

NEW STEPS PROGRESSIVE STEPS

A Glimpse of Achievements during June 2014 to December 2016

Agricultural Progress, Our Priority



Ministry of Agriculture & Farmers Welfare
Government of India



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Shri Sudarshan Bhagat Minister of State for Agriculture and Farmers Welfare



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Department of Agriculture, Cooperation & Farmers Welfare

Department of Animal Husbandry, Dairying & Fisheries

Department of Agricultural Because & Education/

Department of Agricultural Research & Education/ Indian Council Agricultural Research



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Department of Agriculture, Cooperation & Farmers Welfare



SOIL HEALTH CARD



SOIL HEALTH CARD-MULTIPLE BENEFITS:

- Information on balanced usage of fertilizers.
- Better soil management practices can be adopted.
- Crop diversification can be adopted for higher yields.
- 2.29 crore samples have been collected of which 11.45 crore cards are being made.
- 4.15 crore 'Soil Health Cards' have been distributed to the farmers.
- Reduction in the cost of cultivation for doubling the farmers income.



SOIL HEALTH MANAGEMENT

AMOUNT RELEASED UNDER SOIL HEALTH MANAGEMENT SCHEME



Rs. 711.46 crore released to the states in 2014-16, which is 26 times of Rs. 27.76 crore released during 2012-13 and 2013-14

SOIL HEALTH CARD (SHC)

AMOUNT RELEASED UNDER SOIL HEALTH CARD SCHEME

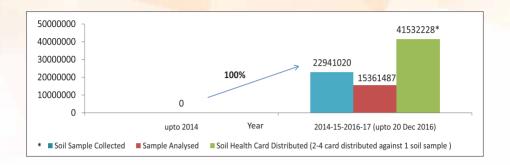


Amount Released Rs. 216.37 crore during 2014-15, 2015-16 and 2016-17 (upto Dec 2016).

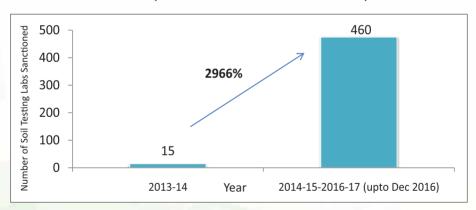
- Farmers can get crop-wise recommendations of macro nutrients, secondary nutrients, micro nutrients and fertilizer with the help of Soil Health Card.
- Farmers can get suggestive corrective measures which can be used to improve soil health and obtain better and higher yield.

SOIL HEALTH CARD SCHEME (SHC)

STATUS OF SOIL HEALTH CARD SCHEME



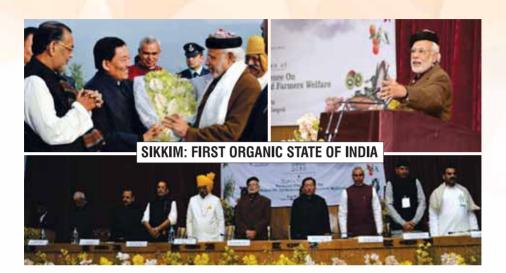
SOIL TESTING LABS (STATIC + MOBILE + MINI-LABS) SANCTIONED



BENEFITS TO THE FARMERS:

- Soil Health Card Scheme was launched in February, 2015.
- 460 Soil Testing Laboratories Sanctioned.
- Soil Health Cards will be issued every 2 years for all land holdings in the country.

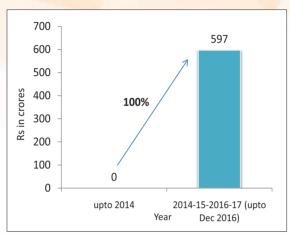
PARAMPARAGAT KRISHI VIKAS YOJANA (PKVY)



- Assistance to farmers for cluster formation, mobilization of farmers, PGS certification, conversion of land to organic farming, establishment of vermi compost unit, labelling or branding of organic products, etc.
- Financial assistance is provided for collection and transportation of organic produce to market at Rs. 120000 max assistance for one cluster.
- Every farmer of a cluster will be provided financial assistance Rs. 50,000 per ha. during 3 years period. 10,000 organic clusters of 20 ha. will be developed to cover certified area by 2 lakhs ha. during the 3 years. So far 9,186 clusters have been formed.
- Government will promote organic farming with usage of traditional resources, adoptive eco-friendly low cost technologies and for higher returns, etc.

PARAMPARAGAT KRISHI VIKAS YOJANA (PKVY)

FUNDS ALLOCATED UNDER PKVY

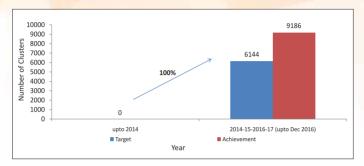




- To develop 10,000 clusters (20 ha each) over 3 years and to increase certified area by 2 lakh ha in 3 years.
- Cluster based approach each cluster of 20 ha @ Rs. 50,000 per farmer/ha.

