kg/ha**
- Per ha consumption of fertilizers highest in- **Telangana (245.29 Kg/ha)**> Punjab (224.49 Kg/ha)> Haryana (224.46 Kg/ha).
- Per ha consumption of fertilizers Lowest in- **Kerala (36.38 Kg/ha)** followed by Rajasthan (60.73 Kg/ha).
- Total production of NP fertilizers in India during 2018-19- **17.93 MMT** (N fert- 13.34, P fert- 4.59 MMT)
- Production of **Urea in India- 23.90 MMT; DAP- 3.90 MMT, SSP-4.08 MMT**
- Total Import of fertilizers during 2018-19- **18.81 MMT** (Urea- 7.45 mmt, DAP- 6.60 mt, NP/NPK- 0.55 mt & MOP-4.21 mt)
- Mostly Imported fertilizer- **Potash** from Jordan and Tunisia
- India is **third in fertilizer production and second in consumption** (China is first in fertilizer consumption)
- Fertilizer Control order- **1985**

Neem Coated Urea (45 Kg bag)- incorporated as regular fertilizer in 2010

- ❖ Indigenous manufacturing of Neem coated Urea started in **-2014**
- ❖ Neem coated Urea is sold at- **5% above the MRP** to recover the cost of coating
- ❖ Neem coated urea save urea by-**20-30%**
- ❖ The basic retail price of Urea is- **Rs.5360 per tone**
- ❖ The basic retail price of 45kg Neem Coated Urea bag is- **Rs.242**

New Urea policy-2015: the government allowed the urea producers to produce up to 100% of production as Neem coated urea.

- ❖ **100 % Neem Coated production of urea made mandatory on – 2015.**

Nutrient Based Subsidy: scheme started in the Year- 2010-11

- ❖ Where a fixed rate of subsidy is announced on nutrients. The NBS covers **three macro nutrients (Nitrogen, Phosphorus and Potassium) and two micro nutrients (Zinc and Boron)**

Per Kg Subsidy Rates (in Rs.)			
Nitrogen (N)	Phosphorous (P)	Potassium (K)	Sulphur (S)
18.9	15.21	11.12	3.56

Pesticide consumption scenario (2018-19):

- ❖ **Total registered pesticides in India (2018)- 287**
- ❖ **Total banned pesticides in India- 28**
- ❖ **Central Insecticides Board and Registration Committee (CIB & RC) –To facilitate the registration of safe, efficacious and quality pesticides for domestic use and export**
- ❖ The major pesticides applications are found in- **Rice and Cotton crops (1st Paddy, 2nd Cotton)**
- ❖ **Andhra Pradesh, Maharashtra and Punjab** are top three states contributing to 45% of **pesticide consumption in India.**
(Source: cibrc.nic.in)
- ❖ Total number of **Central Integrated Pest Management Centres (CIPMCs)** across the country is- **35**

Genetically Modified crops/Transgenic crops/Biotech crops:

- ***Total area in world under GM crops is- 191.7 Mha in 26 countries**
- **Area under transgenic plants in India (2019)- 12.66 Mha**
- ***India's rank in Cultivation of GM crops- 5th**
- Bt-Cotton is the only GM crop Cultivated in India with an area of **12.26 Mha**
- **The country with highest area under GM crops- USA (75 Mha)**
- **Leading countries in transgenic use – USA>Brazil > Argentina>Canada> India (5th)**
- **The crop with highest area under GM crops in world is – Soyabean>Maize> Cotton**
- **Apex body/Regulatory/Statutory body for approval of proposals relating to release of GM crops in India- Genetic Engineering Approval Committee (GEAC), 1989**

- GEAC works under **Ministry of Environment and Forest**
- The first commercially grown genetically engineered food was- **Flavr Savr, Tomato**
- First cultivated GM crop in the world – **Soyabean**

Climate & Environment:

****Full form of IPCC is – Inter-governmental Panel on Climate Change**

- **United Nations Conference on Environment and Development (UNCED)**, also known as the “**Rio de Janeiro Earth Summit**” held on- **June, 1992**
- **Kyoto protocol** (The international treaty that Committed to reduce Greenhouse gas emissions) held on- **Dec, 1997**
- **Full form of UNFCCC is – United Nations Framework Convention on Climate Change**
- **Full form of NAPCC is – National Action Plan on Climate Change**
- **Full form of SAPCC is –State Action Plans on Climate Change**
- **Full form of UNEP is – United Nations Environment Programme**
- ****UNFCCC was set up in – 1992.**
- ****United Nations Climate Change Conference (“COP 25”)** held at- **2 Dec- 13 Dec 2019, Madrid, Spain, (recent climate change Conference)**
- **14th session of United Nations Convention to Combat Desertification (UNCCD-COP14)** held at- **02-13 September, 2019, New Delhi**
- Concept of ‘**Climate smart agriculture**’ given by- **FAO**
- India rank in **Climate Change Performance Index (CCPI)** is- **9th**

Public Distribution System (PDS):

