



**DEPARTMENT OF AGRICULTURAL
RESEARCH AND EDUCATION
INDIAN COUNCIL OF AGRICULTURAL RESEARCH**



During 69th Republic Day of the Country the tableau of Indian Council of Agricultural Research on display at Rajpath for the first time



His Excellency the President of India, the Vice President of India and Hon'ble Agriculture and Farmers Welfare Minister, Govt. of India honouring the artists and the officials of ICAR

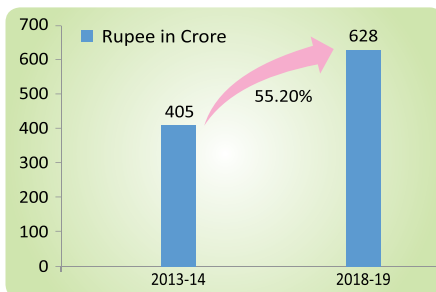
REFORMING HIGHER AGRICULTURAL EDUCATION

The budgetary provision for higher agricultural education enhanced

- Compared to the year 2013-14, in the year 2018-19 the budgetary allocation in the field of higher education has increased by 55.20 percent.

National Agricultural Higher Education Project

- Proposed with an outlay of USD 165.0 million (Rs. 1100 crores)
- Funded by the World Bank and Government of India on 50:50 cost sharing basis
- Duration of the Scheme: four years (2016-17 to 2020-21)



*National Agricultural Higher Education Project

Recommendations of Vth Deans' Committee implemented in all Agricultural Universities from 2016-17 and new degree programmes introduced.

- B. Tech (Biotechnology)
- B.Sc. Community Science
- B.Sc. Food Nutrition & Dietetics
- B.Sc. Sericulture

Degrees in Agricultural Sciences declared as professional degrees.

Holistic distribution of courses

- Traditional Courses in I Year
- Technology based Courses in II Year
- Talent based Courses in III Year
- Trade based Courses in IV Year



Release of Fifth Deans Committee Report on 29th June 2016



Compulsory common courses introduced

The committee report implemented in all the agricultural universities which enabled uniformity in the syllabi for the graduate students in the country

Financial Support provided to New Universities

- Funds worth Rs. 135.0 Crores each released to Acharya NG Ranga Agricultural University (ANGRAU), Andhra Pradesh & Sri Konda Laxman Telangana State Horticultural University (SKLTSHU), Telangana



- Financial support of Rs. 5.00 crore extended to Govt. of Haryana during 2016-17 for the newly established Maharana Partap Horticultural University at Karnal



Prime Minister's package for North eastern states

- A new Institute, Indian Institute of Plant Biotechnology, established at Ranchi
- Establishment of two new Institutes on the line of Indian Agricultural Research Institute (IARI), Pusa, New Delhi:
 - IARI, Jharkhand
 - IARI, Assam.
- A new Regional Center for Coconut Development Board and a Regional Station of National Center for Organic Farming established at Patna
- National Research Centre for Integrated farming established at Motihari (Bihar)
- A new horticulture college established in Piprakoti, Motihari
- Establishment of four (04) new Krishi Vigyan Kendra (01 at Ramgarh, Jharkhand and 03 in Assam)
- International Centre on Foot & Mouth Disease established in Bhuvaneshwar, Odisha.
- A regional research centre of IISWR, Dehradun established at Koraput, Odisha
- Establishment of 2 Agricultural Technology Application Research Institutes (ATARIs) at Patna & Guwahati
- The Rajendra Prasad Agricultural University upgraded as Dr. Rajendra Prasad Central Agricultural University
- Establishment of Second Green Revolution Cell at ICAR-RCER, Patna



Developed technology inventories for Eastern Region

Varieties/breed	275
Production Technologies	20
Management Practices	40
IFS/RCT/Cropping Systems	21
Product/Process/ Models	59
Standardization of Technologies	38

To give impetus to higher agricultural education in North East Region

Six new colleges opened under CAU, Imphal, raising the total number of colleges from existing 7 to 13.

- Two Agricultural colleges one each in the state of Arunachal and Meghalaya.
- One Horticulture college each in Mizoram and Sikkim,
- One college of Veterinary and Animal Husbandry in Nagaland.
- One college of Food Science and Technology in Imphal, Manipur.



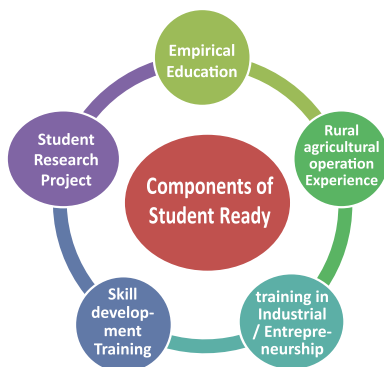
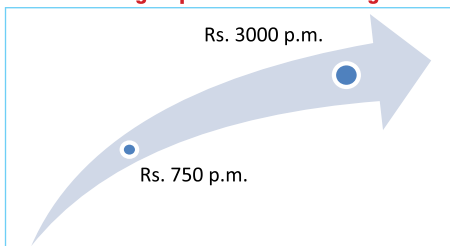
- In addition, two new colleges, College of Horticulture and College of Forestry started in Rani Laxmi Bai CAU, Jhansi from 2016-17.

Student Ready

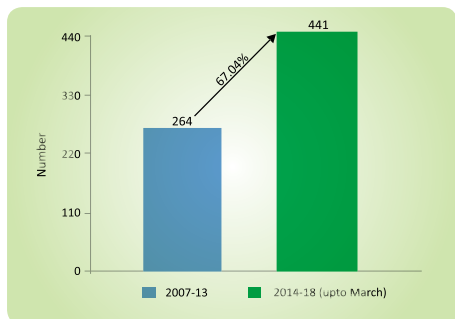
In Student Ready Scheme, started by Hon'ble Prime Minister on 25 th July 2015, the fellowship for working experience to the students has been revised to Rs. 3000pm from Rs. 750 pm.



Increase in fellowship of students given during experimental training

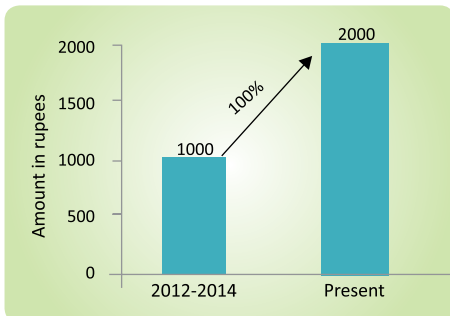


New experimental learning units opened in agricultural universities



New experiemental learning units provide actual working experience besides providing training to the students

National Talent Scholarship to graduate students doubled

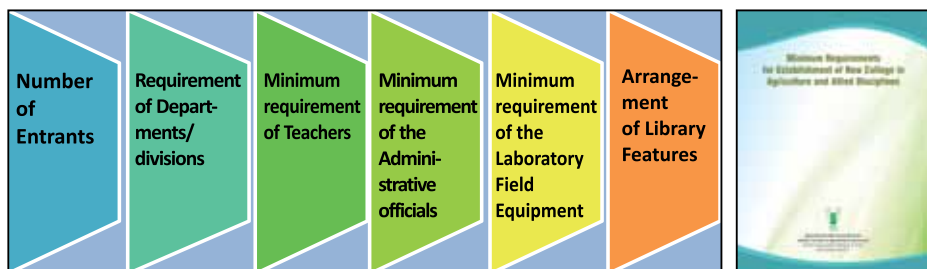


The scholarship amount raised from Rs. 1000 to Rs. 2000/month

Minimum Standards for establishment of New College

To decide the eligibility for opening up of a new Agricultural University/College, ICAR established Minimum Standards for Higher Agricultural Education for different disciplines of agricultural sciences.





Ranking of Agricultural Universities

- In line with the National Initiative on Ranking of Indian Institutions, ranking of Agricultural Universities has been done. Based on the evaluation, 57 agricultural universities have been ranked with a larger objective of improving the ranking of Indian universities in World University Rankings. The following top three universities in these rankings were honoured on ICAR Foundation Day Award Ceremony held on 16 July 2017.

ICAR-National Dairy Research Institute, Karnal

ICAR-Indian Agricultural Research Institute, New Delhi

Punjab Agricultural University, Ludhiana



Introducing Agricultural Courses (Syllabus) at School level:

- In order to attract young talent in agriculture DARE/ICAR has developed a syllabus for introduction at higher secondary level in schools. Following the recommendation of the Cabinet to this effect in 2015, DARE/ICAR is continuously raising the issue of introduction of agriculture in curricula at school level with the HRD ministry.



Pt. Deendayal Upadhyay Unnat Krishi Shiksha Yojana

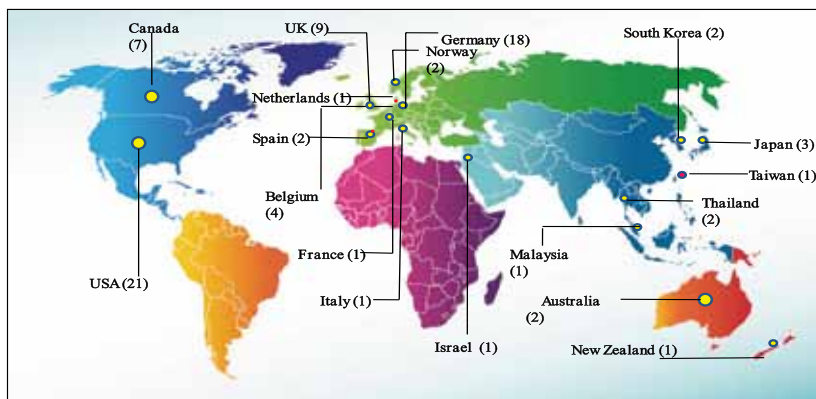
- 130 training programmes organized on Organic Farming/ Natural Farming and Cow based Economy in 32 SAUs
- Identified 100 Centers with budget- Rs. 5.35 crores
- Organized 5 regional workshops cum- training (Lucknow, Kolhapur, Avikanagar, Amritsar and Jhansi)

Netaji Subhas – ICAR International Fellowships

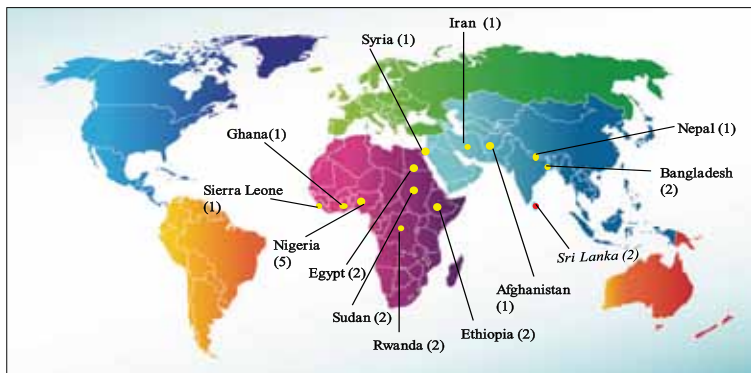
- To develop competent human resources that are trained in the world's best identified laboratories (for Indian candidates) –105 students benefited.
- To expose overseas candidates to the best Indian Agricultural Universities (AUs) and research institutes to facilitate experimental training work experience – 28 students.
- Under this scheme 30 fellowships are awarded every year. Fellowship of US \$2000 pm each for Indian candidates going abroad and Rs 40,000 pm for overseas scholars coming to India are being awarded by ICAR. Both the fresh and the serving persons in ICAR and Agricultural Universities are eligible for this fellowship.



Placement of Indian Students under Netaji Subhas ICAR International Fellowships

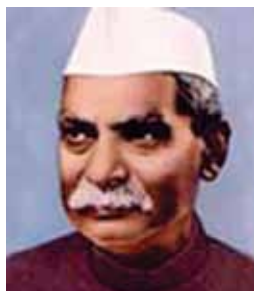


Placement of Overseas Students under Netaji Subhas ICAR International Fellowships

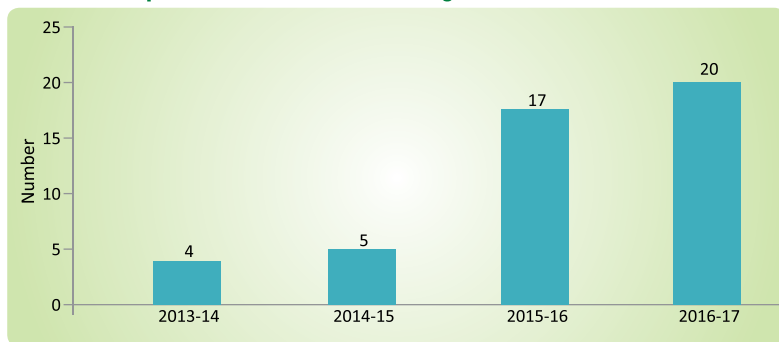


National Agricultural Education Day

For creating awareness about agriculture and agricultural education among school children, the Govt. has declared 3rd December as National Agricultural Education Day in the memory of First Food and Agriculture Minister of the country, Dr. Rajendra Prasad



Emphasis on Accreditation of Agricultural Universities



New guidelines namely, "Guidelines for Accreditation of Higher Agricultural Educational Institutions in India" developed and published.

NEW INITIATIVES TAKEN BY THE ICAR TO DOUBLE THE FARMERS' INCOME

New Crop Varieties Developed

During the last four years, a total of 795 varieties were released as against a total of 448 varieties during the previous 4-year period. Important milestones include the following

- **Development of biofortified varieties:** ICAR developed 20 bio-fortified varieties of field and horticulture crops for the first time during this period.
- **Climate resilient crop varieties:** A total of 495 varieties were released during 2014-18 till date as against a total of 289 varieties during the previous 4 years.
- **Development of Bt cotton varieties:** For the very first time, ICAR developed eight GM Bt cotton varieties tolerant to cotton boll worm for commercial cultivation for which seeds will be available for farmers @ Rs. 200/kg. Seed of these varieties can be used by farmers for 2-3 years which is not possible in case of Bt cotton hybrids where costly seed has to be purchased every year.
- **Extra early maturing variety:** IPM 205-7 (Virat)], an extra-early (52-55 days) and high protein variety of mungbean and Pusa Ageti Masoor (L 4717), short duration (100 days) and Iron rich variety of Lentil are the first of their kind in

respective crops.

- **Varieties suitable for conservation agriculture:** Wheat variety, HD CSW 18 is the first variety specifically bred for Conservation Agriculture which will reduce water requirement, less input and will help in residue management. Another such variety HD 3117 has also been released for late sown situation under conservation agriculture system.
- **Use of molecular tools in crop improvement:** ICAR developed 24 varieties using Marker Assisted Selection (MAS) during the last 4 years as compared to only two varieties during the preceding 4-year period.

Technologies developed to create wealth from waste

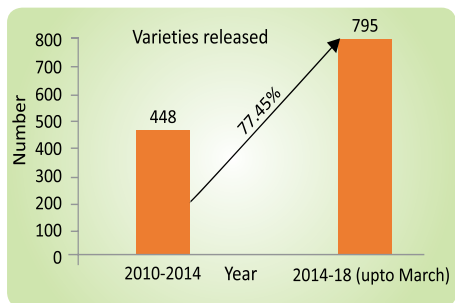
ICAR institutions have developed more than 30 technologies to create wealth from agricultural wastes. These include the production of high value products from the use of banana stems, water hyacinth, coconut fiber and husk, bamboo waste, residue of cotton, production of chitin and chitosan from lobster shell, nutraceutical products from seaweed, Alcoholic drink with medicinal properties from kinnow peels, partial board from jute sticks etc.