PARAMPARAGAT KRISHI VIKAS YOJANA (PKVY)

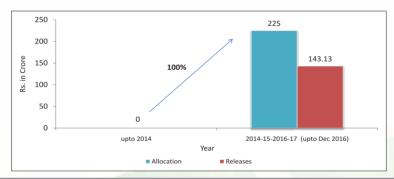
CLUSTERS IN ANNUAL ACTION PLAN UNDER PKVY (TARGET & ACHIEVEMENTS IN NUMBERS)



Against the Plan target of 10000 clusters, 9186 clusters have been approved upto Dec 2016.

MISSION ORGANIC VALUE CHAIN DEVELOPMENT (MOVCD) FOR NORTH EASTERN REGION

ALLOCATION AND RELEASE UNDER MOVCD FOR NORTH EASTERN REGION



- Fund Released to eight states of NER aims at development of certified organic production in a value chain mode to link growers with consumers.
- Scheme was started from 2015-16 with an outlay of Rs 400 crore for 3 years.
- Area of 50,000 hectare has been targeted to be covered during 2015-16 to 2017-18.

NEEM Coated Urea

- Government of India has made it mandatory for manufacturers to produce 100% Neem Coated Urea from May 2015.
- From Dec 2015 the imported urea is also 100% Coated with Neem Oil.
- Now all the urea available in market is Neem Coated.
- Kharif 2016 was the 1st season on the entire urea consumed in the Neem Coated.
- Government has reduced cost of MOP by Rs. 5000 per ton and DAP by Rs. 2500 per ton.
- Government has also reduced Rs. 125 on 50 kg bag of DAP and Rs. 250 on 50 kg bag of MOP.





 Every granule has a coating of Neem Oil, which slows down the rate of dissolution of Urea in soil and thus increases the availability of nitrogen for crops.

National Agriculture Market (e-NAM)



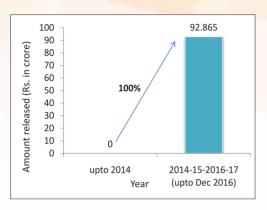
- National Agriculture Market (e-NAM) scheme was approved on 1st July, 2015 with an initial allocation of Rs. 200 crore to link 585 wholesale APMC mandis across the country through a common e-platform.
- On 14th April, 2016 Hon'ble Prime Minister Sh. Narendra Modi launched the pilot of e-NAM on the 125th Birth Anniversary of Baba Saheb Dr. Bhimrao Ambedkar in 21 markets of 8 states.
- e-NAM is a reform linked scheme with certain pre-requisite reforms like:
 - Single license to be valid across the state.
 - Single point levy of market fee.
 - Provision for electronic auction as a mode of price discovery.

Progress:

- 250 mandis of 10 states have been integrated with e-NAM so far.
- In principle approval given to integrate 399 mandis in 14 states with e-NAM.
- To facilitate assaying of commodities for trading on e-NAM, common tradable parameters have been developed for 69 commodities.
- As on 16.12.2016, 31,13,494.35 tonnes of agriculture produce worth Rs. 6,13,890.61 lakhs has been transacted on e-NAM platform. Also, 8,55,839 Farmers, 59,155 Traders and 30,790 Commission Agents have been registered on the e-NAM platform.

AGRICULTURAL MARKETING

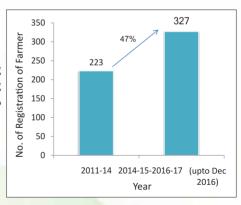
NATIONAL AGRICULTURE MARKET (e-NAM) FUND RELEASE STATUS



The Government has released substantial amount for the promotion of e- Market in the country.

REGISTRATION OF FARMER PRODUCER ORGANIZATIONS (FPOs) BY SMALL FARMER AGRI BUSINESS CONSORTIUM (SFAC)

327 FPOs have been registered during 2014-16 as compared to 223 FPOs during 2011-14 with total increase of 47% towards collectivization of farmers.