- ❖ **Central government has decided to distribute millets such as “Jowar and Bajra through Public distribution system to improve nutrition security of the poor.**
- ❖ **Total number of Beneficiaries in India under PDS system are- 81 crore**
- ❖ **Major commodities distributed in PDS system are- Rice (Rs.3/kg), Wheat (Rs.2/Kg) & coarse cereals (Rs.1/kg)**
- ❖ **The Revamped Public Distribution System (RPDS) was launched in- 1992**
- ❖ **The Targeted Public Distribution System (TPDS) was introduced with effect from- June 1997**



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Other Miscellaneous points:

- ***Monthly Radio programme hosted by P.M. of India is- Mann ki Baat (started on Oct.3, 2014)**
- **Highest Gross Sown Area- U.P.>M.P.>MH**
- **Highest Net Sown Area- MH& M.P**
- **Barren and uncultivated land highest in- Rajasthan**
- **Largest state in terms of Geographical area- Rajasthan**
- **Government of India Formulated – “7 point strategy for Doubling of Farmers Income by 2022”**
- **Cluster bean- becomes the first agricultural product to enter commodities market.**
- **The National Commodity and Derivatives Exchange (NCDEX) has launched India’s first agri index for easy reference to price variations in agricultural commodities on- “Agridex” on 13 NOV, 2019**

ICT Initiatives in Agriculture: (Useful for SRF)

- **An Android Mobile App for Jute and allied fiber crops Pest Management is- Jaf Safe**
- ****A joint initiative of the Indian Meteorological Department (IMD) and Indian Council for Agriculture Research (ICAR) to bring high resolution ‘Vernacular Agro advisory App’ based on weather forecast to farmers is- Meghdoot (Aug, 2019) (Imp)**
- ***App developed by India’s Agriculture Ministry to hire Farm equipments on rental basis is- Uber for Tractor**
(The app seeks to efficiently connect farmers with Custom Hiring Centers (CHCs) just like Uber connects passengers to cabs.)
- **The Union Ministry of Agriculture & Farmers Welfare launched the Multi lingual Mobile App that will allow farmers to avail custom hiring services of CHCs is- CHC Farm Machinery App**
- ***CHC Farm Machinery App will allow farmers to avail custom hiring services of CHCs located in a radius of- 50 KM (Sep 24, 2019)**
- **App launched by Ministry of Agriculture to provide farmers the information of best demonstration of high yielding crops and seeds in their nearby area is- Krishi Kisan App (Sep 24, 2019)**
- **App launched by Ministry of Agriculture for Geo Tagging of Agricultural assets is- Krishi Kisan App**

- *The mobile application launched Ministry of Agril. for farmers which will **provide information on subjects such as weather, Market prices , seeds , fertilizers, pesticides, Input dealers and agriculture machinery is-** **Kisan Suvidha (March, 2016) (Imp)**
- **Disaster Warning device** launched by government to protect fishermen of any danger is- **GEMINI** (Gemini is a portable device linked to ISRO satellites that is ‘fail proof’ developed by INCOIS.)
- **FSSAI signed an MoU with NASSCOM** to build a app to prevent **food wastage**.
- ****App developed by ICAR which integrates more than 100 agriculture related apps of ICAR institutes is-** **KISAAN (Krishi Integrated Solution for Agri Apps Navigation).**
- **KISAAN app developed by-** **ICAR- Directorate of Knowledge Management in Agriculture**
- **KVK Mobile App” developed by-** **ICAR IASRI**
- ***Plant diagnostic app “Plantix” developed by-** **PEAT GmbH in collaboration with ICRISAT, CIMMYT & CABI.**
- App developed by Ministry of Jal Shakti for cleaning & greening of open space through plantation, rain water harvesting-awareness & construction is- **m Hariyali**
- **Portal developed by Ministry of Agriculture for marketing of Organic produce is-** **Jaivik Kheti**
- A mobile smart phone application (**Drishti**) has been developed for **field data collection**. It is developed in 2015 by NRSC (National remote sensing centre)
- **Hortinet Mobile app** for farmers to facilitate **testing, registration and certification** of Fruits & vegetables is launched by- **APEDA**
- **PM Kisan App (Feb 24, 2020) - To increase the outreach of PM KISAN Scheme.**
***PM-Kisan Toll free No. 1800115526**
Saturation of PM Kisan beneficiaries with Kisan Credit Cards
- **Livestock Disease Forewarning Mobile App developed by-** **ICAR-National Institute of Veterinary Epidemiology and Disease Informatics (ICAR-NIVEDI)**
- ICAR-IVRI in collaboration with IASRI developed – **IVRI vaccination Guide App.**
- **Avi Mitra- Pashu Palan App**

Some Important International Years:

2004	International year of rice
2005	International year of micro credit
2006-	International year of desert and desertification
*2007	International year of water (theme-more crop per drop)
2008	International year of potato
2009	-International year of fiber
*2010	International year of Biodiversity
2011	International Year of Forests and International Year of Youth
2012	International Year of Cooperatives and International Year of Sustainable Energy for All
2013-	International Year of Water Cooperation
2014	International year of Family farming & Farmer Producer organizations
**2015	International Year of Soil
**2016	International Year of pulses
2017-	International Year of sustainable tourism for development
2019	International Year of Indigenous Languages
2020	International Year of Plant Health
2021	International Year of Fruits & Vegetables
2023	International Year of Millets (Proposed by Govt.of India to FAO)