State specific documents in relation to doubling the income of farmers by year 2022

In order to strengthen the government's efforts in doubling the income of the farmers, ICAR developed State Specific Strategy Documents while focusing on technology delivery for all the states. These documents have been released during the ICAR-Director's Conference on March 8, 2018. For their implementation in all the agro-ecologies of the concerned states, these documents have been presented to Chief Ministers as well as Chief Secretaries of all the states.



New crop varieties for increasing productivity and income

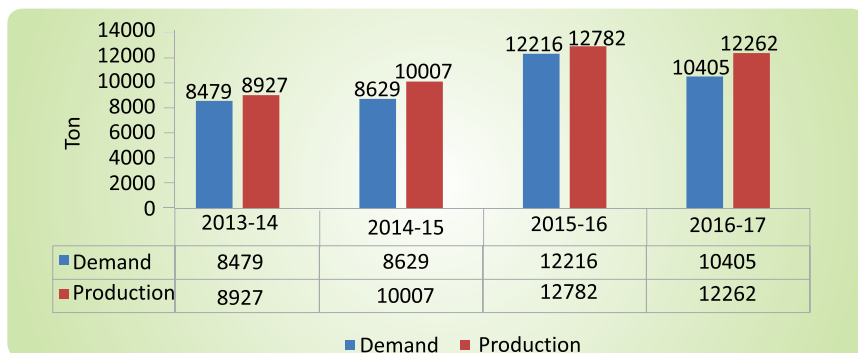


Crop group	March 2010 to April 2014	March 2014 to April 2018
Cereals	255	437
Pulses	63	112
Oilseeds	70	116
Others	60	130
Total	448	795

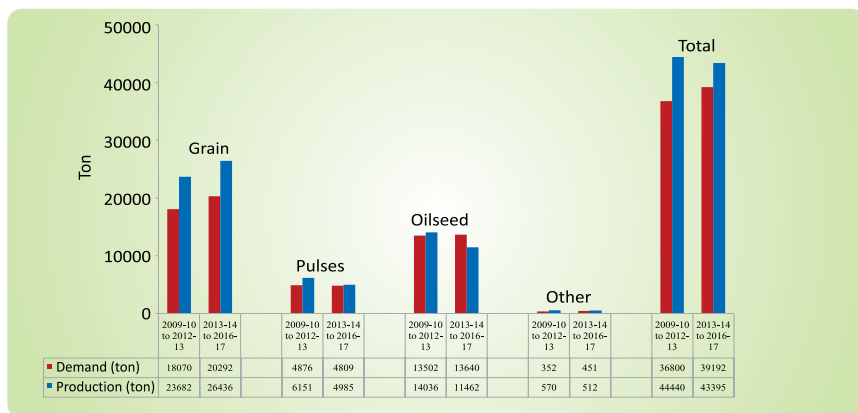
Crop varieties released during the 4 years (2014 to 2018) and previous 4 years (2010 to 2014)

Breeder Seed Production

Breeder seed production was higher than indent in most of the crops



Crop wise Breeder seed indent and production during present four years and previous four years



Varieties developed by use of molecular tools in crop improvement

May 2010 to April 2014	May 2014 to April 2018
2 varieties developed <ul style="list-style-type: none"> • Pusa Basmati 1 (rice) • HBB 67 Improved (Pearl millet) 	24 varieties developed <ul style="list-style-type: none"> • 19 varieties of rice • 1 variety of bread wheat • 4 varieties of Maize

Development of Bio-fortified varieties as a solution to fight against malnutrition

Paddy: CR Dhan 310: Protein 10.3 percent

Paddy: DRR Dhan 45: Zinc 22.6 ppm

Paddy: GN R-4: High Iron (91ppm), dietary fibres (2.87%) & beta- carotene (0.53ppm)

Paddy: DRR Dhan 48: High Zinc (22ppm)

Paddy: DRR Dhan 49: High Zinc (25.2 ppm)

Wheat: WB 02: high Zinc (42.0 ppm) & Iron (40.0 ppm)

Wheat: HBPW 01: Iron (40.0 ppm) and Zinc (40.6 ppm)

Maize: Pusa Vivek QPM 9 Unnat: Pro-vitamin- A (8.15 ppm), Lysine (2.67%) & Tryptophan (0.74%)

Maize: Pusa HM 4 Unnat: Tryptophan 0.91% and Lysine 3.62 %

Maize: Pusa HM 8 Unnat: Tryptophan (1.06 %) and lysine (4.18 %)

Maize: Pusa HM 9 Unnat: Tryptophan (0.68%) and lysine (2.97%).

Bajara: HHB 299: Iron (73.0 ppm) and Zinc (41.0 ppm)

Bajara: AHB 1200: Iron (73.0 ppm)

Masoor: Pusa Ageti Masoor: Iron (65.0 ppm)

Mustard: Pusa Double Zero Sarson 31: Erucic acid <2.0 percent and glucosinolate<3.0 ppm

Mustard: Pusa Mustard 30: Erucic acid < 2.0 percent

Cauliflower: Pusa Beta Kesari 1: Beta Carotene 8.0 - 10.0 ppm

Sugarbeet: BhuSona: high beta carotene (14.0 mg/100g)

Sugarbeet: Bhu Krishna: Anthocyanin (90.0 mg/100g)

Pomegranate: Solapur Lal: High Iron (5.6- 6.1mg/100g), Zinc (0.64-0.69 mg/100g) and Vitamin C (19.4-19.8 mg/100g)



Higher revenue earned from the Mega Crop Varieties

- Sugarcane variety Co-238, which has an average sugar recovery of upto 12% has achieved a coverage of more than 14.75 lakh hectares in UP and adjoining states. This variety gives 1.5 to 2 % more sugar as compared to other popular varieties. During the last four years this variety alone has given the farmers and sugarcane millers an additional income of over Rs. 6550.00 crores as compared to the popular varieties.
- Wheat flagship variety HD 2967, has currently occupying about 10 million ha area across the country and unprecedented breeder seed demand has been witnessed which has touched 3600 quintals during 2017-18, highest ever demand of a single variety in the history of Indian agriculture
- Basmati rice variety, PUSA Basmati 1121, a landmark variety developed by Indian Agricultural Research Institute, New Delhi has earned the country foreign exchange equivalent to Rs. 71900 crores during 2014-17 which was 9100 crores (14.5%) higher than the foreign exchange earned by the variety during 2011- 2014 (Rs. 62800 crores).
- The Tomato variety, Arka Rakshak, developed by Indian Institute of Horticultural Research, Bangaluru, having resistance to leaf curl virus, bacterial wilt and early blight has out-performed all the commercial hybrids available in the market with yield potential of 120 tonnes per hectare. The variety has spread across the country currently occupying over 20,000 acres in 27 states and has generated revenue worth over 400 crores to the farmers during the last 4 years.



New Varieties of Horticultural Crops Developed

S. N.	Crops	No. of Varities Developed
1	Fruits	10
2	Vegetables	78
3	Flowers	3
4	Potato	2
5	Onion	11
6	Garlic	8
7	Spices	14
8	Coconut	7
9	Tubers	2
10	Cashew	1
Total		136

High Density Planting for More Productivity of Apple

Implantation: High density (2.5mX 2.5m)

Pruning: Regular annual pruning and sorting along with Modified Central Leader system

Drip irrigation and recommended fertilizers application and plant protection measures.

The Technology has Potential for increasing the productivity upto - 30-35 tons / ha from existing 7.5 tons / ha.



Some of the new varieties of horticulture crops



Medika : Grapes full of Anti-oxidants

Grape variety Medika is best for high juice and anti-oxidant level.



Guava: Hybrid Arka Kiran

Fruit weight: 200-220 gm
High level of Lycopene: 6-7 mg/100gm
Soft seed productivity: 30-35 ton/ha



Hybrid Cashew (H-126)

jumbo nut (11-12gm/nut). Good for export purpose due to big nut size.



Ajmer Coriander -1

Good for seed production and green vegetable
High seed productivity: 12.5 quintal/ ha
Duration: 150-152 days. Stem gall resistant

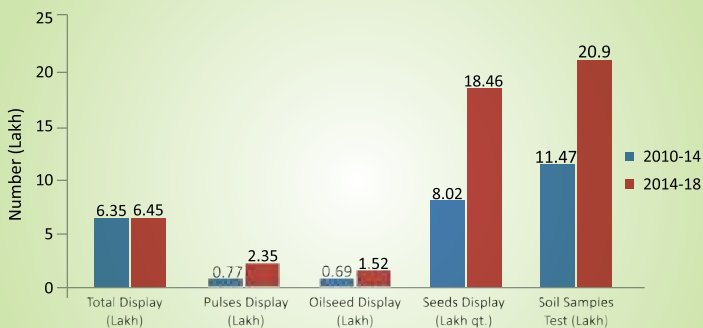


LAB TO LAND: IMPORTANT INITIATIVES

Establishment of KVKs for farmers



Technology demonstration, seed production and soil testing





Extending training and technology support to the farmers for Quality seed, planting material and animal/fish seed production



On farm trials conducted by KVKs

1.32 lakh

Front line Demonstrations conducted by KVKs

5.04 lakh

Farmers trained

53.96 lakh

Agricultural Extension Personnel trained

5.62 lakh



participation of 540.04 lakh farmers in extension activities





Quality seeds produced and distributed by KVKs

184600 tonnes

Plantation material produced and distributed by KVKs

1711.91 lakhs

Production of livestock/ fish strains/ fingerlings

950.22 lakhs

Analysis of soil nutrient status and water samples

20.90 lakhs



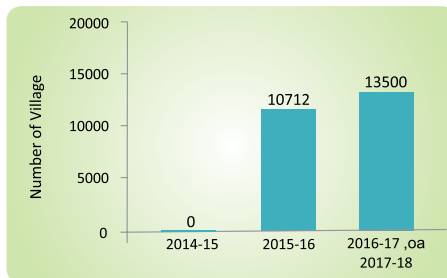
Mobile Agro Advisory provided to the farmers 1022.67 lakhs

We are committed to doubling of farmers' income by 2022.

Mera Gaon Mera Gaurav

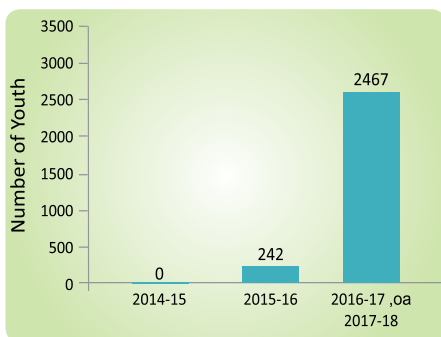


- Under this programme a group of 4 Agricultural Scientists (Multi-disciplinary) from ICAR institutes and State Agricultural Universities work with 5 identified villages and share their experiences on agriculture, horticulture, animal husbandry, fisheries, apiculture and other agriculture technologies to solve the problems of farmers and hence increase their income.
- Facilitation of knowledge, skill and information to farmers
- Issuing timely alerts and advisories
- Providing information on inputs, service providers etc.



- Develop convergence with different departments and organizations for the development of villages
- Scientists have started working in 13500 villages

Attracting and Retaining Youth in Agriculture (ARYA)



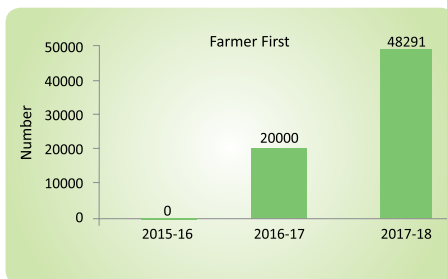
- Attract and empower the youth in rural areas for various agriculture, allied and service sector enterprises
- Emphasis on processing, value addition, marketing and networking
- Entrepreneurship development and value chain management
- Implemented through 25 KVKs in 25 States
- 930 units established giving benefits to 2467 village youths

- 97 KVKs trained 3318 rural youth in various employment related activities/projects by organizing 190 training courses in collaboration with Indian Agricultural Skills Council and RKVY during 2016-17.



Farmers First

- Under this scheme the scientists are working with more than 48291 farm families directly under this project through 51 centres operational at various ICAR institutes /Agriculture Universities all over the country.
- Enriching Farmers –Scientist interface.
- Application of technology and feedback according to the local conditions.
- Work on farmers participation and group formation.
- Compilation of experiences gained from this scheme and its popularization.



Awareness programme on Crop Insurance Scheme and World Soil Day

Programmes on Prime Minister Crop Insurance Scheme, World Soil Day and Sankalp Se Siddhi were organized by KVKs. Sankalp Se Siddhi programmes organised at 562 locations in all parts of the country using KVK platforms.

In this awareness programme more than 10 lakh farmers, more than 50 central and state ministers, 300 MPs, 500 MLAs and higher officials of state and central government participated.



KVKs Initiatives to prevent burning of straws and stovers in fields by farmers

ICAR and DAC&FW worked in close cooperation to minimize this malpractice among farmers



- Massive campaign by 35 KVKs
- 45000 farmers motivated
- Special Vad-Samvad programmes organized on DD Kisan Channel
- 1200 live demonstrations conducted in 4708 ha area on Happy Seeder, Zero till machine, Baler cum knotter and other residue management practices

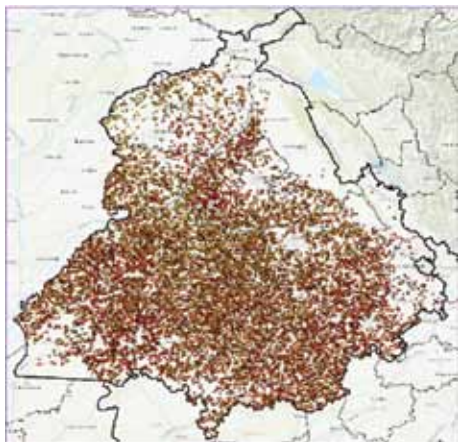


Strategy on crop residue management prepared by ICAR



Monitoring of activities of burning of crop residue during last two years in Punjab and Haryana fields through satellite

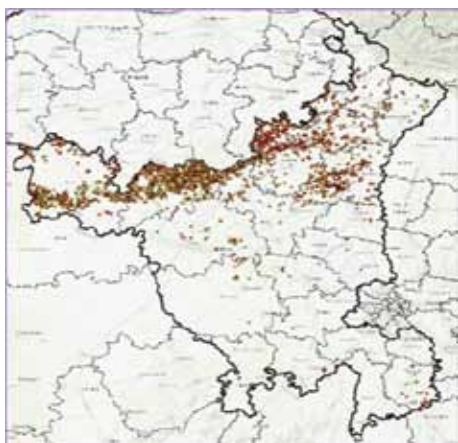
Punjab 2016



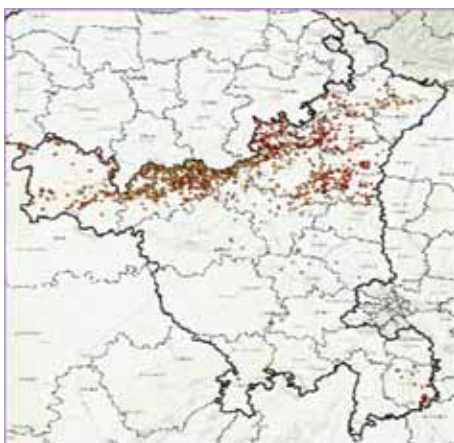
Punjab 2017



Haryana 2016



Haryana 2017



Monitoring period 10th October – 10th November

Krishi Unnati Mela



The Prime Minister, Sri Narendra Modi lays Foundation Stone for 25 Krishi Vigyan Kendras at Krishi Unnati Mela, in Delhi on March 17, 2018.