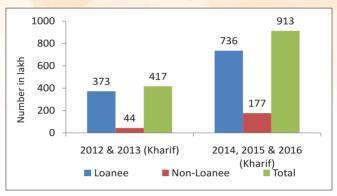


Financing of Joint Liability Groups (JLGS):

Financing of 18.21 lakh Joint Liability Groups from 2014 to 2016 during just 2 $\frac{1}{2}$ years as compared to 6.7 lakh JLGs during the 7 years from 2007 to 2014. In comparison to cumulative achievement of Rs. 6630 cr. during 7 years from 2007 to 2014, Rs. 18,005.79 cr. were made available to JLGs during just 2 $\frac{1}{2}$ years from 2014 and September, 2016

PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY)

Farmers covered under crop insurance schemes



Important Features of Pradhan Mantri Fasal Bima Yojana (PMFBY):

- Covers all food grains, oilseeds and annual commercial/ horticultural crops.
- One season one rate max. 2% for Kharif, 1.5% for Rabi and 5% for Annual Commercial/Horticultural Crops.
- Covers all risks of crop cycle preventive sowing; risks to standing crops and post harvest losses.
- For losses due to hailstorm, landslide and inundation assessment of yield losses at individual field level.
- Post harvest losses for cut & spread crops on field upto 14 days due to cyclone/ cyclonic rains and unseasonal rains.
- On account payment upto 25% of sum insured due to prevented sowing or midseason adversity.
- About 309 lakh farmers of 23 states had been covered under Fasal Beema during previous Kharif Season 2015 in which 294 lakh farmers were lonee and 15 lakh farmers were non-lonee. During Kharif 2016, however, 366.64 lakh farmers have been covered out of which 264.04 lakh farmers are lonee and 102.60 lakh farmers are non-lonee.



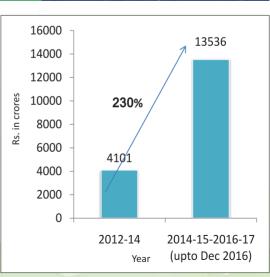
PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY)



- A pocket size folio along with an acknowledgement receipt containing details of insurance which will also serve as a policy document is being distributed from Rabi 2016-17.
- First time the receipt is being distributed among farmers from Rabi 2016 onward.

FUND RELEASED UNDER PMFBY

Substantial fund has been released under PMFBY during 2014-17

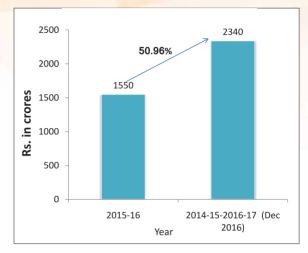


Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

HOW WILL FARMERS GET BENEFITS?

- Priority is given to projects which are already close to completion so that farmer can get immediate benefit.
- Farmer can utilize better water conservation technique.
- Farmer can use drip & sprinkler micro irrigation system.
- Farmer can get more derails on drip/ sprinkler irrigation techniques

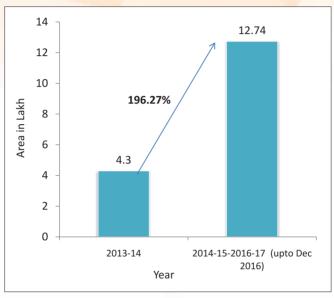
from their District Agriculture/ Horticulture Officer.



- Farmers can also get information from Toll Free Kisan Call Centre No. 1800-180-1551
- During 2016-17 funds allocated to PMKSY- PER DROP MORE CROP is Rs. 2340 crore and 8 lakh ha areas has been targeted under micro irrigation. Rs. 1512.65 crore has been released to the states up to Dec 2016.
- Total area brought under precision irrigation systems i.e. Drip and Sprinkler irrigation is 2.36 lakh ha and 18750 no's of water harvesting structure created having 27835 ha potential for protective irrigation.

Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

Area covered under PMKSY



 Substantial increase in area covered under micro irrigation i.e. Drip Irrigation and Sprinkler under PMKSY.





HORTICULTURE DEVELOPMENT (NHB)





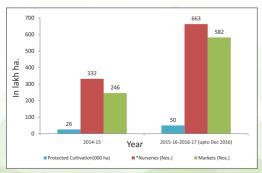
Cold Storage Scheme

- Assisted 144 cold storage/CA storage projects with a financial assistance of Rs 217.79 Crores.
- 7.14 lakh MT Additional cold storage capacity created

Technology Development and Transfer for Promotion of Horticulture:

- Funded 547 projects/events for transfer of technology
- Accredited 1206 nurseries for production of superior quality planting material.

Achievements under MIDH



Significantly higher achievements under various components of MIDH in the last 2.5 years.

HORTICULTURE DEVELOPMENT



Hon'ble Union Agriculture Minister laid the foundation stone of Saffron Park at Pampore, Pulwama, J&K on 23 August, 2014.

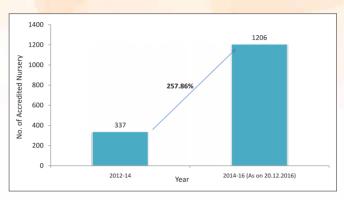
SAFFRON PARK:

- DAC&FW assigned NHB the task of setting up of Saffron Park at Pampore Pulwama (J&K) at a total cost of Rs. 24.45 crores. Park will have facility for Quality Control Lab, Export Promotion Activity and E-auction Centre.
- Civil work of park is almost complete.
 Plant & Machinery supplied and ready for installation.
- Park likely to become operational during current saffron season.