Project/Mission	Initiated in
First AICRP on Maize	1957
First NRC on Groundnut	1979
National Agricultural Research Project (NARP)	1979
National Agricultural Extension Project (NAEP)	1983
Technology Mission on Oil Seeds	1986
National Agricultural Technology Project (NATP)	1998
National Agricultural Innovation Project (NAIP)	July, 2006
National Horticultural Mission (NHM)	2005-06
Mission for Integrated Development of Horticulture (MIDH)	2014-15
National Food Security Mission (NFSM)	2007

National Food Security Act or Ordinance	July, 2013
**National Innovations on Climate Resilient Agriculture (NICRA)	Feb 2011
Agricultural Management Agency	1998
National Agriculture Higher Education Project (NAHEP)	Sep, 2017

Major Flagship programmes Launched by Central Government in Agriculture and allied Sectors (Must Read)**

Programmes launched during 2020 Budget

In 2020 Budget is presented under three Prominent themes:

- | | | |
|--|--|--|
| <p>1. Aspirational India</p> <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px; margin-left: 20px;"> <p>**Agriculture</p> <p>Irrigation</p> <p>Rural Development</p> <p>Water, Sanitation</p> <p>Education & Skills</p> </div> | <p>2. Economic Development</p> <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px; margin-left: 20px;"> <p>Industry</p> <p>Investment</p> <p>Infrastructure</p> <p>Commerce</p> <p>New Economy</p> </div> | <p>3. Caring Society</p> <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px; margin-left: 20px;"> <p>Women & Child</p> <p>Social Welfare</p> <p>Culture, Tourism</p> <p>Environment & Climate Change</p> </div> |
|--|--|--|

In 2020 Budget Agriculture is presented under the theme of **"Aspirational India"**.

In 2020 Budget Government formulated _____ point strategy to boost Agriculture - **16 point**

Budget for Agriculture and allied sectors is- **2.83 Lakh cr (Agril-1.42 lakh cr; RD-1.22 Lakh cr)**

1. **Kisan Rail Scheme: 1 Feb, 2020**

Launched by: **Indian Railways** through PPP.

Objective: To build a Seamless National Cold Supply Chain for perishables (Milk, Meat, Fish) through refrigerated coaches in Express and Freight trains.

To help small farmers to supply perishable goods across the country.

2. **Krishi Udaan: 1 Feb, 2020**

Launched by: **Ministry of civil Aviation**

Objective: To build a Seamless National Cold Supply Chain for perishables (Milk, Meat, Fish).

To assist farmers in transporting agricultural products so that improves their value realization.

3. **Dhanya Lakshmi Scheme: 1 Feb, 2020**

SHGs & Women SHGs will be promoted to become Dhanya Lakshmi (Seed banks) using Mudra Yojana.

Programmes launched during 2018-19 to 2019-20

1. Pradhan Mantri Matsya Sampada Yojana

- **Launched:** 5th July 2019
- **Aim:** To increase the production of fish and aquatic products
- It includes MoFPI's schemes such as Food Parks, Food Safety and Infrastructure.

2. Pradhan Mantri Kisan Man Dhan Yojana – Monthly pension scheme for Small & marginal farmers.

Launched: 12th Sep, 2019, Ranchi, Jharkhand

Aim: To provide **Security to the lives of 5 Crore Small and Marginal Farmers by providing a minimum pension of Rs 3000 per month**, to those who attain **60 years of age**.

- All the small and marginal farmers who are currently between the ages of 18 to 40 years can apply for the scheme.
- Farmer's monthly contribution can be made from the installments of PM-KISAN or through CSCs

3. PM-JIVAN: Prime Minister- Jaiv Indan Vatavaran Anukool Fasal Awasesh Nivaran- Feb 28, 2019

- To provide financial support to Integrated Bio ethanol project using biomass & crop residues.
- 1969 cr for a period of 2018-19 to 2023-24

4. Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA)- Sep, 2018

- To provide MSP assurance to the farmers

Sub components of PM-AASHA:

- a) **Price Support Scheme:** procurement of Oilseeds, pulses & Copra to be done by central nodal agencies along with state govts. Central govt. to bear procurement expenditure and losses due to procurement upto 25% of production.
- b) **Price Deficiency Payment Scheme (PDPS): will cover all oilseeds.**
Farmers will get direct payment of the difference between the MSP and the Selling price.
- c) **Pilot of Private Procurement & Stockist Scheme:** Participation of private sector in procurement operations to be piloted.

***5. Pradhan Mantri Kisan Samman Nidhi (PM-KISAN): Feb, 2019 (IMP)

- Direct income support of Rs.6,000 per annum to all Land Holding Families.
- Farmer will get Rs.6000 in three installments (4 months once, effective from 01.12.2018)
- The Scheme was formally launched at national level by the Hon'ble Prime Minister on the 24th February, 2019 at Gorakhpur, UP.
- PM Kisan toll free number: 1800115526
- Integration of PM Kisan beneficiaries with KCC holders.

6. Har Medh Par Pedh: Dec, 2018 (Sub Mission on Agro Forestry)

- Establishing New Forward linkages for Agro forestry produce
- Promotion of tree based oil seeds for production of biofuel.
- Provision of Financial Assistance for Nursery Development & Plantation in farm land which will help farmer get additional income and make farming system more climate resilient & adaptive.