The Prime Minister, Sri Narendra Modi addressing the audience at Krishi Unnati Mela 2018 at IARI Mela ground on 17.03. 2018.

The Krishi Unnati Mela, is being organized in the Indian Agricultural Research Institute, Pusa, New Delhi, regularly since 2016 with the objective of providing information about new technologies developed by our scientists on agriculture, horticulture, animal husbandry, fisheries, beekeeping etc. and ensure that the advanced agricultural technologies reach the farmers in all nooks and corners of the country, to enable establishment of agriculture as a profitable business to increase the income of farmers. The fairs were very successful and more than 5 lakh farmers participated in the event every year. During the year 2018, the Krishi Unnati Mela was organized during March 16-18.

- Hon'ble Prime Minister addressed farmers, inaugurated the Jaivik Kheti portal and laid the foundation stone of 25 KVKs on March 17, 2018.
- Krishi Karman Award & Pandit Deen Dayal Upadhyaya Krishi Vigyan Protsahan Puruskar were conferred by the Prime Minister.
- Display of agri and allied sector technologies, live demo, theme pavilion etc.

Major highlights of the mela:

- More than 800 stalls

- Display of latest Agri & allied sector technologies through 800 stalls.
- Live Demonstrations on Micro-Irrigation, waste water utilization, Animal Husbandry (Pashudhan) and Fisheries etc.
- Seminars, conferences and question answer sessions on various contemporary topics in agriculture and allied fields held to solve the problems of the farmers/ agricultural entrepreneurs.

Pavilions with following themes created:

- Dedicated stall for Doubling Farmers income by 2022
- Stall for Jaivik Maha Kumbh on organic farming
- Stall dedicated to Sahkar Sammelan (Cooperatives)
- Pavilion for inputs (seeds, fertilizers, pesticides supplying agencies)
- Pavilion for Horticulture/ Dairy, Animal Husbandry, Fisheries
- Dedicate Pavilion highlighting Agricultural research and extension activities of ICAR
- Special stalls of Ministry of Textile, Ministry of Food Processing and Industry, Ministry of Commerce and North East Council



New ICT (Information and Communication Technology) Apps and Portals

Web Portal – Krishi Vigyan Kendra Knowledge Network

- Pusa Krishi- Technology Mobile App
- Mobile App “riceXpert”
- e-Kapas Network and Technology Documentation
- Pulse Expert for diseases and pests
- e-Pest Surveillance and Advisory System for horticultural crops
- Online Pest Monitoring and Advisory Service
- Pest Forewarning application
- Krishi-Digital data portal
- During the last 4 years the ICAR research institutes have developed more than 130 technology apps on various agricultural and allied sector technologies.

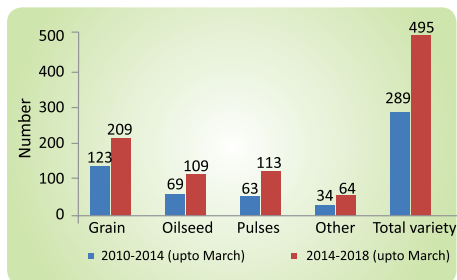


Four new ICAR awards established

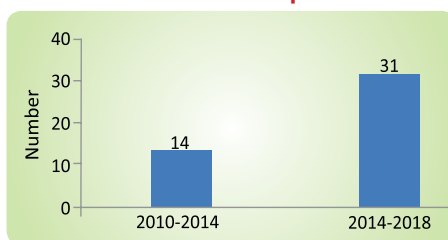
Name of Award (Numbers)	Year of Institution	Value of the Award
1) ICAR Administrative Awards (3 awards one each in Technical, Administrative & Supporting categories)	2014	Rs. 51,000/- each
2) Haldhar Organic Farmer Award (1)	2015	Rs. 1,00,000/-
3) Pandit Deendayal Antyodaya Krishi Puruskar (1 National & 11 Zonal Awards)	2016	National: Rs. 1,00,000/- Zonal Rs. 51,000/- each
4) Pandit Deendayal Rashtriya Krishi Vigyan Protsahan Puraskar (1 National & 11 Zonal Awards)	2016	National: Rs. 25,00,000/- Zonal: Rs. 2,25,000/- each

New initiatives on development of climate resilient and sustainable production system

Abiotic stress tolerance varieties of crops released



Number of Integrated Farmers Systems Models Developed



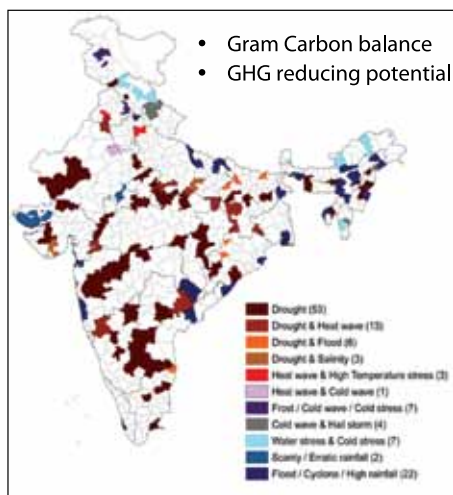
- During the period 31 multi-enterprise IFS models encompassing field and horticultural crops, agroforestry, livestock, fisheries suiting to small and marginal farmers of different agro-ecological regions of the country have been developed to enhance farm productivity and profitability.
- IFS linked to profitability, livelihood generation and risk minimization. IFS models are useful in doubling farmers' income if implemented through dedicated schemes.
- IFS intervention can increase Farmers' income to the tune of Rs. 1.5 -3.6 lakhs per annum.
- Kerala government sanctioned Rs 1470 lakhs (2017-18 to 2018-19) to establish 2300 models (@2 in each Panchayat).
- IFS provide more stable incomes even during years of extreme weather events.
- Net Profit (mean of 3 years): Rs 2.5 lakhs.

These models are being promoted across the country in order to reach the farmers through different ICAR institutes, Agricultural Universities and KVKs.



151 Climate Resilient Villages Established by KVKs

ICAR and DAC&FW departments are working together to demonstrate 100 climate-resilient and integrated farmers' systems technologies at the farmers' fields.



NICRA-NMSA interface workshop

- 5000 villages in Maharashtra included with the support of World Bank
- Odisha has also signed MoU with ICAR
- Concept note ready for J&K

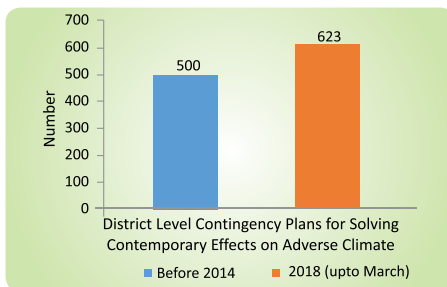
Considering the climate sensitivity Agriculture Contingency Plans were prepared

Under this scheme, the following activities have been undertaken by ICAR

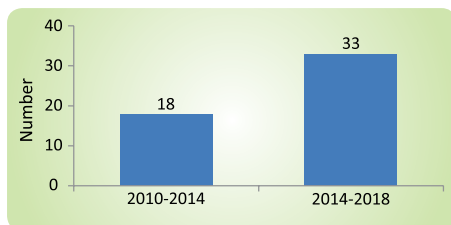
- Custom hiring of farm machinery for the benefit of small & marginal farmers
- Demonstrations in 6803 farmers' fields covering 3431 ha
- 722 training programs organized covering 27887 farmers
- Smart farmer certificates awarded to 4605 NICRA farmers
- Identified 27 climate resilient practices for up-scaling under NMSA

District Contingency Plans

- Developed contingent crop plans for 623 districts which includes technological solutions to overcome weather disasters in horticulture, animal husbandry, poultry farming, fisheries and other fields.
- These contingency plans contain information on alternate crop varieties/crops to be chosen and agronomic measures to be taken up in case of weather related extreme events.
- Further, strategies for contingency situations in livestock, poultry and fisheries have also been included.
- The contingency plans are available at ICAR / DAC websites [http:// farmer.gov. in/](http://farmer.gov.in/), and <http://agricoop.nic.in/acp.html>, <http://crida.in/> and circulated to all state agriculture departments.



Package of practices for Organic Farming Developed



Organic farming package of practices for 33 crops/cropping systems have been developed by ICAR which are being promoted in 20 states including north eastern states through NCOF/PKVY/ NHM.

National Phenomics Facility at Indian Agricultural Research Institute, Pusa (New Delhi)

Honourable Prime Minister dedicated the Nanaji Deshmukh National Phenomics Facility to the Nation. This facility besides promoting state of the art research in Agriculture including crop sciences, will prove a boon to overcome the adverse effects of the changing climate on various agricultural crops.



Digital portable soil test kit cum mini Lab (Mrida Parikshak)

- Capable of measuring all the 12 soil parameters of Soil Health Card (pH, EC, OC, available N, P, K, S and Fe, Zn, Cu, Mn&B).
- The kit is equipped with GPS, Shaker and balance. The kit is complementary to soil testing labs
- The Kit is useful for rapid analysis of soil samples for generating soil health cards along with the crop and soil specific fertilizer nutrient recommendations, monitoring of soil fertility and preparation of geo-referenced soil fertility maps at block/village level. Validated using different soil types revealed about 90% accuracy of STL
- Area of operation : Village/Panchayat level, KVKs and STLs
- More than 1096 units already sold



Multipurpose, inflatable, flexi Rubber Dam for watershed

- Developed multipurpose rubber dam for watershed to reduce soil erosion, create water storage facility, enhance ground water recharge and quick & safe disposal of sediments. It can store 20-25% additional water in comparison to traditional checkdam to provide irrigation in critical stage and to facilitate ground water recharging with yield advantage by 62% in Kharif rice and 47% in vegetables during Rabi. This technology has a potential to benefit farmers in rainfed agro-ecosystems by providing irrigation. This can also be used in coastal creeks, estuaries, streams and channels to restrict the inflow of sea water into land mass during cyclone, tsunami & high tides.
- Cost : Nearly Rs. 8 lakhs (width 5 m x 1.5 m height)
- The investment on rubber dam can be recovered within a span of three years.
- Installed 43 rubber dams in 6 states (Orissa, Uttarakhand, Maharashtra, Madhya Pradesh, Gujarat and Jharkhand)



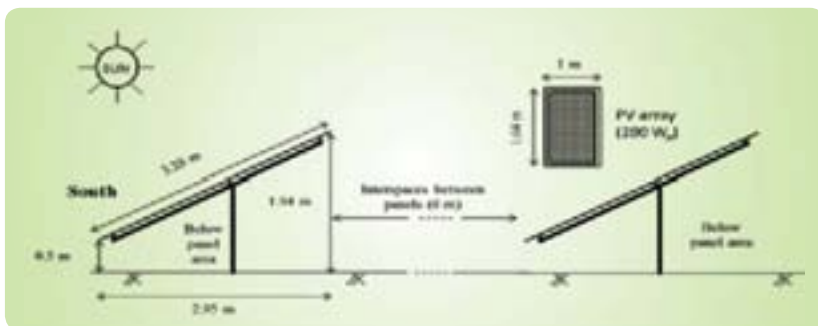


Solar PV Sprayers for spraying Agro-Chemicals under Solar Farming System developed

Agri- Voltaic System/ Solar Farming

Agri-Voltaic System

Crop cultivation together with electricity generation through Photo Voltaic (PV) module on a single piece of land.



Model Area: 1 hectare

- Solar PV generation efficiency : 0.5 Mega Watt
- Daily electricity generation : 2500 Kilo Watt per hour
- Investment : Rs 2.5 Crore
- Income generated through electricity : Approximately Rs. 45 lakhs annually.
- Age of system : 25 years
- Payback period : 7 years.
- Green gram productivity : 4.0 q/ ha

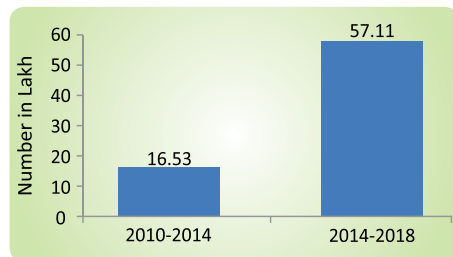
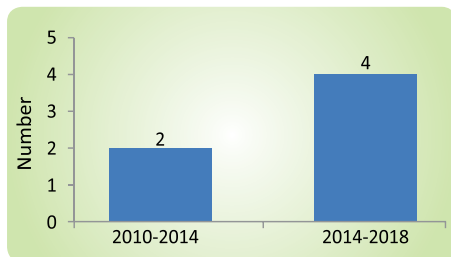
Ridge furrow seed drill for In-situ moisture conservation under Solar Farming System



Agricultural Technologies for Income and Nutritional Security

Developed and released 4 backyard poultry varieties having double the egg production (50-70 eggs/annum) compare to local / native variety

Poultry Seed Provisioned to farmers and development agencies



JHARSIM - Multi-Coloured rural bird for Jharkhand and Bihar (Annual egg production - Under rural / backyard system: 120-130 eggs)

NARMADA NIDHI – Dual purpose coloured rural poultry bird for the state of Madhya Pradesh (Annual egg production - Under rural / backyard system: 180 eggs)

KAMRUPA - Multi-Coloured bird for rural poultry for the State of Assam (Annual egg production - Under rural / backyard system: 118-130 eggs)

HIMSAMRIDHI- Location specific rural variety for Himachal Pradesh (Annual Egg Production: Under rural / backyard system: 140-150 eggs)

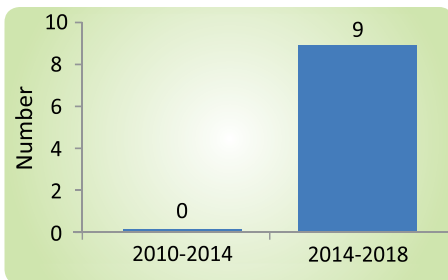


Seed provisioned to more than 5,000 farmer families benefited in various states of the country (including North Eastern Region)

In addition, during this period, a new advanced breed of sheep 'Abhishan' has been developed by ICAR for dry areas of the country which is capable of raising the income of sheep farmers

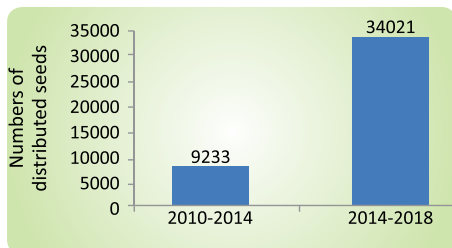
New Pig Varieties Developed

Developed and released 9 pig varieties. These improved crossbred varieties attain body weight more than 75 kg as compared to local variety weighing around 35-40 kg, thus providing double the income through sale on live weight basis at 8 months of age (slaughter age). The litter size is more than 8 as compared to around 5 in local variety.