NATIONAL HORTICULTURE BOARD (NHB)

ACCREDITATION & RATING OF FRUIT PLANT NURSERIES



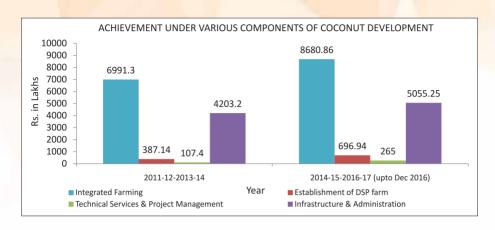
2.5 times increase in number of accredited nurseries during 2014-16 as compared to 2012-14.

HORTICULTURE DEVELOPMENT

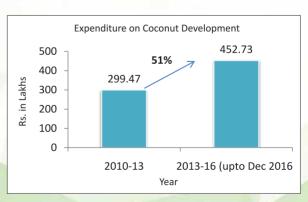
PRIME MINISTERS' PACKAGE FOR J&K:

- Rs. 500 crore special package announced on 07.11.2015 towards restoration of damaged horticulture areas and development of horticulture in J&K.
- J&K Govt. submitted its 3 year's Action Plan for Rs. 500 crore for 2016-17 to 2018-19.
- Cabinet Committee on Economic Affairs approved one time relaxation of MIDH cost norms for;
 - Import of planting material at the maximum cost of Rs. 460 per plant.
 - Import of four wire trellis system @ of 9.8 lakh per hectare.
 - Enhanced rate of subsidy @ 90% for provision of planting material.
 - Administrative approval for implementation of CCEA's decision has been issued on 08/12/2016.
 - Rs. 47.89 crore (Gol Share) released on 24/08/2016. Remaining funds will be released in due course.

COCONUT DEVELOPMENT BOARD

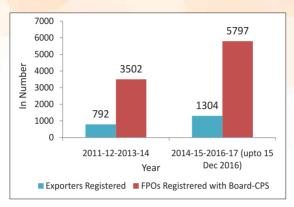


- India became first in coconut production and productivity in the world. Coconut area, production and productivity reached 1.97 million ha, 20.439 billion nuts and 10345 nuts per ha respectively.
- Established 18 Nucleus Coconut Seed Gardens and 86 small Coconut nurseries.
 Established 361 organic manure units.
- 7,356 Coconut Producer Societies, 646 Coconut Producer Federations and 57 Coconut Producer companies were formed.
- Trained 2,314 Neera Technician.
- 9163 ha. has been brought under new plantation.
- 39,20,13 Coconut Palm Climbers trained under "Friend of Coconut Tree".



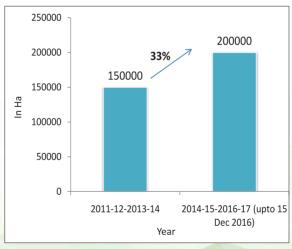
COCONUT DEVELOPMENT BOARD

CDB SCHEMES - PHYSICAL ACHIEVEMENTS



 Substantial increase in Exporter registration as well as FPOs registration with Coconut Development Board (CDB) during the year 2014-16 as compare to 2011-14.

REPLANTING & REJUVENATION - AREA REJUVENATED



• 33% increase found in replanting and area rejuvenation of Coconut Development Board (CDB) during the year 2014-16 as compared to and 2011-14.

BEE KEEPING

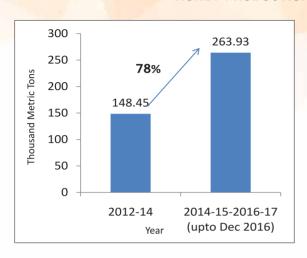
- 11862 farmers/Beekeepers have been trained in scientific beekeeping by National Bee Board (NBB) during the period 2014-15 to 2016-17 (Upto November, 2016).
- Honey production increased from 72,300 MTs in 2012-13 to 94,500 MTs (estimated) in 2016-17.
- Designed technical standards for food grade plastic containers for storing honey.
- 6361 beekeepers/beekeeping & honey societies/firms/companies etc. with 10.62 lakh colonies have been registered (as on November 2016).





NATIONAL BEE BOARD (NBB)

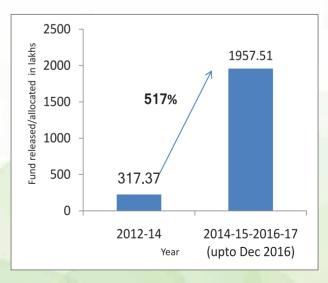
HONEY PRODUCTION



78% increase in honey production during the year 2014-15, 2015-16 and 2016-17 over the year 2012-13 and 2013-14 due to increased budget allocation and facilitation to beekeepers / farmers by NBB.