7. **Kisan Urja Suruksha evam Utthaan Mahabhiyan (KUSUM): Feb, 2019

- ❖ ****Formulated by ministry of New and Renewable Energy
- ❖ ** Installation of Grid connected Solar power plants each of capacity Upto 2MW in rural areas
- ❖ ***Installation of Solar water pumps (for 20 Lakh farmers)
- ❖ **Solarisation of existing grid connected agricultural pumps (for 15 lakh farmers) to make farmers independent of grid supply and also enable them to sell surplus solar power to DISCOM.

8. Yuva Sahakar Scheme: November, 2018

Launched by: NCDC

Objective: To give wings to Young entrepreneurs in Cooperatives

The scheme will be linked to Rs.1000 cr Cooperative Start up- and Innovation Fund (CSIF) created by the NCDC.

9. GOBAR – DHAN: Galvanizing Organic Bio-Agro Resources, February, 2018

- Main focus on converting cattle dung, solid waste into compost, biogas and bio-CNG.

10. Agrimarket Infrastructure Fund: March, 2019

Corpus fund of Rs.2000 cr to NABARD towards soft loan to states/UTs for developing Marketing infrastructure.

Programmes launched during 2014-15 to 2017-18

11. Pradhan Mantra Kisan SAMPADA Yojana- May, 2017

SAMPADA - Scheme for Agro Marine Processing and Development of Agro processing Clusters

Objective: Holistic development of the food processing sector

- Promotion of Value addition through food processing
- Integrated cold chain and value addition infrastructure
- Total number of Mega food parks- 42
- Infrastructure facilities creation through **Mega food parks**
- Budget: Allocation of 6,000 cr for a period of 2016-20

12. Dairy Processing & Infrastructure Development Fund (DIDF): Sep, 2017

Budget: Allocation of Rs. 10,881 crore during the period from 2017-18 to 2028-29.

Objective: To create infrastructure facilities in dairy sector

Implementing Agency: National Dairy Development Board (NDDB) and National Cooperative Development Cooperation (NCDC)

Sponsoring Agency: NABARD

13. **E-Pasuhaat Portal: 2016

- ❖ For connecting breeders and farmers of indigenous breeds of cow
- ❖ To connect Farmers and breeders o trade disease free germplasm

14. ***Pradhan Mantri Fasal Bima Yojana: Jan 14, 2016 (Imp)

- under this scheme farmers will have to pay

* **2% premium fixed by insurance firms for Kharif crops**

* **1.5%- for Rabi crops**

* **5% for Commercial & Horticultural crops**

It is formed by Merging National Agricultural Insurance Scheme (1999-2000); Weather based Crop Insurance Scheme (1985)

Restructured Weather Based Crop Insurance Scheme (RWBCIS)- Kharif 2016- aims to mitigate the hardship of the insured farmers against the anticipated crop loss resulting from adverse weather conditions relating to rainfall, temperature, wind, humidity etc.

15. e- National Agricultural Market (e-NAM): April 14, 2016- "One nation-One Market"

- ❖ Electronic trading portal designed to create a **unified national market** for agricultural commodities.
- ❖ To assure **transparent price discovery** for remunerative crops for the farmers for their produce through **competitive online bidding system**.
- ❖ All 585 APMC (Agriculture Produce Market Committees) connected to e-NAM by March 31, 2018.
- ❖ Agricultural commodities (90 agro products) valued at about **Rs.36,300** traded on e-NAM

16. Parampraghat Krishi Vikas Yojana: 2015- Cluster Approach

- Launched **to support and promote organic farming** and thereby improving soil health.
- To bring **5 lakh acres under OF** by 10,000 organic clusters

17. Soil Health Card Scheme: Feb 19, 2015 (Theme: Swasth Dhara Keth Hara)

- ❖ To issue soil health cards (**Once in 2years**) to farmers which will carry crop wise recommendations of nutrients.
- ❖ **Development of Model Villages Project (2019-20)** - Under this project **Soil sample collection has been taken up at Individual farm** instead of Grid.
- ❖ **Soil Health Card Celebrated on 19 Feb** on Occasion on 5yrs of completion of scheme.

18.DD Kisan channel- 24 hr Farm television channel – 26 May, 2015

19. **Pradhan Mantri Krishi Sinchayi Yojana- 1st July, 2015

- To attract investments in irrigation system at field level, develop and expand cultivable land in th
- theme- **Per drop more crop**

20. Swachh Bharat Mission: October 2, 2014

- To make India Open Defecation Free (ODF) by **2019**.
- Cess on swachh bharat services: **0.5%**

21. National Livestock Mission: 2014-15

- Intensive development of livestock, especially small livestock (sheep/goat/poultry) along with adequate availability of quality feed and fodder.