HD-K75, Rani & Asha in Assam; Jharsuk in Jharkhand; Mannuthy White in Kerala; Lumsniang in Meghalaya; TANUVAS KPM Gold Crossbred Pig (Large White Yorkshire x Desi) in Tamil Nadu and "SVVU-T 17 Crossbred Pig", (Large White Yorkshire x Desi) in Telangana and Landly crossbred pig

Pig Seed provisioned to farmers and development agencies

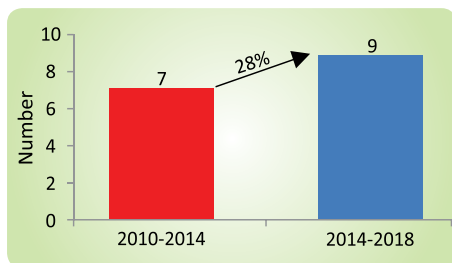


Seed provisioned to more than 3,000 farmer families benefitted in North Eastern Region and the state of Tamil Nadu, Andhra Pradesh and Jharkhand.



Vaccines against livestock diseases developed

Vaccine Developed



Vaccines developed against PPR, Sheep pox, Equiherpabort, Updated equine influenza, Classical swine fever and Johne's disease.



Diagnostic kits developed for animal diseases

The diagnostics are for: Japanese Encephalitis (JE), Brucellosis, FMD, Theileriosis, Listeriosis, Avian Influenza, E.coli in neo-natal kids, type-specific ELISA kit for differentiation of EHV1 & 4 Infection, Equine piroplasmosis, Sandwich ELISA for PPR antigen.



ICAR-NIVEDI conferred DBT Biotech Produce Award for development of Elisa Kit against Brucellosis

Fish breeding technologies

Developed breeding and seed production technologies for commercially-important species.

Marine

- Cobia (*Rachycentron canadum*)
- Silver pompano (*Trachinotus blochii*)
- Indian Pompano (*Trachinotus mookalee*)
- Orange-spotted grouper (*Epinephelus coioides*)

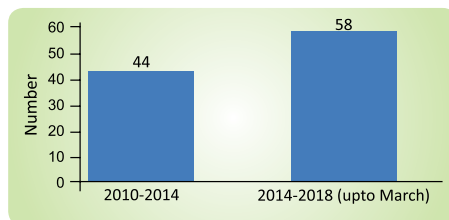
Brackishwater: Crescent Perch (*Terapon jarbua*)

Coldwater: Indian Trout (*Raiamas bola*)



Indian Pompano (*Trachinotus mookalee*)

Developed fish breeding technology



Cobia



Pink Ear



Pompano



Grouper

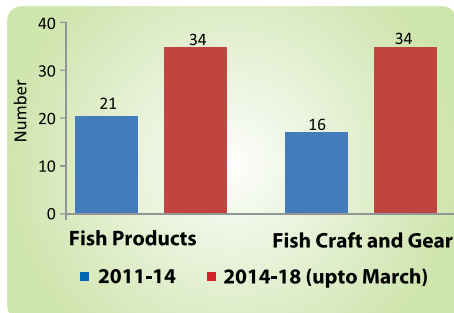


Crescent Perch

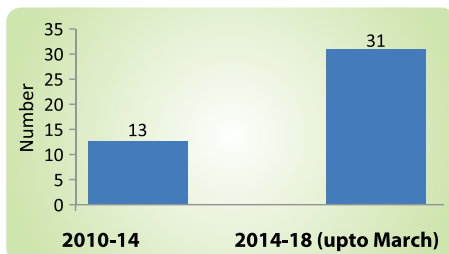


Indian Trout

Fish Products and Fishing Craft and Gear Designed



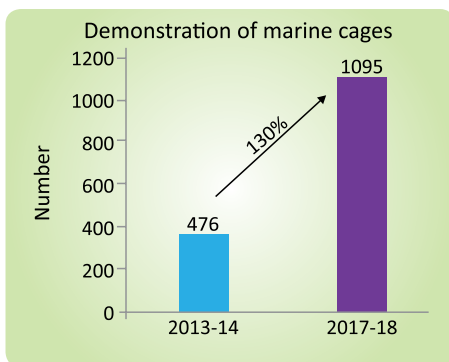
Fish Feed Developed



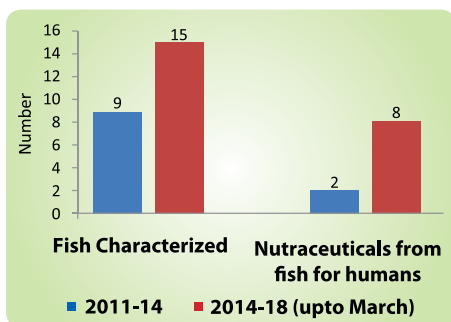
Open-Sea Cage Aquaculture – A New Paradigm



- Marine cage culture of *Cobia (Rachycentron canadum)* and Silver Pompano (*Trachinotus blochii*) - technology demonstration
- Demonstrated average production levels of 3.0 tonnes in 6 months (6 m dia x 6 m depth) 25-30 kg/ m³
- Cost of production Rs. 180/kg for Cobia and Pompano. Farm gate price - Rs. 350/kg (Cobia) & Rs. 300/kg (Silver pompano)
- 1095 cages installed all along the coast of India with the technical support of ICAR-CMFRI, Kochi



Fish Species Discovered & Characterized and nutraceuticals developed from fish for human health



Indigenous fish feed formulation for enhancing efficiency & cutting cost developed



Nutraceuticals from Aquatic Organisms

Development of different high –value compounds and nutraceuticals for human health including

- Green mussel extract (Cadamin™ GMe), Green algal extract (Cadamin™ GAe)- for pain & arthritis
- Seaweed antidiabetic extract (Cadamin™ ADE) - a green remedy for type-2 diabetes
- Seaweed anti-obesity extract (Cadamin™ ACE) – a nutraceutical product to combat obesity/ dyslipidemia
- Seaweed nutraceutical drink 'Nutridrink' – for enhancing micronutrients



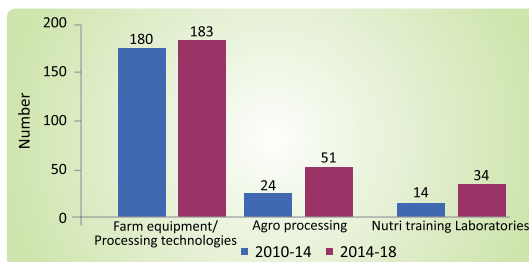
Development of New-Generation fishing vessels

Design of a new-generation, fuel-efficient and multi-purpose fishing vessel developed and commissioned.

Multipurpose fishing vessel for Trawling, Gill-netting and Long-lining



Engineering technologies for reducing production costs, improving agricultural income and reducing drudgery



N.	Particulars	2010-14	2014-18
1.	No. of farm implements/ processing technologies developed	180	183
2.	Number of technologies commercialized/ license agreement signed with firms	51	68
3.	No. of rural youth trained for establishment of custom hiring centres	255	885
4.	Number of EDPs trainings conducted	97	113
5.	Agro-processing centres established	24	51

Assistance for start-up / agricultural entrepreneurs

ICAR has developed a strong support mechanism to facilitate technology incubation activities and techno-entrepreneurs through a network of agri-business incubation centers established in 25 institutes. Under this initiative, ICAR is helping 194 start-ups/ agricultural entrepreneurs across the country to setup their own enterprises. Out of these agro-entrepreneurs/start-up companies, 17 companies displayed their products in full cooperation with ICAR institutes at the Innovation and Entrepreneurship (FINE) exhibition organized at Rashtrapati Bhavan on March 19, 2018. This function was inaugurated by Hon'ble President of India Shri Ramnath Kovind.

The Start-up entrepreneur, Dr. Chaitra Narayanan, M/s Codagu Agritech from Kushal Nagar, Karnataka; a team of Drs M Anandaraj, R Dinesh and Y K Bini of ICAR-Indian Institute of Spices Research and 15 other agripreneurs presented a brief summary about their initiatives.



Inauguration of Innovation and Entrepreneurship exhibition by the Hon'ble President of India



Start-up entrepreneurs presenting their technologies



Fourth ASEAN–India Ministerial level meet on Agriculture and Forestry



Fourth ASEAN-India Ministerial level meet on Agriculture and Forestry was held on 12 January, 2018 at New Delhi, India in which the ways and means for taking continued efforts for future initiatives in the areas of agriculture and forestry were discussed. The meeting was co-chaired by, Hon'ble Agriculture and Cooperative Minister of Thailand Mr. Grisada Bunrech and Hon'ble Union Minister of Agriculture and Farmers Welfare, Govt. of India, Shri Radha Mohan Singh.

The meeting highlighted the need for taking fresh initiatives towards further strengthening the collaboration in the area of agriculture and forestry between ASEAN and India and deliberated on developing a strong roadmap in this

regard.

The agenda was accepted and the report and recommendations of the ASEAN working group and Co-Chairs on Agriculture and Forestry were accepted. In this meeting the progress on medium-term plan of ASEAN-India cooperation in agriculture and forestry (2011-15) were noted. It was agreed that by increasing ASEAN-India collaboration, the solution for various problems confronting agriculture and forestry, especially the challenges of food security and climate change, that have become international issues, can be resolved by means of collaborative efforts in capacity building, agricultural education, research and development.



DOUBLING OF FARMERS' INCOME

SEVEN POINTS STRATEGY

The Hon'ble Prime Minister has set a target before all of us, viz. "Doubling of Farmers' income by 2022". To achieve this target, the Hon'ble Prime Minister has also advocated a Seven Points Strategy:

1. Special focus on irrigation with sufficient budget, with the aim of "Per Drop More Crop".
2. Provision of quality seeds and nutrients based on soil health of each field.
3. Large investments in Warehousing and Cold Chains to prevent post-harvest crop losses.
4. Promotion of value addition through food processing.
5. Creation of a National Farm Market, removing distortions and e-platform across 585 Stations.

6. Introduction of a New Crop Insurance Scheme to mitigate risks at affordable cost.

7. Promotion of ancillary activities like poultry, beekeeping and fisheries.

At present, the Government is following various schemes to synchronise with higher gains for the farmers:

I For higher production through productivity gains:

- ♦ National Food Security Mission (NFSM)- for cereals, pulses, oilseeds, nutri-rich cereals, commercial crops
- ♦ Mission for Integrated Development of Horticulture (MIDH) for high growth rate of horticulture crops.
- ♦ National Mission on Oilseeds and Oil
- ♦ Palm (NMOOP) launched in 2014-15 for increasing production of oilseeds and Oil Palm.
- ♦ Rashtriya Gokul Mission launched



in December 2014 for gene pool of indigenous cattle and buffaloes

- ♦ National Livestock Mission launched in 2014-15 to ensure intensive development of livestock especially small livestock (sheep/goat, poultry, etc.) along with adequate availability of quality feed and fodder.
- ♦ Blue Revolution- in December, 2015 Hon'ble Prime Minister announced "Blue Revolution" scheme for the fisheries development, by enhancing production and productivity of Integrated Inland and Marine Fisheries resources

II For reduction in cost of cultivation:

- ♦ Soil Health Card (SHC) (2 year cycle) - ensure judicious and optimal use of fertilizer application.
- ♦ Neem Coated Urea (NCU) is being promoted to regulate use of urea, enhance availability of nitrogen to the crop and reduce cost of superfluous fertilizer application
- ♦ Pradhan Mantri Krishi Sinchai Yojana (PMKSY) micro irrigation component (1.2 million ha/yr target)- with the motto of 'Har Khet Ko Paani' for providing end-to-end solutions in irrigation supply chain, comprising water sources, distribution network and farm level applications.
- ♦ Paramparagat Krishi Vikas Yojana (PKVY) to promote organic agriculture. This will improve soil health and organic matter content and increase net income of the farmer so as to realise premium prices.

III To ensure remunerative returns:

- ♦ National Agriculture Market Scheme (E-NAM) is an innovative market process to revolutionize agrimarkets by ensuring real-time better price discovery, bringing in transparency and competition to enable farmers to get improved remuneration for their produce, moving towards 'One Nation One Market'.
- ♦ "The Agricultural Produce and Livestock Marketing Promotion & Facilitation) Act, 2017" has been released on 24th April, 2017 for its adoption by States/UTs, with provisions includes setting up of private markets, direct marketing, farmer-consumer markets, special commodity markets, declaring warehouses/silos/cold storages or such structures as market sub yards.
- ♦ Warehousing and post-harvest loans at concessional rate of interest so as to discourage distress sale by farmers and to encourage them to store their produce in warehouses against negotiable receipts.
- ♦ Minimum Support Price (MSP) notified for certain crops.
- ♦ Procurement of oilseeds, pulses and cotton are undertaken by central agencies at MSP under Price Support Scheme (PSS) at the request of the State Government concerned.
- ♦ Market Intervention Scheme (MIS) for procurement of agriculture & horticulture products, which are perishable in nature and are not covered under PSS

IV For risk management and sustainable practices:

- ♦ Pradhan Mantri Fasal Bima Yojana (PMFBY) & Restructured Weather Based Crop Insurance Scheme (RWCIS) provides insurance cover at all stages of the crop cycle including post-harvest risks in specified instances and available to the farmers at very low rates of premium.
- ♦ Mission Organic Farming in North-East- MoVCD (NE)- for realizing the potential of organic farming in the North Eastern Region of the country

V Allied activities:

- ♦ “Har Medh Par Ped” launched during 2016-17 to encourage tree plantation on farm land along with crops/ cropping system. The scheme is being implemented in the states those have notified/liberalized transit regulations for transport of timber.
- ♦ National Bamboo Mission has been announced in the Union Budget 2018-19 for value chain based holistic development of this sector as a supplement to farm income.
- ♦ Bee-Keeping to increase the productivity of crops through pollination, and honey production to supplement the income of farmers.
- ♦ Dairying: There are three important schemes for dairy development: National Dairy Plan-1 (NDP-1), National Dairy Development Program (NPDD) and Dairy Entrepreneurship Development

Scheme

- ♦ Fisheries: Foreseeing high potential in fisheries sector, a Blue Revolution with multi dimensional activities mainly focusing on fisheries production, both inland and marine is being implemented.

VI For investment in agriculture:

- ♦ Rashtriya Krishi Vikas Yojana (RKVY) scheme has been approved for continuation for three years as Remunerative Approaches for Agriculture & Allied Sector Rejuvenation i.e. (RKVY-RAFTAAR) which aims at making the farming as a remunerative economic activity through multi pronged approach along with holistic development of agriculture and allied sector. The new Guidelines provide for major allocation for creation of production and post-production infrastructure, beside promoting agri-enterprises and incubation facilities

VII Operation Greens

- ♦ Tomato, Onion and Potato (TOP) are basic vegetables consumed throughout the year. However, seasonal and regional production of these perishable commodities pose a challenge in connecting farmers and consumers in a manner that satisfies both.
- ♦ The government proposes to launch an Operation Greens on the lines of Operation Flood. Operation Greens shall promote Farmer Producers Organizations (FPOs), agri-logistics, processing facilities and professional management. The Government



allocated a sum of Rs. 500 crore for this purpose.