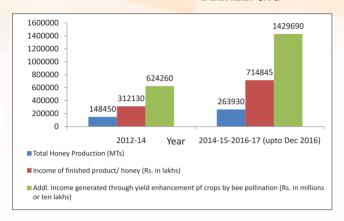
FUNDS RELEASED/ALLOCATED FOR PROMOTION OF BEEKEEPING

Budget for beekeeping has increased almost 517% in last 3 years (2014-16) as compared to the period 2012-14.



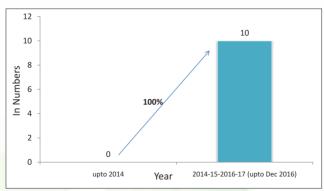
NATIONAL BEE BOARD (NBB)

ADDITIONAL INCOME GENERATED THROUGH DEVELOPMENT OF BEEKEEPING



Additional income accrued to both beekeepers as well as farmers.

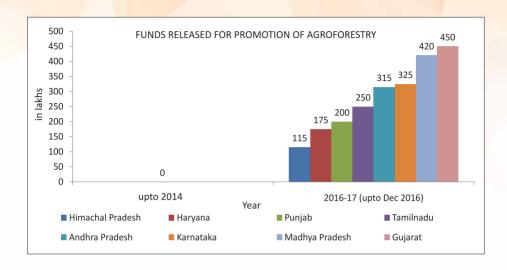
NUMBER OF INTEGRATED BEEKEEPING DEVELOPMENT CENTRES (IBDC)/COES SETUP/ APPROVED



10 IBDCS, ONE IN EACH STATE:

Haryana, (Dept. of Horticulture, Kurukshetra), New Delhi (IARI, Pusa), Bihar (KVK, Piprakothi), Punjab (PAU, Ludhiana), MP (KVK, Morena), UP (IIVR, Varanasi), Manipur (CAU, Imphal), Uttarakhand (KVK, Dehradun), J&K (SKUAST, Srinagar) and Tamil Nadu (TNAU, Coimbatore) have been setup/approved by NBB During the years 2015-16 & 2016-17 (upto Dec 2016).

SUB MISSION ON AGROFORESTRY



- National Agroforestry policy formulated to augment farmer's income and achieve climate resilience.
- A dedicated scheme "Sub-Mission on Agroforestry" is launched with aim "HAR MEDH PAR PED" during 2016-17.
- Budget provision for central share of Rs. 75 crore for the year 2016-17.
- Relaxation of transit regulations in pre-requisite for assistance under Sub-Mission on Agroforestry (SMAF).
- 8 States have relaxed this regulation.

NATIONAL FOOD SECURITY MISSION (NFSM)

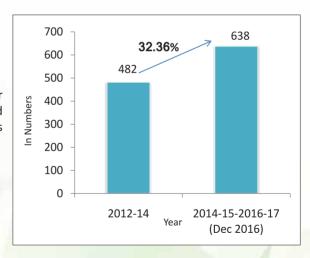


Number of states covered

Number of State under NSFM has been increased from 19 to 29 during 2014-16.

Number of districts covered

Number of District under NFSM has been increased from 482 to 638 which is almost 32.36 % increase.



 Presently 7 crops (Rice, Wheat, Pulses, Coarse Cereals, Sugarcane, Jute and Cotton) are being covered under NFSM which was only 3 during 2012-14.

NATIONAL FOOD SECURITY MISSION (NFSM)-PULSES

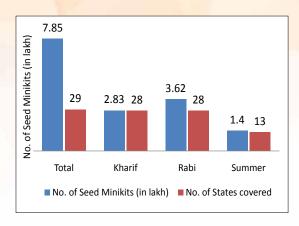


Steps to increase production of pulses:

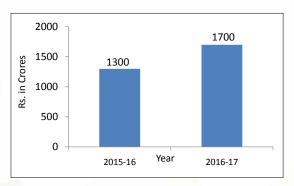
- Out of Rs. 1700.00 crore under National Food Security Mission (NFSM), Rs. 1100.00 crore was allotted to pulses during 2016-17 which is more than 60% of total allocation.
- Pulses are being encouraged in rice fallow areas under NFSM & Bringing Green Revolution in Eastern India (BGREI).
- A special scheme under RKVY "Targeting Rice Fallow Areas in Eastern India for Pulses" has been initiated from Rabi 2016 bring rice fallow areas under cultivation.
- Summer moong cultivation is being promoted.
- Pigeonpea on rice bunds is being encouraged.
- 31000 clusters front line demonstration through 574 KVKs during 2016-17 are being conducted.
- 150 seed hubs sanctioned for SAUs/KVKs/ICAR institutes
- 15% allocation of pulses component of NFSM is earmarked for production of quality seed from Kharif 2016.