22. National Mission on Oilseeds and Oil palm (NMOOP): 2014-15

- For increasing production of oilseeds and Oil palm

23. Mission for Integrated Development of Horticulture (MIDH): 2014-15

- High growth rate of horticultural crops

24. ***RKVY (Rashtriya Krishi Vikas Yojana) – 2007

- **Renamed as Rashtriya Krishi Vikas Yojana – Remunerative Approaches for Agriculture and Allied sector Rejuvenation (RKVY-RAFTAAR)**
 - To increase annual agricultural growth rate by- **4%**
 - To incentivise states to increase allocation for agriculture and allied sector
 - To make farming remunerative economic activity by strengthening farmers effort, risk mitigation and promoting agribusiness entrepreneurship.
 - **Share of stake holders: 60:40 grants between centre and state government**
while 90:10 for North Eastern and Himalayan States.
 - **Sub-schemes:** Accelerated Fodder Development Programme (AFDP), Saffron Mission, Crop Diversification Programme (CDP) etc.,

25. START UP INDIA, STAND UP INDIA – Jan 16, 2016

- ❖ To promote entrepreneurial skills that will lead to job creation

Stand Up India: (April, 2016): to support entrepreneurship among women and SC & ST communities.

26. AGRI-CLINIC AND AGRI-BUSINESS CENTRES: 2002

- **Self-employment venture**
- Two months Training provided by MANAGE through identified nodal training institutions.
- **Launched by: Govt. of India**
- **ACABC run and Formulated by: MANAGE**
- **Funding by: NABARD**
- Subsidy rate : 36% for general, *44% for SC, ST, Women and persons from North East*
- Minimum number of members required: **05**
- **Maximum ceiling cost for Individual- 20 lakhs, for a group of five is One crore**
- **Toll free number- 1556** (Timing: 9AM to 5.30 PM)
- **First ACABC established at- Vapi, Bulsar (Dist), Gujarath by Sunil Kumar**

27. ***KISAN CALL CENTRES (KCC): Jan 21, 2004

- **To provide information to farming community through toll free telephone number**
- **** Toll free number: 1800 180 1551**
- **Timings: 06.00 AM to 10.00 PM.**
- **Operation : 3 levels- First Level- Agricultural Graduate**
 - **Second level- Subject Matter Specialist/Expert**
 - **Third level- The management group**

28. MOVCDNER: Mission organic value chain development for North Eastern region- 2017

- For developing Model Organic Cluster Demonstration and Model Organic Farm under Paramparagat Krishi Vikas Yojana (PKVY) scheme

29. SFAC: Small Farmer's Agribusiness Consortium- 1994

- ❖ To link the small farmers to agricultural value chain, which includes investments, technology and markets in association with private, corporate or cooperative sector.

30. DEEN DAYAL UPADHYAYA GRAM JYOTHI YOJANA -2015

- Rural power supply mission, providing 24X7 uninterrupted power supply to all homes in rural india

31. **DIGITAL INDIA: July 1, 2015**

- Aims to ensure that govt. services are available to citizens electronically and people get latest information

32. **MAKE IN INDIA: 2014.**

To attract capital and technological investment in India

- The scheme focuses on job creation and skill enhancement in 25 sectors of the economy.

33. **SKILL INDIA: March, 2015**

- To create opportunities, space, scope for the development of the talents of the Indian youth.

34. **MUDRA Yojana: (Micro units Development and Refinancing Agency)- 2015, April**

- For providing loans up to Rs.10 lakh to the non-corporate, non-farm small/micro enterprises

35. ****OPERATION GREEN- Feb, 2018. (To augment Food processing in TOP)**

- **To promote FPOs, agrilogistics and processing in Tomato, Onion, Potato (TOP)**
- Operation Green operating on the lines of Operation Flood
- ****For enhancing the production of Tomato, Onion and Potato (TOP)**
- **Funding: 500 cr**

36. **Green Revolution– Krishonnati Yojana- 2017-2020**

Total Funding: Rs. 33,269 crore.

Umbrella scheme comprises of 11 Schemes/Mission

- Mission for Integrated Development of Horticulture (MIDH)-2014**
- National Food Security Mission (NFSM) - 2007**
- National Mission for Sustainable Agriculture (NMSA)**
- Submission on Agriculture Extension (SMAE) - 2010**
- Sub-Mission on Seeds and Planting Material (SMSP)-2010**
- Sub-Mission on Agricultural Mechanisation (SMAM)-2010**
- Sub Mission on Plant Protection and Plant Quarantine (SMPPQ)- 2010**
- Integrated Scheme on Agricultural Cooperation (ISAC)- Dec, 2013**
- Integrated Scheme on Agricultural Marketing (ISAM)- 01. 04. 2014**
- National e-Governance Plan in Agriculture (NeGP-A)- 2014**

37. National Mission on Agricultural Extension and Technology (NMAET)- 2010

NMAET otherwise called as Modified reforms of ATMA

ATMA-Support to State Extension Programmes for Extension Reforms 2005

38. Kisan Credit Card (KCC) Scheme- 1998-99

- ❖ **First Kisan Credit Card Issued by- SBI**
- ❖ Short term loan limit under KCC scheme is upto- **Rs. 3 Lakhs**
- ❖ Short term loan limit for New KCC holders is- **Rs.2 Lakhs**
- ❖ Short term loans provided to farmers @ interest rate of **-7 per annum** and **4% interest per annum on Prompt repayment**
- ❖ Animal Husbandry and Fisheries farmers now eligible for concessional short term loan through KCC.
- ❖ Banks to issue KCC on completion of application form within- **14 days**

39. ****Deen Dayal Upadhyaya Antyodaya Yojana- 2016 (Imp)**

- Launched by converging National Rural & Urban Livelihood Mission
Replaced Ajeevika.