VIII Pradhan Mantri Kisan SAMPADA Yojana

- ♦ Government of India (GOI) has approved a new Central Sector Scheme – Pradhan Mantri Kisan SAMPADA Yojana (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters) with an allocation of Rs. 6,000 crore for the period 2016-20 on 3 May 2017 coterminous with the 14th Finance Commission cycle. The scheme is being implemented by Ministry of Food Processing Industries (MoFPI).
- ♦ PM Kisan SAMPADA Yojana is a comprehensive package which will result in creation of modern infrastructure with efficient supply chain management from farm gate to retail outlet.
- ♦ Components under PM Kisan SAMPADA Yojana are:
 - ♦ Mega Food Parks.
 - ♦ Integrated cold chain and value addition infrastructure.
 - ♦ Creation / expansion of food processing & preservation capacities.
 - ♦ Infrastructure for agro-processing clusters.
 - ♦ Creation of backward and forward linkages.
 - ♦ Food safety and quality

assurance infrastructure.

- ♦ Human resources and institutions strengthening.

IX Capital Investment in Agriculture

Various corpus funds for promotion of agriculture & allied sectors:

- i. Agri-Market Infrastructure Fund (AMIF) is proposed for development of 22,000 rural hatts in to Grameen Agricultural Markets.
- ii. Micro Irrigation Fund to provide impetus to micro irrigation in the country.
- iii. Fisheries and Aquaculture Infrastructure Development Fund (FIDF) to provide concessional finance to the State Govt, Cooperatives, individual entrepreneurs for the development of fisheries infrastructure facilities both in Marine and Inland fisheries sector.
- iv. Dairy Processing & Infrastructure Development Fund (DIDF) for building an efficient milk procurement system and setting up of processing and chilling infrastructure at village level.
- v. Fund For Integrated Development of Sheep, Goat, Piggery & Poultry to encourage entrepreneurship, modernization of poultry farms and establishment or strengthening of district level semen station for goat, sheep and pig.



किसानों की आय दोगुनी करने के लिए मोदी सरकार की नई पहलें

DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE

1. Soil Health Card Scheme is a nation-wide program started on February 19, 2015 to promote soil based nutrition management.
2. Paramparagat Krishi Vikash Yojana(KKVY) Scheme has been launched to promote the environment friendly package of practices by adopting organic farming and minimum use of chemical fertilisers.
3. Production of 100% neem coated urea was started for overall increase in crop yield and reducing the use of urea for non-agricultural purposes.
4. Biological Value Chain Development Mission for North Eastern Hill areas was launched in 2015-16.
5. The National Agricultural Market (e-Nam) Scheme was started on 1 July 2015 to connect 585 wholesale Agriculture Mandies in the country to e- platform.
6. Rs. 2000 crores has been proposed for the development of about 22,000 rural agricultural markets (rural haats) in the country.
7. The Central Government has started the Pradhan Mantri Fasal Bima Yojana (PMFBY) to provide income security to farmers. This schemes offers lows the lowest premium rates for kharif and rabi crops. In addition to this, it covers risk of all crop cycle – preventive sowing, risk of standing crops and post harvest losses.
8. Pradhan Mantri Krishi Sichai Yojana has been launched to encourage adoption of drip and sprinkler irrigation and development of small water sources.
9. The Indian Government has



- announced the creation of dedicated corpus fund of Rs 5,000 crore for development of minor irrigation with the assistance of NABARD.
10. MIDH Scheme has been launched in 2014-15 for overall horticulture development covering fruits, vegetables, bulbs and tuber crops, mushroom, spices, flowers, aromatic plants, coconut, cashew nuts, cocoa and bamboo, etc.
 11. For the first time, the Agro-Forestry Sub-Mission has been started with the aim of promoting the concept "Har Med Par Ped" and also tree plantation in the field along with the crops.
 12. In the past it was difficult to cut and transport bamboo and farmers used to refrain from cultivating bamboo on their land. The Government has now amended the law, it has been removed as a forest tree species under the Indian Forest Act.
 13. The new scheme called 'Operation Greens' is proposed for the realization of true value of Tomato, Onion, and Potato (TOP).
 14. Using the Geo Informatics ChAMAN (Coordinated Horticulture Assessment and Management Using Geo Informatics) was launched in Sept 2014. The purpose of this program is to develop and strengthen the methodology for estimating the area under the horticulture crops and the production by using "remote sensing technology" and "sample survey method".
 15. To bring the areas under paddy land under cultivation, a special scheme called 'Targeting Areas of Rice Land in Eastern India for Pulse Development' has been started under RKVY from Rabi 2016.
 16. Protection of Plant Variety and Farmer Rights Authority (PPV &FRA) has reduced the Annual Fee of Farmer varieties from Rs 2000 per year to Rs 10 per annum from 2015 and the renewal fee of the farmers has been 'zeroed' from Rs 45,000.
 17. The value of Plant Genome Protector Farmer Award has been increased from Rs. 1 lakh to Rs. 1.5 lakh and the amount of Plant Genome Protector Farmer's Reward has been increased from zero to Rs. 1 lakh.
 18. Sub-mission on Agricultural Mechanization was started in the year 2014-15 for overall promotion and adoption of machineries in agriculture and allied sectors.
 19. Online issuance of Plant Hygiene Certificates and registration of insecticide started.
 20. The proposed income tax exemptions on the lines of co-operative societies to the Farmers Producers Organisations (FPOs).
 21. In the next three years, computerization of 63,000 Primary Agricultural Co-operative Societies will completed bring greater transparency in the process of lending of credit to agriculture sector.
 22. Changes were made to the criteria of drought management and disaster relief measures.
 23. In order to provide more opportunities to the states to promote investment for enhancing overall productivity in agriculture and allied sectors, the Government has started revised Rastriya Krishi Vikash Yojana (RKVY). Revised Scheme RKVY - RAFTAR has been launched on November 1, 2017.

DEPARTMENT OF ANIMAL HUSBANDRY, DAIRYING & FISHERIES

1. वैज्ञानिक और समेकित रूप से देशी नस्लों के संवर्धन एवं संरक्षण के लिए राष्ट्रीय गोकुल मिशन प्रारंभ किया गया। देश में पहली बार देशी नस्लों के संवर्धन एवं संरक्षण के लिए गोकुल ग्राम की स्वीकृति 196 करोड़ रुपए के साथ दी गयी है।
2. दुग्ध किसान की आय को दुगुना करने के लिए डेयरी प्रसंस्करण और अवसंरचना विकास निधि की स्थापना की गयी है। योजना के तहत 10881 करोड़ की निधि स्थापित कर आगे बढ़ाया जाएगा।
3. ई- पशुधन पोर्टल के माध्यम से किसान देशी नस्ल के पशुओं की खरीद और बिक्री कर रहे हैं।
4. केंद्रीय बजट -2018 में पशुपालन अवसंरचना विकास निधि (ए एच आई डीएफ) के स्थापना के लिए समर्पित रु. 2450 करोड़ का अलग से प्रावधान किया है। इस राशि में लघु और गरीब किसान तथा उद्यमियों विशेषकर महिलाओं, स्व-सहायता समूह, कमजोर वर्गों को आधुनिक अवसंरचना सुविधाओं की उपलब्धता तथा उत्पाद के बढ़े हुए मूल्य के माध्यम से लाभ दिलाने की क्षमता है।
5. एमएसवीई (डेटम) में एससी और एसटी / ओबीसी तथा शारीरिक रूप से विकलांग के लिए आरक्षण नीति को प्रारंभ किया गया है जो पूर्व में नहीं था।
6. नीली क्रांति योजना के तहत गहन समुद्री मत्स्यन हेतु सहायता नामक एक नया उप घटक प्रारंभ किया गया है। इसके अंतर्गत डीप सी फीशिंग वेसेल्स निर्माण हेतु तमिलनाडु सरकार को कुल 300 करोड़ की राशि जारी की जा चुकी है।
7. केंद्रीय सरकार ने अपने बजट-2018 में 'मात्स्यिकी तथा जलकृषि अवसंरचनाविकास निधि' (एफ.आई.डी.एफ) की स्थापना के लिए समर्पित रु.7,522.48 करोड़ का अलगसे प्रावधान किया है। इस फंड में 40 लाख समुद्री और अंतर्देशीय मछुआरों, विशेषकर महिलाओं, सेल्फ-हेल्प- ग्रुप, कमजोर वर्गों को आधुनिक अवसंरचना सुविधाओं की उपलब्धता तथा उत्पाद के बढ़े हुए मूल्य के माध्यम से लाभ दिलाने की क्षमता है।
8. विगत दो वित्तीय वर्षों (2016-17 और 2017-18) के दौरान, कृषि और किसान कल्याण मंत्रालय की नीली क्रांति और पोत परिवहन मंत्रालय की सागरमाला के बीच सह-निधियन के द्वारा कार्यान्वयन के सम्मिलन आधार पर 337.67 करोड़ रु. की केंद्रीय देयता के साथ 642.75 करोड़ रु. की कुल लागत से चार नई मत्स्यन बंदरगाह परियोजनाओं और सासून डॉक, मुंबई में एक विद्यमान मत्स्यन बंदरगाह के आधुनिकीकरण का कार्य प्रारंभ किया गया है।



DEPARTMENT OF AGRICULTURAL RESEARCH AND EDUCATION

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

1. Strengthening of KVKs- Total number of KVKs in the country has been increased to 692, the number of subject matter specialists increased to 10 from 6 and the total staff strength of KVKs increased from 16 to 22. Three New ATARIs (Agricultural Technology Application Research Institutes) established taking their number to 11. Grading of KVKs for qualitative improvement was also done by an independent agency (NILERD) under the supervision of NITI Aayog.
2. Student READY- Student Ready scheme, launched by Hon'ble Prime Minister on July 25, 2015 for imparting necessary skills and providing working experience in actual project mode to enable them to become job providers instead of job seekers, the fellowships of students for 6 months training revised to Rs. 3000 pm from Rs. 750 pm. A total of 436 Experiential Learning Units have been opened at various Agricultural Universities.
3. Farmer FIRST scheme, a platform has been created for strong farmer-scientist linkages, capacity building, technology adaptation and application, on-site input management, feedback and institution building. This scheme is being implemented by 51 centers under ICAR institutions / agricultural universities covering 48,291 farm families.
4. Mera Gaon- Mera Gaurav programme has been initiated to effectively promote direct interface of scientists of ICAR Institutes and State Agricultural Universities with the farmers to hasten the lab to land process. Agricultural scientists are already providing information on newer technologies to the farmers in 13,500 villages.
5. Attracting and Retaining Youth in Agriculture (ARYA) project was implemented to empower the Youth below 35 years of age in Rural Areas to take up various Agri-enterprises in Agriculture, allied and service sector for sustainable income and gainful employment. The project is running in 25 districts of 25 States through KVKs. 930 units established benefiting 2467 rural youths.
6. Recommendations of Vth Deans' Committee were implemented in all Agricultural Universities and accordingly course curricula for degree courses in agricultural disciplines have been revised with focus on experiential learning, skill and entrepreneurship development.
7. Four-year agricultural degree courses in Agriculture, Horticulture, Fisheries and Forestry have been declared as Professional degrees to equip them with entrepreneurship opportunities.
8. Personnel Information Management System (PIMS) developed and implemented to streamline the

process of transfers and deployment of vacancies. A centralized deployment and transfer system (PATS) also developed to provide a clear, open and transparent operating system.

9. The process of selection of scientists has been made more transparent and effective. The score card for the initial screening of scientists for higher and management grade scientists have been modified to attract and accommodate meritorious scientists.
10. Several portals have been developed for effective monitoring of individuals and institutions under ICAR using the power of Information and Communication Technology.
11. To strengthen the governments initiatives on bringing Green Revolution to Eastern India including North East, Indian Institute of Agricultural Biotechnology (IIAB) was established at Ranchi (Jharkhand), two new Indian Agricultural Research Institutes (IARIs), one each in Jharkhand and Assam, six new colleges under Central Agricultural University, Imphal, National Integrated Agricultural System Research Center in Bihar, National Research center for Integrated Farming in Motihari (Bihar) and National Organic Farming Research Institute in Tadong (Sikkim) were also established along with upgradation of Rajendra Agricultural University to Dr. Rajendra Prasad Central Agricultural University.
12. Financial support extended to Telangana, Andhra Pradesh, and

Haryana Governments for the establishment of new Agriculture and Horticulture Universities.

13. National Agricultural Education Project (Rs. 1100 crores) started with partial financial assistance from World Bank for Human Resource Development in Higher Agricultural Education and Research.
14. Netaji Subhas ICAR International Fellowships started for developing competent human resources that are trained in the world's best identified laboratories (for Indian candidates) and similarly expose overseas candidates to the Indian Universities.
15. Agricultural Universities were ranked to bring qualitative improvement in the Universities and improve the ranking of Indian Universities among the best Universities in the World. The top three ranked universities were;
 - i) ICAR-National Dairy Research Institute, Karnal
 - ii) ICAR-Indian Agricultural Research Institute, New Delhi
 - iii) Punjab Agricultural University, Ludhiana
16. Nanaji Deshmukh National Phenomics Facility set up at IARI, New Delhi was dedicated to the nation by Hon'ble Prime Minister. This facility, unique in the world, besides promoting state of the art research in agriculture including crop sciences, will prove a boon to overcome the adverse effects of the changing climate on various agricultural crops.
17. During the last 4 years, ICAR for the first time, developed 20 bio-fortified crop varieties for the first time, bred



specially to have higher contents of nutrients such as Iron, Zinc, Vitamin A etc. Besides this, 495 climate resilient crop varieties were developed and released during the last 4 years.

18. For the very first time, ICAR developed eight GM other Bt cotton varieties tolerant to cotton boll worm for commercial cultivation for which seeds will be available for farmers @ Rs. 200/kg. Seed of these varieties can be used by farmers for 2-3 years which is not possible in case of other Bt cotton hybrids.
19. Extra early maturing (52-55 days) and high protein variety of Mungbean IPM 205-7 (Virat) and short duration (100 days) and Iron rich variety of Lentil, Pusa Ageti Masoor (L 4717) are first of their kind in respective crops.
20. Land resource details on the scale of 1: 10,000 for agricultural land use planning at the micro level developed.
21. To combat the problems arising out of climate change, 151 Model Climate Smart villages have been developed, in which 121 Krishi Vigyan Kendras are working to make the

farmers technically capable. ICAR has developed and validated 623 district contingency plans and conducted skill development programs for 40.9 lakh farmers. Developed 45 Integrated Farming Systems (IFS) models in 23 states and 1 Union Territory covering all the 15 agro-climatic regions of the country and 33 new Organic Farming Technologies which have been tested and refined across 20 states including 7 north eastern states.

22. ICAR has initiated a new Pt. Deendayal Updhyay Unnat Krishi Shiksha Yojana under which 130 training programmes on organic farming/ natural farming and cow based economy have been initiated in 32 State Agricultural Universities.
23. ICAR has instituted new ICAR Awards which include; Haldhar Organic Farmer Award, Pt. Deendayal Rashtriya Krishi Vigyan Protsahan Puruskar, Pt. Deendayal Antyodaya Krishi Puruskar for recognizing outstanding contributions of KVKs and farmers.