NATIONAL FOOD SECURITY MISSION (NFSM)

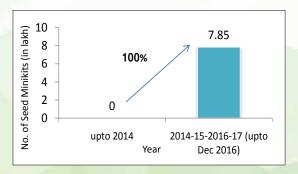


Pulses seed minikits distribution during 2016-17 (upto Dec 2016). For the first time, pulses seed minikits are being distributed across the entire country.



Allocation of funds for NFSM as central share

Substantial increase in the budget allocation under NFSM for the crops - Rice, Wheat, Pulses, Coarse Cereals, Sugarcane, Jute and Cotton.



Seed minikits distribution targets of pulses under NFSM

This intervention is included under NFSM from Kharif 2016 onwards

National Mission on Oilseed and Oil Palm (NMOOP)

MODIFICATIONS MADE IN THE PATTERN OF ASSISTANCE UNDER NMOOP:

- Seed subsidy for certified seed distribution of oilseed was increased by more than 100% (from Rs. 1200/- to Rs. 2500/- per qtl. and from Rs. 2500/- to Rs. 5000/- per qtl. of hybrids and sesame).
- Subsidy on water carrying pipes increased from Rs. 25/- per meter to Rs. 50/- per meter for HDPE pipes, Rs. 35/- per meter for PVC pipes and inclusion of HDPE laminates woven lay flat tubes with subsidy of Rs. 20/- meter from Kharif – 2016.
- A Special scheme under RKVY "Targeting Rice Fallow Areas in Eastern India for Pulses and Oilseeds" has been initiated from Rabi 2016 to cover an area of 10.0 lakh hectare rice fallows of six eastern states in next three years.
- 423 KVKs of ICAR and SAUs are involved for cluster demonstrations and FLDs of various oilseed crops during 2016-17.
- More than 16.0 lakh seed minikits of various oilseed crops were distributed during 2016-17.
- Special focus is given on cultivation of Oil Palm in North States Fastern Mizoram took lead by covering more than 25,000 ha area under oil palm during last couple of years and one oil palm processing unit has been commissioned by Godrei Agrovet in Mizoram in October, 2014.

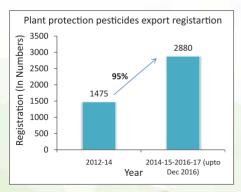


PLANT PROTECTION

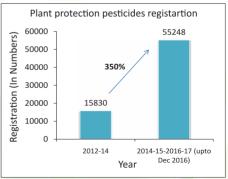
- As a result of concerted efforts of PP Division, ban on Indian Groundnut has been lifted by Vietnam.
- Process of pesticides registration has got accelerated with the approval of 55, 248 registration certificates during 2014-15 to 2016-17. Majority of backlogs are cleared.
- The pesticides registration for export has also got accelerated steeply with the approval of 2880 registration certificate during 2014-15 to 2016-17.
- Requirement of import permit for import of agri-commodities has been abolished.
- Requirement for renewal of manufacturing licence of pesticides has been removed.
- IPM Package of Practice for 87 important agricultural crop revised made available online.







Increases of 95% in Plant Protection Pesticide Export Registration in numbers over 2012-14.



The number of Pesticide Registration has been increased by about three and half times on account of better monitoring and use of technology.

AGRICULTURAL MECHANIZATION



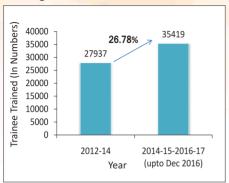




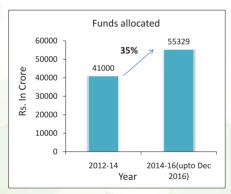
A two-day Conference on "Innovations in Agricultural Mechanization and Development of linkage among R&D Institutes - Industry - Farmers" was organized by Mechanization & Technology Division of Department of Agriculture, Cooperation & Farmers Welfare, Govt of India from 7-8 July, 2016 at Vigyan Bhawan, New Delhi.

AGRICULTURAL MECHANIZATION

Agricultural Mechanization

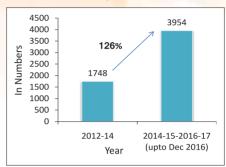


More number of trainees trained at FMTTIS and State Agriculture Departments under Sub-Mission on Agriculture Mechanization (SMAM) during 2014-16 as compared to the number of trainees trained during 2012-14.