Objective: To Train **0.5 million people** in urban areas for **providing skill training**
To train **1 Million people** in rural areas.

Other Imp. Schemes:

****CHAMAN-Coordinated Horticulture Assessment and Management using Geoinformatics – 2016**

****FASAL - Forecasting Agricultural output using Space, Agro meteorological and Land based observations (FASAL) - 2010**

- Aim was to collect Monsoon data through remote sensing, economic data and monitoring of crops when growing.

❖ **National Mission for Sustainable Agriculture (NMSA)- 2014**

Sub components of NMSA:

Rain fed Area Development (RAD)

Soil Health Management (SHM)

Sub Mission on Agro forestry (SMAF)

Climate Change and Sustainable Agriculture, Monitoring, Modeling and Networking (CCSAMMN)

- ❖ National Mission on Micro Irrigation (NMMI)- 2010
- ❖ Bringing Green Revolution to Eastern India (BGREI)- 2010

****National Bamboo Mission restructured on 25 April, 2018- plantation in non-forest government land, development of value chain.**

Interest Subvention Scheme introduced in 2006-07 while incentive to farmers on prompt repayment started in the year 2009-10

Five Year Plans (Concept taken from Russia)

FYP	Priority Area
**I FYP (1951-56) Harrod-Domar model	Famous called as “Harrod Domar” model, priority to agriculture and allied sectors
II FYP (1956-61) Mahalanobis Model	Famously called as Mahalanobis Model, Priority to Industry or manufacturing sector
**III FYP (1961-66)	Agriculture registered Negative Growth rate, priority to achieve Self sufficiency in food grain production and to stop import of food grains from USA
IV FYP (1969-74)	Growth and Justice
***V FYP (1974-79)	Removal of poverty and self reliance
VI FYP (1980-85) Rolling plan	Family planning
VII FYP (1985-90)	Food Production, Employment, Productivity
**VIII FYP (1992-97) Indicative planning	Famously called as “Indicative planning”, Employment Generation, Control of Population and Economic reforms
IX FYP (1997-2002)	Growth Rate of 7 percent
X FYP (2002-2007)	Self employment and resources and development
XI FYP (2007-2012)	Improvement of Health, Education and Sanitation.
XII FYP (2012-17)	Faster, Sustainable & more inclusive growth".

Important Days in Agriculture & Allied Sciences for JRF & SRF	
2 February	World Wet land day/ Ramsers day
**10 February	World Pulses Day
13 February	World Radio Day (for Social sciences)
19 February	Soil Health Card Day
3 March	World wild life day
**8 March	International women's day
11 March	Water resource day
**15 March	World consumer day
21 March	World forest day
**22 March	World Water day
23 March	World Meteorological day
7 April	World Health day
**22 April	World Earth day
26 April	World intellectual property day
Last Saturday of April	World Veterinary day
11 May	National Technology day
**20 May	World Honey day
21 May	World Tea Day
31 May	World Anti- Tobacco day
1 June	World Milk day
7 June	World Food safety Day
**5 June	World Environment day
10 July	National Fish Husbandry day
11 July	World Population day
**16 July	ICAR day
8 Sep	World Literacy day
August 19	World honey day
16 Sep	World Ozone day
*18 Sep	World Bamboo Day
1 Oct	World Habitat day/Vegetarian day
**1 Oct	World Coffee Day
2 Oct	National Women Literacy day
4 Oct	World Animal Welfare day
11 Oct	International day of Girl Child
13 Oct	World Egg day/ UN International day for Natural Disaster Reduction
**15 Oct	Mahila Kisan Diwas (Women in Agriculture day)/International Day of Rural Women

16 Oct	World Food day
24 Oct	UN day
16 Nov	National Press day
21 Nov	World Fish day
26 Nov	National Milk day
**3 Dec	National Agriculture Education day (Babu Rajendra Prasad birthday)
**5 Dec	World Soil day
10 Dec	Human Right's day
14 Dec	National Energy conservation day
**23 Dec Ch.Charan Singh birthday	Farmers day (Kisan Diwas) Farmers awareness week (Dec 23-29)

International Agricultural Institutions:

CATIE (Tropical Agricultural Research and Higher Education Centre)	Turrialbas, Cartago Costa Rica
CIAT (International Center for Agricultural Research)	Cali, Columbia
**CIMMYT (International Maize and Wheat Improvement Center)	Mexico City, Mexico
CIP (International Potato Center)	Lima, Peru
IFPRI (International Food Policy Research Institute)	Washington D.C. United States
ICRAF (World Agro forestry Centre formerly International Center for Agro Forestry)	Nairobi, Kenya
**ILRI (International Livestock Research Institute)	Nairobi, Kenya
IITA (International Institute of Tropical Agriculture)	Ibadan, Nigeria
CIFOR (Center for International Forestry Research)	Bogor Barat, Indonesia
ICRISAT (International Crops Research Institute for the Semi-Arid Tropics).	Patancheru, Hyderabad, India
IRRI – (International Rice Research Institute)	Los Banos, Philippines
IWMI- (International Water management Institute)	Colombo, Sri Lanka
Biodiversity International.	Rome, Italy
CGIAR- ('Consultative Group for International Agricultural Research)	Montpellier –France
ICARDA- (International Center for Agricultural Research in the Dry Areas)	Beirut, Syria
WARDA- (West African Rice Development Association)	Costa rica
ISNAR – (International Service for National Agricultural Research)	Netherlands, Hague