Activities Carried Out by the Department of Agriculture, Cooperation and Farmers Welfare for Making the Life of Common Man Comfortable

Whatever sustained efforts have been made for the betterment of agriculture and farmers during the last three years under the auspices of Hon'ble Prime Minister Narinder Modi, the encouraging and positive results of them have been begun to reflected. Due to this the farmers are witnessing a multiple improvement in their lives. The Modi Government has laid down exclusive parameters with innovative modus operandi and transparent approaches. The Government has transformed the targets related to implementation of the schemes for the farmers welfare into mission mode in the time bound manner under able guidance of honourable Prime Minister. Our Government has laid down the foundation of modern and future oriented India with the new dimension, good governance, innovations and reformist approach.

Modi Government has been successful for creating awareness among the farmers towards the new initiatives taken for the progress of agriculture sector in the country. Modi Government has made sustained and reinforced endeavors for transforming the lives of rural inhabitants in a positive way.

During the tenure of UPA Government most of the budgetary provisions have been lesser against the expenditure incurred. For instance during the year 2011-12, the budgetary provision was 24,526 crore whereas the expenditure was only 23,290 crores. Similarly the budgetary provision during 2012-13 was 28,284 crore rupees, whereas the expenditure incurred was only 24,630 crore. During the year 2013-14 the budgetary provision was 30,224 crore, whereas the expenditure incurred was 25,896 crores.



Keeping in view the interest of the agricultural sector and the farmers, Modi government has made higher budgetary allocation. For example, during the five years of the UPA government a budgetary provision of Rs. 1,21,082 crore was made for agriculture sector for the year 2009-2014 while the current government has allocated Rs. 2,11,694 crore to the agriculture sector during the period 2014-19 which is 74.5 percent more.

In addition to the budgetary provision, two corpus funds of Rs. 5,000 crore for micro irrigation funds and Rs. 10,881 crore for the Dairy Processing and Infrastructure Fund (DIDF) have been created for the years 2017-20.

Apart from this, the Fishery & Aquaculture Infrastructure Development Fund and Animal Husbandry Infrastructure Development Fund amounting to Rs. 10,000 crore and an agriculture market development fund amounting to Rs. 2,000 crore have been announced in the budget 2018-19.

The Government has imparted the sense of security and trust on the farmers during the span of deficient monsoon in the initial 2 years of the last 3 years period. The Government has put emphasis specifically on agricultural education, research and extension along with promoting the activities related to the distribution of soil health card, extension of the facilities for irrigation, low cost organic farming, national agricultural market, horticulture development, agro forestry, bee keeping, dairy, fisheries as well as egg production. The Government has

invested more capital for the strengthen of cooperatives. A number of initiatives have been launched for enhancing the production of pulses and oil seeds for achieving the target of self dependence in this direction. The farmers have been imparted unprecedented security coverage by dint of Pradhan Mantri Fasal Bima Yojana with the incorporation of different sort of risks and the lowest rate of premium. The contingency plan has been formulated for all the districts in the country. The Government has given priority to the interest of the farmers in the perspective of the economy by enhancing relief parameters to the effected farmers through drought and excess rainfall. It has been decided under the leadership of Prime Minister that the MSP will be announced on the basis of one and a half times the cost of different agricultural genes from the forthcoming kharif and the declared MSP will be available to all farmers, for this, a new system will be built by the Commission in connivance with the Center and the State. There has been a clear disclosure of the commitment to empowerment of the village, poor and farmers of the Modi Government in the 2018-19 budget.

The Hon'ble Prime Minister Shri Narendra Modi has put up a target before the nation for improving the economic condition of the farmers. This target is to make the farmers income as double by the year 2022. This is for the first time that any Prime Minister of India has placed any target before the countryman for overall welfare of the farmers under the learned and able guidance of the honorable Prime Minister. The Ministry is supposed

to complete this business by the year 2022. The Ministry of Agriculture has been engaged for interpreting the vision of the Prime Minister into reality with tooth and nail.

The Central government is working expeditiously to achieve the goal of doubling the income of farmers by the year 2022. For this purpose, the Government has constituted a committee under Chief Executive Officer, National Rainforest Area Authority, Agriculture Cooperative and Farmers Welfare Department to examine the issues related to doubling the income of the farmers by 2022 and to make recommendations to achieve this by 2022. The Committee was formed on 13.04.2016. Apart from working on a comprehensive strategy, the committee has been suggesting various interventions for parallel consideration which are being implemented by the Ministry through the State Governments.

Input Management

- The improvement of irrigation system is very much imperative for enhancing agricultural production, therefore our Government has increased the budget for irrigation.
- Our objective is more crop for every drop. Pradhan Mantri Krishi Sichi Yojana has been launched for getting rid for the problems related to drought. The aim of this scheme is to provide water to every field. During 2017-20 a corpus fund of Rs. 5,000 crore has been announced for micro irrigation.
- The business related to middle

and major irrigation schemes lying pending for years is being carried out by leaps and bounds.

- The water shed development task is also being implemented expeditiously along with water harvesting and water management.
- The ponds are being constructed in the field of the farmers under MANREGA.
- The solar energy driven pumps are being provided to the farmers on subsidized rates.
- The Government has initiated soil health cards for the first time in the country for providing information to the farmers about the fertility of their land. By dint of soil health cards the farmers are utilizing the fertilizers in a balanced quantity resulting in low cost in the farming and more production thereof.
- The availability of neem coated urea has ascertained the adequate availability of urea. This also has led the annihilated misuse of the urea in chemical industries.
- Government is promoting organic farming. The use of new technologies in agriculture sector like forecast for productivity through National Space Technology Programme, prior surmise about drought, better use of Rabi season for the vacant area of paddy etc are the factors conducive for the enhancement in production. Apart from this the farmers are being provided information and advisories in time through call centers and farmers facilitation apps



like telecommunication and online sources.

- Under agriculture loan interest subvention scheme, the Government of India provides loan on 5% interest. The farmers have to pay 4% interest only. Madhya Pradesh, Chhattisgarh, Haryana, Karnataka, Telangana, Andhra Pradesh, Tamil Nadu, Kerala, Rajasthan and Punjab provide additional assistance from the state treasuries. The farmers obtain interest free loan in these states.
- The computerization process is on for bringing about transparency in 63,000 pacs working in the areas of cooperatives with the allocated fund of rupees 1,985 crore rupees during the forthcoming 3 years.
- The Modi Government has accelerated the agricultural credit flow. During 2018-19, budgetary provision of Rs. 11 lakh crore has been made which was Rs. 10 lakh crore during last year. The amount of interest subsidy which was Rs 6,000 crore in the year 2013-14 which has been increased more than 15,000 crore during in the year 2017-18.
- FPO: It is a farmers related production organization which carries out the business of production collection, organic products along with providing services to the farmers. It also works for promoting its business. During the year 2011-14, 484 FPO had been registered against 223 farmers production organizations in a year 2011-14, which is an increase of 117%. In the last 4 years, 3800 Farmer

Productive Organizations were set up by NABARD, State Governments and Multilateral Agencies besides the Small Farmer Agriculture Business Association.

- JLGs: A sum of rupees 6630 crore was released to 6.72 lacs JLGs in a span of 7 years i.e. during 2007 to 2014, whereas a sum of Rs. 27,930 crore released to 29.33 lac JLGs in a span of 3 ½ years i.e. 2014-18 (January).

Output Management

- Union Government is laying emphasis for the improvement of agricultural marketing. Along with 3 prominent reformatory initiatives the E-national agriculture market has been initiated under which 498 Markets have been linked with E-national agricultural markets thereof by now. Online agriculture market trading has also been launched in a number of markets.
- A model PMC act 2017 has been circulated to all the states for improving marketing system in agriculture sector by the Government, under which there is a provision of market yard in the private sector.
- During 2018-19 an amount of Rs 2000 crore has been announced for Agri-Market Development Fund which reflects the importance of the Retail Market in Agricultural Marketing. These markets have been named GRAM (Gramin Retail Agricultural Market). It will be possible to develop the infrastructure of 22,000 rural hatta and 585 APMC wings.
- Tomatoes, Onions, Potatoes are consumed throughout the year in

the entire country. During the last 70 years, farmers and consumers have incurred losses. For the first time, a new initiative titled "Operation Green" has been taken so that farmers can get right price and products are also available to the consumers at suitable prices. For this purpose, a provision of Rs. 500 crore has been made.

- In addition to this, the Government is working for formulating a model act for promoting contractual agriculture.
- A declaration of Model Land Licence Cultivator Act has also been made in this budget through which farmers doing farming on rent and sharing basis will also get the benefit of institutional loan arrangements. For this, NITI AYOOG will take necessary action with the help of state governments.
- The Government declared an appropriate and beneficial price related parameter for sugarcane and the minimum support along with 22 prominent crops like wheat and paddy etc. based on the recommendations of agriculture cost and price commission (CACP), concepts and thoughts of union Ministries, State Government and other factors concerned. Keeping in view the proposals from the State Governments the provision has been made for the procurement of the products from the farmers on minimum support price.
- The procurement of pulses and oilseeds is carried out with price stabilization fund on minimum

support price after having obtained the proposal from the states. During 2016-17, bumper production of pulses has been witnessed. Maharashtra, Gujarat, Madhya Pradesh, Karnataka, Orissa, Andhra Pradesh, Telangana, Rajasthan, Haryana and Tamil Nadu etc. have sent a proposal for the procurement of arhar so as to provide support price to the farmers. The support price of arhar is rupees 5050. 20.6 lac tone pulses have been procured and farmers have enjoyed better return of their products.

- The MSP will be announced on the basis of one-and-a-half times the cost of various agricultural goods from the forthcoming kharif and the announced MSP will be provided to all the farmers, for this, a new system will be created by the NITI Aayog in collaboration with the Central and State Governments.
- There has been a provision for the procurement of oilseeds, pulses and cotton on minimum support price. If the minimum support price of agricultural products in the market comes down then based on the proposal of the Government 25% quantity of total production was procured through the states which limit has now been increased to 40%. The basic objective of this scheme is to provide beneficial price to the farmers for their products and to enhance the production along with the target also has been laid down for providing better returns to the farmers. Under this scheme a total



procurement of 804923 MT costing to rupees 3372.54 in 2011-14 has been made, whereas during 2014 to 27th January, 2018 only a procurement of 26,75,639 MT of Rs. 12132.26 crore has been carried out.

- Under Market intervention Under Market intervention scheme the agricultural products which do not attribute to support price and if such sort of agricultural products are more than 10% and there is a down fall of 10% in market price then state Government proposes and under this scheme the farmers began to enjoy market price on account of the 10% procurement by the states. Recently Government has increased this limit to 20%. Procurement approval in Karnataka beatel leaf, in Tamil Nadu palm oil, ginger in Arunachal Pradesh, Chilli in Andhra Pradesh and Telangana, Onion in Madhya Pradesh, Karnataka and Telangana, grapes in Mizoram and apples in Himachal Pradesh have been granted.
- Tomatoes, Onions, Potatoes are consumed throughout the year in the entire country. During the last 70 years, farmers and consumers have incurred losses. For the first time, a new initiative titled "Operation Green" has been taken so that farmers can get right price and products are also available to the consumers at suitable prices. For this purpose, a provision of Rs. 500 crore has been made.
- Government is promoting quality in agricultural products through food processing. Pradhan Mantri Kisan

Sampada Yojana has been launched with the allocation of Rs. 6000 crores. Apart from this, food processing potentialities will be developed by the performance on forward and backward linkage of agro processing clusters under this scheme. For this, the budget has been increased to Rs. 1400 crore in comparison to the last year budget of Rs. 715 crore.

Coverage for the Risk

- Union government has started Pradhan Mantri Fasal Bima Yojana. This is a security coverage for the farmers. The lowest premium rates have been laid down since ever for Kharif and Rabi crops which is maximum 2% and 1.5% respectively. In it the risk related to pre sown period and harvesting period has been included along with standing crop. The loan sanction has been made equal to financial parameters by removing capping. Not only so even 25% payment is being made instantly online system for the claims of losses. For the expeditious payment of the claims and crop loans to the farmers, the new techniques like drone and smart phone for harvesting has been utilized in a number of states.
- The provision has been made for depositing premium amount through new technical facilities like service centre and online since this kharif season while keeping in view the facilitation to the non-loanee farmers.
- The government has made a number of changes for providing relief resulting in the loss due to natural

calamities. Now the government is providing relief on 33% losses. Apart from this amount of relief has been multiplied as 1.5 times more.

Role of State Government in Pradhan Mantri Fasal Bima Yojana

- Selection of crops and areas for inclusion in the scheme.
 - Selection of crop-wise insurance unit, declaring the sum insured and the determination of crop-wise indemnity level.
 - Making cluster of districts and issue of tender notice, selection and notification of the implementing agency / insurance company.
 - Issuing necessary guidelines for all the agencies / institutions / government departments / committees engaged in the implementation of the scheme.
 - To provide yield data for insurance claim calculation and to conduct requisite number of Crop Cutting Experiments (CCEs).
 - To release 50% share of the premium subsidy to insurance companies at the beginning of each season based on the reasonable estimates and release of balance immediately after the final data is presented by the insurance company.
 - To help the insurance companies to evaluate the crop losses of individual insured farmers in case of localized risks and also help in the assessment of subsequent loss assessment.
- Development Mission is playing an important role for making the farmers income as double. For this purpose, better plantation material, improved seeds and protected cultivation and high density plantation, rejuvenation, precision and farming like measures have been taken.
- While utilizing Jio informatics (chaman), the horticulture assessment and management related coordinated programme has been launched with the estimated cost of Rs. 13.38 crore in Sept., 2014 which is to be completed by 2018. The aim of this programme is to develop and strengthen the methodology for forecasting the potential production in the area to be used for agricultural crops while utilizing tele sensitive technology and sample survey methodology.
 - A forecast for the production of onion and potato and the area to be used for this purpose has been carried out on the level of state and district for the year 2016-17.
 - A modus operandi has been made for the assessment of the horticulture crop and the area used thereof for the farming of tomato, chilly, mango, banana, lemon and other horticultural crops.
 - An assessment is being made for opening new cold storage for potatoes in Bihar under infrastructure component under tele sensational project.
 - The mapping of mango, banana and lemon is being carried out in the

Auxiliary Activities

1. Horticulture

- The consolidated Horticulture



states giving more productions too these crops and they are being laid in Bhuvan platform.

- While utilizing LISS-III data, the assessment of menthol area in Barabanki distt. of Uttar Pradesh is being prepared.
- The analysis is being carried out for the venue demarcation in the perspective of horticulture extension for a single crop for single district amongst eight north eastern states.
- Jio sapatial application has been made in Bhiwani district of Haryana.
- Renovation for the orchard related studies has been made in respect of mangoes in Lucknow district of Uttar Pradesh.
- The analysis related to soil appropriation for planting mangoes in Nujvid Commissionary of Andhra Pradesh was carried out.
- An another Geostatistical study for the farming of foxnut was carried through in Darbhanga district of Bihar. The programme has been made for planting foxnut on the new chunks of land.