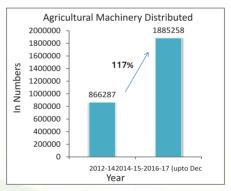


Allocation of funds is increased almost by 492% in 2014-16, as compared to allocation of funds for the Schemes during 2012-14.

Agriculture Machineries Tested at FMTTIs and designated test centers

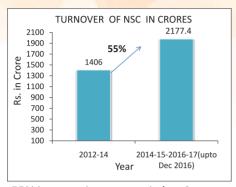


Increase of 126% in numbers of Machinery Tested during 2014-16 as compared to the number of Machineries Tested during 2012-14.

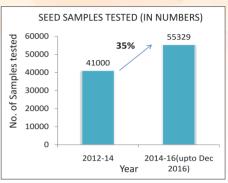


An increase of 117 % in Numbers of Machineries distributed to farmers on subsidy during 2014-16 as compared to the number of Machinery distributed during 2012-14, under the various Schemes of DAC&FW. During last two and half years, DAC&FW has approved for distribution of 1885258 numbers of agricultural machinery and equipments under various schemes.

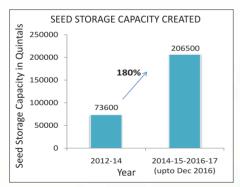
NATIONAL SEED CORPORATION (NSC)



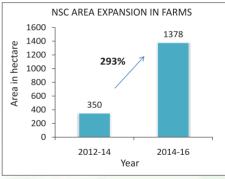
55% increase in turnover in last 2 years as compared to previous 2 years (2012-14)



35% more Seed samples have tested in 2014-16 as compared to previous 2 years (2012-14)



180% more storage capacity created by during 2014-16 as compared to 2012-14.



293% increase in area expansion in farms during 2014-16 as compared to 2012-14.

PROTECTION OF PLANT VARIETIES & FARMERS RIGHTS AUTHORITY (PPV&FRA)

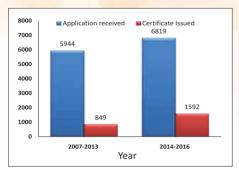
NEW INITIATIVES FOR THE BENEFIT OF THE FARMERS UNDER PPV&FR ACT AFTER 2014:

- Three (03) New Branch Offices of PPV&FR Authority have been approved recently for establishment at Palampur (H.P.) which will cover the States of Northern Hill Zone, another at Pune (Maharashtra) which will cover the Central and Western Zone States and third one at Shivamogga (Karnataka) for Southern States.
- The amount of cash reward for "Plant Genome Saviour" Farmer Award, has been enhanced from Rs.1.00 lakh to Rs.1.50 lakh each and the amount of Farmers' Recognition has been enhanced from Nil to Rs. 1.00 lakh each during 2015.
- The annual fee for the farmers after registration of varieties has been reduced from Rs. 2000 per year to Rs.10 only during 2015.

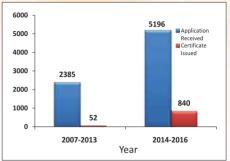


Shri Radha Mohan Singh, Hon'ble Union Minister of Agriculture and Farmers Welfare, Govt. of India conferring Plant Genome Saviour Award of Rs. 10 Lakhs with Memento and Citation to the Representatives of Community of Kharchi Village, Rajasthan for their unique salt tolerant wheat on 24 August 2016. Hon'ble Minister of State for Agriculture & Farmers Welfare and Panchayati Raj, Sh. Parshottam Rupala, Hon'ble Minister of State for Agriculture & Farmers Welfare Sh. Sudarshan Bhagat also graced the occassion.

Applications received and ipr certificates issued under PPV&FR ACT, 2001

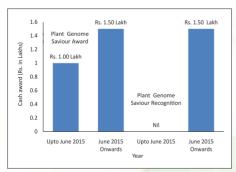


Applications received from farmers under PPV&FR ACT and number of varieties registered



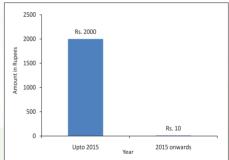
- A total of 12763 applications have been received by the PPV&FR Authority since 2007.
- Against 47% of applications received upto 2013, 53% of the applications have been received since 2014 because of a massive awareness drive by the government for the benefit of the farmers

Enhancement of cash for plant genome saviour awards under PPV&FR ACT



The Government through a Gazette notification S.O. 1598(E) dated 15 June 2015 reduced the Annual fee of Farmers Varieties from Rs. 2000 to Rs. 10.