International Agronomical research Center	Montpellier, France
World Fish Center	Penang, Malaysia
International Water Management Institute (IWMI)	Colombo, Srilanka
Food and Agriculture organization (FAO)	Rome
Asian Vegetable Research and Development Centre (AVRDC)	Taiwan
International Centre for Foot and Mouth Disease- (ICFMD)	Arugal, Odisha, India
Asia Pacific Association Of Agricultural Research Institute (APAARI)	Thailand
**International Horticulture Innovation And Training Center	Jaipur, Rajasthan
World Meteorological Organization	Geneva, Switzerland
IPGRI-International Plant Genetic Resources Institute	Rome, Italy
International Rice Research Institute	Manila, Phillipines

International Agricultural Organizations:

1. CGIAR:

- ❖ Famously called as “**Partnership of funders and international agricultural research centers**”
- ❖ **Objectives:** To reduce poverty and hunger, improve human health and nutrition, and enhance ecosystem resilience through high-quality international agricultural research, partnership and leadership.
- ❖ **Total number of CGIAR institutions- 15**
- ❖ **Funding:** from various institutes and countries FAO, UNDP, Ford foundation, World Bank, IFAD, Asian development bank, African development bank, OPEC.

2. Food and Agriculture organization (FAO)- Rome

Parental organization: UN Social and economic council

Funding: Multilateral institutions such as the World Bank, regional development banks and international funds as well as FAO resources.

Other Organizations:

(a). BRICS- Brazil Russia India China South Africa (05)

- ❖ Term coined by Jim O Neill
- ❖ Founded in – **2009**
- ❖ Headquarters of BRICS development bank- **Shanghai**
- ❖ BRICS headquarters- **Shanghai**
- ❖ **9th** BRICS summit (recent) happened at- **Xiamen, China**

❖ Chairman of BRICS development bank: **KV Kamath**

(b). SAARC: South Asian Association for Regional Cooperation, 1985

- ❖ Headquarter: **Kathmandu, Nepal**
- ❖ Founder Members: **6**
- ❖ Present Members: **8** (Afghanistan, Bangladesh, Bhutan, India, Nepal, Maldives, Pakistan and Sri Lanka)
- ❖ 20th SAARC summit will be held in- **Srilanka, 2018**
- ❖ SAARC secretary general- **Arjun Bahadur Thapa**
- ❖ **SAARC Agriculture Centre located at- Dhaka, Bangladesh**

(C).Organization of the Petroleum Exporting Countries (OPEC):

Headquarter: **Vienna**

Member countries: **14**

- **“India is a member country of: SAARC, G-20, G-77, WTO, IMF, World bank & BRICS, BIMSTEC”.**
- **India is not a member country of ASEAN, G-7, OPEC.**

(d). Bay of Bengal Initiative for Multisectoral Technical and Economic Cooperation (BIMSTEC)

Founded: **1997**

Headquarter: **Dhaka, Bangladesh**

Member countries: **07**

(e). World Trade Organization: (India is Founder Member country)

Founded: **1Jan, 1995**

Headquarter: **Geneva, Switzerland**

Member countries: **193**

Director General: **Robert Azevedo**

Organization	Number of Member Countries	Year of Establishment
WTO	164	01.01.1995
UNO	193	24.10.1945
IMF	189	27.12.1945
SAARC	08	1985
BRICS	05	2009

Some Important Policies/Commissions on Agriculture	
*NATIONAL AGRICULTURAL POLICY	2000
*National Commission on Farmers (NCF) (Chairman: MS Swaminathan)	2004
**National Commission on Agriculture (Chairman: MS Randhwa)	Initiated in 1970 Submitted its report: 1976
*National Agricultural Development Programme	2007
*National Policy for Farmers	2007

Revolutions related to Agriculture:

Revolutions in Farming	Associated Crop	Associated Person/Father
❖ Green Revolution	Over all crop Production	Norman Borlaug- World MS Swaminathan- India
❖ White Revolution	Milk Production	Vergheese Kurien
❖ Black Revolution	Petroleum Production/crude oil production	Hiralal Chaudhary & Arun Krishnan
❖ Brown Revolution	Leather/Cocoa Production /non conventional	—
❖ Golden Fibre Revolution	Jute Production	8962-791599
❖ Golden Revolution	Fruits/Overall Horticulture development/Honey Production	Dr.K.L.Chadda
❖ Grey Revolution	Fertilizer	--
❖ Brown Revolution	Leather/Cocoa production	--
❖ Yellow Revolution	Oil Seeds	Sam Pitroda
❖ Round Revolution	Potato	
❖ Red Revolution	Meat & Tomato Production	Dr. Vishal Tewari
❖ Pink Revolution	Onion, Prawn	Dr. Durgesh Patel
❖ Protein Revolution	Agriculture Higher production Technology driven Green Revolution	Sri. Narendra Modi
❖ Silver Fiber Revolution	Cotton	--
❖ Silver Revolution	Egg/Poultry	Smt. Indira Gnadhi
❖ Evergreen/Rainbow revolution	Overall development of Agriculture	MS Swaminathan
❖ Sweet Revolution	Honey Production	Sri. Narendra Modi
❖ Green Gold Revolution	Promotion & Trade of Bamboo	Sri.Narendra Modi