2. Integrated Farming

- Our government is utilizing consolidated agriculture system (IFS). IFS concentrate multi cropping system, cycle cropping, inter cropping, allied activities like horticulture, live stock, fisheries and Bee keeping etc. along with allied crop practices. Which only enhanced the production for the sustained livelihood of the farmers but also reduces the phenomena of drought,

flood and other tremendous seasonal incidents. The IFS methodology are based on agriculture protection outlook which ascertain minimum loss by adopting maximum ploughing process, utilization of crop residuals the surface of soil as well as local and temporary crop order/ crop cycle. This can lead maximum benefits through the inputs along with the adverse affect of the environment can also be reduced.

- There are many more advantages of consolidated agriculture system. One of the advantages is the enhancement of agricultural productivity in a sustained way in rain fed area while adopting the above said agricultural system based approaches and to reduce the adverse affects due to the potential crop failure owing to drought, flood or in ordinary hailstorm through vivid and allied agriculture system. To reinstate the trust in rainfed area agricultural net work by creating sustained agricultural opportunities through the reformation agricultural methodology and technology to enhance livelihood resources and income of the farmers.
- The farmers have witnessed also 40% enhancement in their annual income through consolidated agriculture system.
- Consolidated agriculture system is being promoted through rain fed area development (RAD) scheme of the Department which is a component of national sustained agricultural mission (NMSA). NMSA has been

operated since 2014-15 which aims at transforming agricultural sector into more producing, sustainable, beneficial and climate friendly by promoting rain fed technologies soil health management, venue specific consolidated/mingled farming systems, soil and humidity preservations measures etc.

- Under rainfed area development scheme (RAD) the rainfed agriculture is being made more productive, sustainable, beneficial and climate friendly by promoting venue specific consolidated/ allied agriculture system. The preservation of agricultural methodology for the sustained use of natural resources is also being promoted.
- **INTER CROPPING :** Under this system, two or more than crops are grown simultaneously. The main objective of inter cropping is to produce more yield in the same field by affectively utilizing the sources available without affecting the yield of main crop. Under National Food Security Mission through inter cropping system maize, bajra, jowar, ragi, small millets, oil seeds and cotton etc. is sown along with pulses so as to attain more and more production through both crops. Inter cropping system is prevalent mainly in Barrani areas because a better production can be achieved even in deficient rainfall season during kharif. In case of the failure of main crop the farmers get the yield of another crop. This sort of crop is also condusive in preventing soil erosion. It also helps in reducing the adverse affect of crop disorder,

pastes and weeds. Intercropping system is mainly prevalent in Madhya Pradesh, Karnatka, Andhra Pradesh, Chhatisgarh, Jharkhand, Rajasthan and Maharashtra etc.

3. Agroforestry

- The existing government has for the first time launched agro forestry sub-mission scheme in 2016-17 for planting trees on every meadow along with crops/cropping system in the fields. This scheme is being implemented only in those states where there are relaxation in the rules of transporting the timbers. Under this scheme, 8 states have witnessed the implementation of this scheme during 2016-17 and 13 more states have experienced this process thereof during 2017-18 after they have been given relaxation in transportation related rules and regulations.
- Agro forestry is not only conducive in enhancing the longevity of soil but it also creates the additional resources of income for the farmers. There has been made a provision for Rs. 100 crore as the share of union government for the implementation of this scheme during 2017-18. The aim of this programme is to promote plantation along with farming and to extend the area thereof, to provide plantation material of quality improved seeds, to make different agriculture forestry methods/models popular, to prepare data base in agro forestry, to assist for providing information and knowhows and



to facilitate assistance regarding capacity building.

- In order to increase agricultural and non-agricultural activities in this year budget National Bamboo Mission has been proposed as a new way with a fund of Rs. 1290 crore. Through this, small industries of bamboo can be established which will be helpful in increasing the income of the farmers and creating new jobs.

4. White Revolution

- This is the first government after we have obtained independence who not only focused on the economic development of the farmers along with agricultural growth but also taking concrete and substantial measures for the development of the farmers on grass root level. For this purpose, Deptt. of Livestock Dairy & Fisheries has not only made the productivity of livestock, as double but also achieving the new dimension for white revolution. The Department aims at making India on the top in the field of fisheries through blue revolution. For this purpose, we will have to accelerate the pace of white revolution and develop species of domestic bovines and Mahish bovines.
- The projects have been sanctioned in 28 states of the country with the funds of Rs. 1496 crores under National Gokul Mission for making the productivity of domestic bovines as double. Through this process the species of 41 domestic bovines and 13 mahish bovines is being promoted and developed.
- A sum of Rs. 197.82 crores have been sanctioned for 20 Gokul Grams in 13 states under Gokul Gram Yojana. For the first time two national Kamdhenu Breeding Centre in Chintaldevi district Nellore, Andhra Pradesh and Itarsi, Distt. Hoshangabad (MP) with the funds of 50 crore rupees are being established for the preservation and promotion of overall development of domestic bovines with scientific way. Kamdhenu centre in Andhra Pradesh has almost been completed.
- Rs. 9 crores milch animals will be provided Nakul Swasthya Patra facilities with the fund of Rs. 825 crores under National Bovine productivity mission. More than 5 lakh bovines has been identified since January 2017.
- E-livestock portal has been set up in Nov. 2016 for linking the domestic bovines and farmers together. By now more than 4.75 crore semen doses have been sold out. The thorough description of more than 79,658 bovines and buffaloes have been provided on this portal so that a willing farmer could buy them.
- The progress in dairy development sector is more speedy. As far as the dairy development is concerned India ranks first and contributes 19 percent of the world's total milk production. In comparison to 2013-14, the milk production has increased to 20.12% in the year 2016-17.
- Availability of per capita milk has increased from 307 grams in 2013-14 to 355 grams in the year 2016-17. Similarly, the income of dairy farmers

increased by 23.77% in 2014-17 compared to 2011-14. The annual growth rate of milk production was 4% in the year 2011-2014 which has now become 6% in 2014-17. While the annual growth rate of milk production in the world is 2% in 2014-17.

- The average milk procurement by the cooperatives during 2016-17 has become 448.51 lakh litres per day (LLPD). Under National Dairy Development Scheme (NDP) the additional capacity for 10.50 LLPD processing and 7.72 LLPD cold storage has been set up. Now declaration has been made for implementing DDF (Dairy Processing and Infrastructure Development Fund) with the expenditure of 10,881 crore rupees under the ambitious mission of white revolution during the span of 3 years.
- This year -2018-19 a budgetary provision of Rs. 2,450 crore for Animal Husbandry Infrastructure Development Fund (AHDF) has been announced.
- A scheme with the fund of rupees 3000 crore has been declared in December, 2015 for achieving the targets of blue revolution under which 50% enhancement in fish production will be earmarked in the forthcoming span of 3 years i.e. by 2019-20. It will be increase to 15 million tones during the last 3 financial years i.e. 2014-15 to 2016-17. The state and union territories have been released rupees 1214.00 crore for the implementation of blue revolution scheme. There has been an enhancement of 20 % fish production during 2014-17 as compared to 2011-14 which records an unprecedented phenomenon.
- During 2018-19, Budgetary provision of Rs. 7,550 crore has been made for Fishery & Aquaculture Infrastructure Development Fund (FIDF).
- The poor poultry farming households are being provided complementary income related assistance under Rural Backyard Poultry Development Scheme. Under National livestock development mission the rarest of goats, sheep, pig and ducks are being provided the opportunity for enhancing their income as well as creation of awareness among them.

5. Blue Revolution

- Keeping in view the tremendous potentialities of fisheries, our Hon'ble Prime Minister has declared this sector as blue revolution. The scope of blue revolution encircle the enhancement fisheries production and productivity through inland and marine fisheries resources along with multi dimensional activities. The government has also started a new scheme with the name of deep sea fishing under the umbrella of blue revolution.

6. Honey revolution

- An amount of Rs. 29.15 crores released to National Bee Board (NBB) during last four years (2014-15 to 2017-18) which is 242.94 % more in comparison of Rs. 8.50 crores released during last four years (2010-11 to 2013-14).



- 24,071 farmers / beekeepers have been trained in scientific beekeeping up to 31st January, 2018.
- 7637 beekeepers/beekeeping & honey societies/firms/companies etc. with 12.41 lakh colonies have been registered as on 31st January, 2018.
- No. of bee colonies have been increased by 14 lakhs during last four years (2014-15 to 2017-18) i.e. from 20 lakhs in 2013-14 to 34 lakhs in 2017-18 (estimated).
- Honey production increased by 28.57 % i.e. from 2,86,950 MTs in 2010-14 to 3,68,930 MTs in 2014-18 (including estimated 1,05,000 MTs for the year 2017-18).
- 14 Integrated Beekeeping Development Centres (IBDCs)/ Centres of Excellence (CoEs) as role model for beekeeping have been commissioned by NBB during the years 2015-16, 2016-17 & 2017-18 in 12 States, one each in Haryana (Deptt. of Horticulture, Kurukshetra), Delhi (IARI, PUSA), Bihar (KVK, Piprakothi, Motihari), Punjab (PAU, Ludhiana), Madhya Pradesh (KVK, Morena), Uttar Pradesh (IIVR, Varanasi), Manipur (CAU, Imphal), Uttarakhand (KVK, Dehradun), Jammu & Kashmir (SKUAST, Srinagar), Tamil Nadu (TNAU, Coimbatore), Karnataka (UHS, Bagalkot), HP (Chaudhary Sarwan Kumar (CSK) Himachal Pradesh Krishi Vishwavidhyalay, Palampur), West Bengal (ICAR- Central Institute for Subtropical Horticulture, Malda) and Tripura (Director of Horticulture & Soil Conservation, Tripura). The approximate cost of these centres ranges from Rs. 1.50 to 3.00 crores, except IBDC at Haryana for which about Rs. 10.50 crores approved under Indo-Israel Project. Proposals from other States, viz.; Gujarat is under consideration. Up to 2013-14, as such no IBDC was set up.
- Designed technical standards for food grade plastic containers for storing honey, which helped in minimizing the problem of presence of Lead in honey.
- Convinced NDDDB/GCMMF/Dairy Cooperative System for beekeeping and marketing of honey to explore the possibilities for utilising milk routes/NDDDB's infrastructure/cooperative network in the field.
- Safal Brand of Honey launched by Mother Dairy under technical guidance/advice & support of NBB and honey is being sold at Safal Outlets in NCR.
- National level Seminar on Beekeeping organized by NDDDB & NBB on 10.2.2017 at Anand.
- 150 officials / representatives / members / farmers of Banas Dairy Union and Kolhapur Dairy Cooperative trained in beekeeping by NBB. Trained farmers/beekeepers started beekeeping.
- Banas Brand of Honey, launched by Hon'ble Prime Minister on 10th December, 2016 at Palanpur, Gujarat.
- Setting up of Honey Testing Lab by NDDDB in Anand has been approved.
- A draft EFC Memorandum for a Central Sector Scheme titled "National Beekeeping and Honey Mission

(NBHM)” for overall promotion and development of beekeeping, has been prepared and submitted by National Bee Board (NBB). In this scheme, among other activities, promotion of scientific beekeeping for pollination support & honey production, setting up of Integrated

Beekeeping Development Centres (IBDCs), setting up of honey & other beehive products collection, primary processing, packaging, branding, etc. centres, storage, etc. and setting up of honey processing & export units/plants, etc. have been proposed.

Agricultural Progress through Research

For rendering the dream of Government of India into reality regarding doubling the income of farmers as double by 2022, Indian Agriculture Research Council has constituted state wise coordination committees. The coordination committees constituted by ICAR have developed state specific strategy documents while focusing on agricultural technologies and their combinations for the respective states. On March 8, 2018, these documents were released during the ICAR-Director's conference. In order to implement them in all the agro-ecologies of the states related to them, these documents have been presented to the Chief Ministers as well as Chief Secretaries of all the state.

For making the deployment of scientists transparent for the better research activities, the process related has been made on line. The parameters has been laid down for such excellent scientists in modified score cards who are deserving to participate in uplifted research management. The specific subjects have been included in the parameters of score cards. The salient feature of this project is that the candidate will be capable enough to behold inputs provided in the

software through computerized score card. It will increase the transparency in the better assessment of the candidate and the scientists having better achievement will deserve the post of senior research management.

The research related endeavours are of paramount importance for the enhancement of agriculture production. In this direction, during the last 3 years, ICAR has developed 795 new crop species giving better yield in adverse natural intolerant conditions. Apart from this, the council has developed 13 new bovine species along with better agriculture methods.

150 seed hubs have been established across the country for bringing about self dependence in the field of pulses production that resulted in 22.95 million tons record production of pulses.

The council has prepared 623 district contingency scheme as yet for increasing tolerance for the crop in the condition of adverse natural calamities. They are continuously striving for making them updated. The farmers will be capable enough for saving their agricultural product even during adverse natural



circumstance on account of receipt of advisory in time.

Specifically 42 unified agriculture system models have been developed for enhancing the income of small and marginal farmers in the country. For this purpose, livestock, poultry and horticulture is being specifically focused. The advance demonstration of these models at 325 locations are being carried out for encouraging the farmers through the institutes of ICAR, Universities and KVKs.

The Council has put specific stress on the reinforcement of higher agriculture education. Now the skill development of the students related to students ready programme has been included for thorough one year so that the students might convert themselves as agriculture entrepreneurs by achieving more experience in this field and consequent upon may provide opportunities of employment to others. While taking one more step ahead in this direction, the agriculture education has been declared a professional degree. It will help these students in achieving the opportunities of employment and higher education.

The advance line demonstrations have been carried out through the extensive network of KVKs (690) in order to create trust about the scientific techniques in the farmers. During the last 3 years, the council has carried out more than 5 lacs frontline demonstrations which have benefited crores of farmers and they have been motivated for adopting scientific

techniques. Apart from this, the training Programmes are being conducted in order to create awareness amongst the farmers and other stakeholders.

KVK Knowledge Network Portal (<http://kvk.icar.gov.in>) has been launched to share the basic information and features of KVKs including contingency plans, performance timetables and consultancy.

The farmers are provided mobile based agriculture advisory in this era of information technology through which more than 4 crore farmers have availed advantage. KVK knowledge portal, e-sanvad, e-learning moduls have been developed for encouraging digital farming.

The scientist of the council are always in touch of the farmers for enhancing outreach to the farmers and to implement the programme "from Prayogshala se khet tak" under Mera Gaon Mera Gaurav scheme. They also provide them appropriate scientific advisory from time to time.

The farmers are assisted in establishing agriculture primary processing centres for the farmers by the council so as to provide better return to the farmers for their products. As yet more than 160 Agriculture Primary Processing centres have been established which are proving to be very much conducive for enhancing the income of the farmers. Besides 194 new agri start up and agri entrepreneurs also have been provided technical assistance.