Some Important National Institutes: (Imp)

INSTITUTE	Location
National Research Centre on Integrated Farming System (ICAR-NRCIF)	Motihar, Bihar
IRRI South Asia Regional Centre	Varanasi, U.P.
*Indian Institute of Farming Systems Research (IIFSR)	Meerut, UP
**IIRS – Indian Institute of Remote Sensing,	Dehradun, Uttarakhand
**CIRCOT – Central Institute for Research on Cotton Technology,	Mumbai, Maharashtra
CIRG – Central Institute for Research on Goats,	Makhdoom, Farah, Uttar Pradesh
*Indian Institute of Agricultural Biotechnology (IIAB)	Ranchi, Jharkhand
*National Institute of Biotic Stresses Management (NIBSM)-	Raipur, Chhattisgarh
*National Institute of Abiotic Stress Management (NIASM) -	Malegaon, Maharashtra
CISTH – Central Institute of Sub-Tropical Horticulture	Lucknow, Uttar Pradesh
CITH – Central Institute of Temperate Horticulture	Srinagar, Jammu & Kashmir
Central Institute for Agricultural Engineering	Bhopal
central Institute of Arid Horticulture	Bikaner, Rajasthan
Central Seed Testing Referral Laboratory	Varanasi
**CIWA - Central Institute for Women in Agriculture	Bhubaneswar, Odisha

CMFRI – Central Marine Fisheries Research Institute	Cochin, Kerala
CPCRI – Central Plantation Crops Research Institute	Kasargod, Kerala
CPPTI – Central Plant Protection Training Institute	Hyderabad
CPRI – Central Potato Research Institute,	Shimla, Himachal Pradesh
CRIDA – Central Research Institute for Dryland Agriculture	Hyderabad, Telangana
CRIJAF – Central Research Institute for Jute and Allied Fibres	Barrackpore, West Bengal
Directorate of Knowledge Management in Agriculture	New Delhi

CSSRI – Central Soil Salinity Research Institute	Karnal, Haryana
CIFA – Central Institute of Freshwater Aquaculture	Bhubaneswar, Odisha
CIFRI – Central Inland Fisheries Research Institute	Barrackpore, West Bengal
CIFT – Central Institute of Fisheries Technolgy	Cochin, Kerala
IGFRI – Indian Grassland and Fodder Research Institute	Jhansi, UP
CIMAP – Central Institute of Medicinal and Aromatic Plants	Lucknow, Uttar Pradesh
CIPHET – Central Institute of Post-harvest Engineering and Technology,	Ludhiana, Punjab
IIAB – Indian Institute of Agricultural Biotechnology	Ranchi, Jharkhand
IIFSR - Indian Institute of Farming Systems Research	Modipuram, UP
IIHR – Indian Institute of Horticultural Research,	Bangalore, Karnataka
**IIMR - Indian Institute of Maize Research,	Ludhiana, Punjab
IIMR - Indian Institute of Millets Research,	Hyderabad, Telangana
IINRG – Indian Institute of Natural Resins and Gums	Ranchi, Jharkhand
IIWBR- Indian Institute of Wheat and Barley Research	Karnal, Haryana
IIOR - Indian Institute of Oilseeds Research	Hyderabad, Telangana
IIPR – Indian Institute of Pulses Research	Kanpur, Uttar Pradesh
**IIRR - Indian Institute of Rice Research	Hyderabad, Telangana
IISR – Indian Institute of Spices Research, ,	Calicut, Kerala
**IISR - Indian Institute of Seed Research,	Mau, Uttar Pradesh
Indian Vegetable Research institute	Varanasi, UP
National Research Centre for Citrus (NRCC)	Nagpur, MH

****National Remote Sensing Centre- Hyderabad, Telangana**

****Borlaug Institute for Asia - Ludhiana, Punjab**

****National Multi Commodity Exchange- Ahmadabad, Gujarat**

****National Bee Board- New Delhi**

NATIONAL BUREAUS- 06 (Imp)

NBAGR – National Bureau of Animal Genetic Resources	Karnal, Haryana
NBAII – National Bureau of Agriculturally Important Insects	Hebbal, Bengaluru, Karnataka
NBAIMO – National Bureau of Agriculturally Important Micro-Organisms	Mau Nath Bhanjan, Uttar Pradesh
NBFGR – National Bureau of Fish Genetic Resources	Lucknow, Uttar Pradesh
NBPGR – National Bureau of Plant Genetic Resources	New Delhi
NBSS & LUP – National Bureau of Soil Survey and Land-Use Planning	Nagpur, Maharashtra

Deemed Universities- 04

IARI - Indian Agricultural Research Institute	New Delhi
NDRI - National Dairy Research Institute	Karnal, Haryana
IVRI - Indian Veterinary Research Institute	Izatnagar, Uttar Pradesh
CIFE - Central Institute on Fisheries Education	Mumbai, Maharashtra

~~~~~ All the best ~~~~~





# GENERAL AGRICULTURE FOR JRF, SRF & OTHER EXAMS- 2020



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