A glimpse related to the strategy and development for making the farmers income double

Farmers are the lifeline of the country. The development of any country is incomplete without the development of the farmers and agriculture sector. The credit for imparting foodgrains security on sustainable basis goes to the farmers. Today, the agriculture related scenario suggests that India not only independent on a number of agricultural commodities but also exporting different agricultural products. This is also true with this fact that our schemes have been production concentrated but income focused schemes could not be formulated well. Consequent upon the farmers are unable to obtain remunerative price of their products what's why the Govt. of India is of the view that the agriculture sector must be paved towards development with the multidimensional facets along with the increasement in agricultural products. The income of the farmers must be enhanced. With this objective, a rally which was organized in Bareilly on 28.02.2016, the Hon'ble Prime Minister while addressing it had said "I desire to make the farmers income double on the juncture when India might be celebrating its 75th Anniversary of Independence on 2022. I have accepted it as a challenge. However, it's not only a challenge it's a good strategy and planned programme. This goal may be obtained through the provision of adequate resources and effective implementation of the scheme".

The government of India is expeditiously working for doubling the income of the farmers by the year 2022. For this purpose the Government had constituted Inter Ministerial committee on 13.04.2016 under the chairmanship of Chief Executive Officer, National Rainfed Area Authority, Department of Agriculture and Farmers Welfare for recommending the strategy relating to the matter of doubling the income of the farmers by 2022. This committee has been extending advice regarding the different interventions for pondering over this issue. Whatever committee has suggested, the Ministry has been implementing that with the help of State governments.

For preparing an extensive scheme for doubling the income of the farmers by 2022 as per the promises made by Hon'ble Prime Minister Shri Narendra Modi, the Government of India has reconstituted a committee on the subject on 13.04.2017 which will be comprised of Senior Economists pertained to the Department of Economic and Statistics, the Statistic Advisor, the Joint Secretaries of Food Processing, Crop, Livestock and Dairy as well as Policy Division, Agriculture Advisors to NITI AYOJ, Horticulture Commissioner, Managing Director of National Cooperative Development Corporation, Chief Executive Officers of National Cold



chain Development Centre, Director of National Agriculture Economic and Policy Research Institute and a number of non-official members. This Committee comprised of 8 members aims at to divert agriculture sector from production focused to income focused centre. The committee is to identify potential areas which are required much more investment. Along with the committee desires to sort out the problems related to the losses inflicted on agriculture sector along with the development of horticulture, livestock and fishery, etc. Apart from this, the committee will submit its recommendations regarding reduction of agricultural costs along with the variability of rates in terms of agricultural commodities.

To study the current income level of farmers/agricultural labourers, to measure the historical growth rate of the current income level, to determine the needed growth rate to double the income of farmers/agricultural labourers by the year 2021-22, to consider and recommend various strategies to be adopted for doubling of farmers income, to recommend an institutional mechanism to review and monitor implementation to realize the goal.

There is no doubt this is an ambitious scheme and a multidimensional strategy is to be adopted by GoI. Therefore, Hon'ble Prime Minister has recommended 7th points strategy for obtaining this goal in which the

following are included:

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

Now, the government while differentiating the outlook of action and saying and demonstrating its commitment has made an unprecedented provision in the budget 2018-19 for agriculture sector. The budgetary allocation to the Ministry of Agriculture and Farmers Welfare has been increased from Rs 51,576 crore to Rs. 58,080 crore. The budget allocation and its increase in percentage has been reflected in the following table regarding each and every points related to 7 points strategies laid down for doubling the income of the farmers.

Sectors	Budgetary provision (in crores)		Budgetary provision (in crores)
	2017-18	2018-19	
Crop Insurance	9000.75	13014.15	44.59%
Micro Irrigation	3400	4000	17.65%
Bio-farming	450	520	15.5%
Agriculture Mechanization	577.58	1200	107.76%
Agriculture Extension Submission	932.72	1040.88	11.6%
Agriculture Education	694.66	725.13	4.3%
Agriculture Research	2166.46	2914.77	34.6%
Rainfed Area Development	223	234	4.93%
Dairy Development	2318.97	2788.28	20.24%
Blue Revolution	553.23	747.45	35.11%

Three areas has been concentrated by DIF Committee related to making the farmers income as double. These areas are as follows: (i) productivity & profit (ii) reduction in the cost of crop and (iii) beneficial price. The implementation related to the mission constituted for National Foodgrain Security and Horticulture Integrated Development Mission for enhancing the production of Agricultural commodities and the existing schemes have been interlinked for increasing the income of the farmers. Similarly, there has been made a budget provision worth Rs. 200 crore for promoting the marginal and small industries and farming sector. Apart from this a special focus has been given

for promoting cluster based farming related to district wise horticulture crops.

The organic farming has been in prevalence in India since centuries which is based on organic manures and domestic techniques. It may be new technique for the world however, it has been exercised in the country since long. Almost 2 lakh farmers across the world practise the organic farming. The 80% number of these farmers dwell in India. In the budget related to the 2018-19, the organic farming on a larger chunk of land has been declared for implementing this scheme successfully. It has been proposed to have it linked with the markets. The specific benefits of this scheme will be extended to northeastern and hilly states for reducing the cost of agriculture. The government has put emphasis on the soil health card and neem coated urea along with more crop for every drop. The government has also declared for the initiation of a new scheme for underground water with a layout of Rs. 2600 crore under Pradhan Mantri Krishi Sinchai Yojana. A long term irrigation fund has been established in NABARD for a period of last 2 Years. For meeting this necessity related to irrigation construction work a specific command development project has been proposed for extending the scope concerned. For creating beneficial income sources eNAM, dry and cold storage resources, storage infrastructure on concessional rate of interest and pro-harvesting loan necessities have been focused. Pradhan Mantri Krishi Sampada Yojana is a pioneer scheme for



promoting the investment in the area of foodgrain processing. For this purpose, the budget for the year 2018-19 has been made almost double as Rs. 1400 crore in comparison Rs. 715 crore for previous budget. The farmers are installing solar water pumps in rural areas through this scheme. The farmers are not only benefited with cheap irrigation facilities but there has been made a provision for the procurement of the additional power resources generated by them.

The sustainable agriculture is being promoted through Pradhan Matri Fasal Beema Yojana, Traditional Development Scheme and Northeastern organic farming mission, etc. for adopting permanent methodology and risk management. For this purpose, during the budget, 2018-19 under Pradhan Fasal Beema Yojana, the budget provision has been enhanced 44.59 % which has been converted from Rs. 9000.75 crore to Rs. 13014.15 crore.

Market reform plays most important role in the process for doubling the income of the farmers. For the last 3 years this area is being reformed constantly in which an initiation of eNAM reformation in APMC Act etc. has been included. All these reforms aim at that the farmer should be capable in dispose of his products anywhere from his village to the any corner of the country. The new reforms have been initiated in agriculture market for providing remunerative price to the farmers for their products. In this budget, agri. market development fund with Rs. 2000 crore has been declared which displays the importance of retail

market in the agriculture marketing. These markets have been named GRAM (Gramin Retail Agriculture Market) through these markets the fundamental infrastructure of 22000 Gramin Haats and 585 APMC Markets will be developed. The government is committed to provide remunerative price to the farmers along with enhancing the productivity and production of different crops.

In budget 2018-19 under the leadership of Hon'ble Prime Minister the different declarations have been made in this context. The MSP has been multiplied one half times more on the basis of the cost value of Agricultural commodities. Along with this decision, the Modi Government not only has fulfilled its promises declared in its manifesto but also paved a way for extending the benefits of MSP to the farmers. It suggests that there has been an unexpected enhancement in the production of pulses, oil seeds and crops during the last 4 years. In this budget it has been declared that NITI Ayog will set up a new provision along with central and state governments so as to extend the benefit of MSP to all of the farmers. The government is chalking out the plan for making institutional mechanism for export import policy for a long period. Through this, we shall be capable for an ambitious export target worth of Rs. 100 billion US dollars for the year 2022-23. All of the 42 mega food parks will be equipped with the state of arts trial facilities. Along with there has been made a provision for establishment of institutional mechanism for price and demand forecasting so as to

be ascertained that which crop will be beneficial for the farmers in the perspective of quantity and quality.

The consumption of tomato, onion and potato is exercised across the country. During the last 70 years the farmers and consumers have to bear out the losses. Modi Government has declared a new initiative with the name of Operation Green first time in the budget under which the farmers will get remunerative price of their products. The commodities will be provided to the consumers on reasonable price. For this purpose a provision has been made of Rs. 500 crore for obtaining a higher growth rate in agriculture sector. We will have to enhance capital investment.

It is very necessary to provide loan to the farmers on time. For this purpose, the total amount of credit which was Rs. 10 lakh crore in previous year has been enhanced to Rs. 11 lakh crore during present financial year. The farmers will be provided this loan on the basis of Kisan Credit Card for animal husbandry and fishery.

While treating this budget as agricultural budget all of the FPOs along with the farmers producer companies will be imparted relaxation in terms of income tax. The small and marginal farmers while constituting FPOs/FPCs will be able to avail this credit. On the contrary, the division of small land holdings will be sorted out too. Apart from this in this budget a model and licence cultivator Act has been declared under which small, marginal farmers, crop share holders will also be eligible for obtaining

institutional loan. For this purpose, NITI Ayog will perform necessary action along with state governments. It is mention worthy that empowerment of gender farmers budget 2018-19 has declared an amount of Rs. 75,000 crore which was earlier 42,500 crore for this purpose.

For doubling the income of the farmers 4 strategic infrastructures have been considered. These are comprised of durable and sustainable agriculture production, monetization of agricultural products, re-strengthening of extension services as well as recognition of agriculture sector as entrepreneurship. While treating 2015-16 as a base year for the income of the farmers, the government has emphasized on agriculture related allied sectors for enhancing the income of the farmers. These sectors may be comprised of the agriculture irrigation, construction of rural roads, generation of energy and rural development etc. so that the income sources from agriculture and non-agriculture sector may be enhanced on 60:40 to 70:30 basis. For this purpose while identifying the prominent resources for development the concentration has been focused on adopting permanent production system along with system on national and state level and this has been considered as an important strategy for increasing the growth rate in agriculture allied sector.

The government is focusing on different additional income sources for the farmer like livestock, poultry, bee keeping, fishery and dairy. With a provision of Rs. 1290 crore a new mission with the name



of National Bamboo Mission has been declared in this budget. Not only small scale industry will be established but also the new opportunity for the employment will be created. The government is of the view that enhancing the income of the farmers these additional sources of income are of paramount importance for the farmers. For this purpose the government has launched National Livestock Mission, Gokul Mission, Blue Revolution, Bee Keeping, Poultry Scheme etc. During last few years, Dairy, Poultry, Bee Keeping, Fishery has made a tremendous success recorded on their end. National Livestock Mission (NLM) which has been launched during 2015-16, all of the states as well as UTs have been covered thereof. In addition to this livestock product methodology, capacity building of the stakeholders, livestock production etc. also have been covered. This mission aims at for a sustainable development of the livestock sector with a provision of quality fodder for the cattle. Northeastern states have been continuously demanding aid for the overall development of pig rearing under Pig Development Submission. Government of India is providing assistance to the 8 states for importing germ plasm for state pig rearing farms so that quantity of protein may be enhanced along with the opportunity of livelihood. The government has initiated integrated fisheries development and management schemes which have been named as Blue Revolution under which in-land fisheries, aquaculture farming, marine fisheries, marine culture and national fisheries development board

are included. Apart from budgetary allocation, there has been made a provision of outlay of Rs. 10,000 crore for fisheries and aquaculture infrastructure development and animal husbandry infrastructure development. Through this scheme, cheap loan will be provided to the state governments, cooperatives, personal investors for fisheries and livestock basic infrastructure. This will expedite the process of construction of fish landing centre, cold storage, ice plant, transport facility processing unit and hatch rich etc.

DIF committee has carried out several important activities by now for doubling the income of the farmers in which the identification of learning participants with NCAER and NCCD as well as six meeting of full committee and 30 meetings of partial committee have been organized while including more than 35 clusters and sub-clusters thereof. The committee has also submitted its report on annual income calculation of the farmers on state wise basis. In addition to this, NABARD has organized one national level and 6 regional level conferences along with the states. The states are also being inspired for preparing their own strategy for doubling the income of the farmers. Besides, some of the states like Rajasthan, Chhatisgarh, Madhya Pradesh, Aurnachal Pradesh have shared their strategy with central government. Simultaneously for chalking out state level strategy Indian Agriculture Research Council has also constituted state coordinating committees under the chairmanship of the chancellors.

Stakeholder debate has been organized while incorporating seed private sector, government organization and farmer bodies during 14-21 March, 2017 on the different issues like Agriculture Mechanization, Irrigation, Seeds, Pesticides, fertilizers, marketing, research and development, loan, organic farming, information technology and extension, etc. for doubling the income of the farmers. A policy paper prepared by NITI Ayog has also been included in the DIF Report while sharing it with all of the states.

DIF Committee has decided for preparing an extensive report in 14 volumes while selecting the subjects impacting the income of the farmers so that the willing stakeholders could suggest their constructive remarks after they have gone through it minutely. In this respect, inter academic debate has also been invited.

On the basis of all these inputs, DIF committee will assign its integrated report to the government in this very month. Along with this committee will have been giving its recommendations for implementing this report by the government. Committee will also been evaluating the unification and phased modifications running programmes. The committee will have also been committed for an unabated development of agricultural sector in the form of profession.

By now keeping in view 7 sources like (i) crop productivity reformation, (ii) Livestock productivity reformation (iii) resource use skill (cost saving and

stability) (iv) enhancement in crop density (v) diversification through much valued crops (vi) reformation in real prices obtained by the farmers and (vii) keeping in view the change in agricultural and non agricultural activities. The DIF committee has shared interim recommendations with the government which are being implemented through the provision of necessary budget and existing running schemes. The gist of the main recommendation extended by DIF committee are as follows in which government has initiated a viable step while making budget provision for this purpose:

- (i) to put more emphasis on livestock sector on the basis of 3.8%, 14.7 %, 0.5 %, 1.6% growth rate related to agriculture livestock non agricultural professions and wages.
- (ii) a constructive relation to be established between agriculture and investment in field of agriculture growth so as to increase investment in public sector related to agriculture particularly for corporate sector
- (iii) to extend priorities for the process of market intervention and crop production
- (iv) to capture leftover products of the farmers with pro-harvesting interventions along with 100% price
- (v) to increase the capacity withholding the yield of the farmers
- (vi) strengthening the basic infrastructure for storing dry and wet commodities



- (vii) new market initiative like electronic trade, single trade licence, single window for the levy of market fees, check on market fees, promotion of contractual farming, constitution of agriculture value system front / platform, unification of every farmer in value series, 25% extension and engagement of ATMA personnel in marketing sector, etc. have been included
- (viii) the sustainable practices in production like water preservation, integrated farming system, watershed management and organic farming etc. to be implemented
- (ix) the agricultural and agriculture related activities like bee keeping, mushroom farming, manure preparation, farming of laakh and agro-forestry etc. are to be promoted
- (x) to revive agriculture extension program like to increase central assistance from 60 to 75% for filling up the vacancies for the personnel related to the ATMA and extension, put emphasis on the inclusion of ICT and women power in extension activities
- (xi) to concentrate on other infrastructural reforms.

At present all of the running program initiatives only aim at for doubling the income of the double by 2022. For this government is taking necessary steps. The budget 2018-19 also reflects that to what degree government is committed for enhancing the income of the farmers. We are confident that the target of the prosperous farmers may be achieved in Independent India and we are taking a fast track in this direction.