Reduction of annual fee of farmers' varieties under PPV&FR ACT

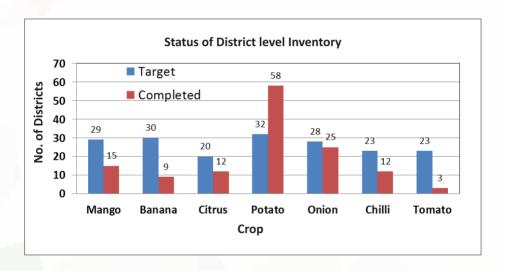


The Government through a Gazette notification 495 (E) dated 15 June 2015 decided that the amount of cash award shall be decided by the Central Government. Accordingly, the Central Government enhanced the amount of cash reward for "Plant Genome Saviour" Farmer Award from Rs.1.00 lakh to Rs.1.50 lakh and for Farmers' Recognition from Nil to Rs. 1.00 lakh.

MAHALANOBIS NATIONAL CROP FORECAST CENTRE (MNCFC)

Chaman (Coordinated Horticulture Assessment and Management using GEO-Infromatics)

- Launched in September 2014
- Use of Remote Sensing and GIS for crop area and production assessment of 7 horticultural crops in 135 districts (Target 180)
- Use of Remote Sensing for horticultural development planning in Site Suitability,
 Orchard Rejuvenation, Post- Harvest Infrastructure, Aqua-horticulture



MAHALANOBIS NATIONAL CROP FORECAST CENTRE (MNCFC)

Kisan-Crop insurance using space technology and GEO-infromatics

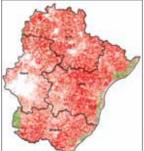
- Launched in October 2015.
- Use of high resolution remote sensing for improved crop yield estimation
- CCE site selection for 7 Rice Districts and 4 Cotton Districts in Karnataka under PMFBY (Pradhan Mantri Fasal Bima Yojana)
- Development of Protocols for quality checking of CCE Data
- Area Discrepancy Analysis using Remote Sensing Data for Gujarat

Crop intensification in rice-fallow area:

- Launched in September 2016.
- Objective: Rice-Fallow area assessment and characterisation for crop intensification for Rabi Pulses in 6 states
- Analysis Carried out for 2 districts each in Chhattisgarh and Odisha
- Block level maps and statistics generated for area suitable for Rabi season Cropping



Kharif Rice



Kharif Rice - Rabi fallow Kharif Rice-Rabi Crop



Area Suitable for Rabi Cropping

Rice-Fallow Area Suitable for Rabi Season Cropping in Raipur District of Chhattisgarh

CLIMATE CHANGE

IMPACT OF CLIMATE CHANGE

- The impact of climate change on agriculture has large detrimental effects on availability of food, livelihoods and the overall economy
- Small & Marginal farmers pastoralists and fisher folk are affected
- Agriculture has contributed 18% of the total emission in India. Major Contributor in GHG: Enteric fermentation, Paddy cultivation, fertilisers & crop residue burning

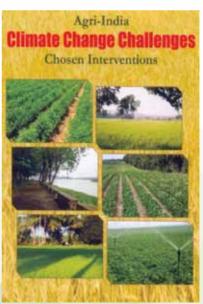
CLIMATE CHANGE RISKS		Contribu	tory Factors	Recommended Practices
DIRECT EFFECT	INDIRECT EFFECT	☐ Subme	erged rice cultivation	☐ Efficient use of water/ water harvesting
Productivity	❖ Soil Fertility	☐ Unscie	entific use of fertilizer	☐ Climate resilient crop varieties
❖ Quality of Produce	❖ Live stock & Fishery	☐ Gas er	mission from livestock	☐ Crop diversification & crop alignment
	Soil & Water Resources	☐ Low o	rganic matter in soil	☐ Organic Farming
	❖ Crop Health			☐ Soil Health Card based Integrated Nutrient Management
				☐ Feed Management of livestock
				☐ Agroforestry
Union Government Schemes and Policy Initiatives				
➤ Soil Health Card Scheme			> National Initiative and Climate Resilient Agriculture	
> Pradhan Mantri Krishi Sinchayee Yojana			➤ National Mission on Sustainable Agriculture	
➤ Paramapagat Krishi Vikas Yojana			➤ National Agroforestry Policy	
> Sub-Mission on Agroforestry			➤ National Policy for Management of Crop Residues	
> Mission for Integrated Development of Agriculture			➤ Ration Balancing Programme	
> National Mission on Agriculture Extension and Technologies				

CLIMATE CHANGE & AGRICULTURE

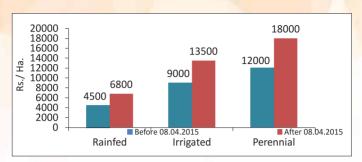
ACTIONS & PROGRESS

CHOSEN INTERVENTIONS OF NATIONAL MISSION FOR SUSTAINABLE AGRICULTURE (NMSA) UNDER NATIONAL ACTION PLAN ON CLIMATE CHANGE (NAPCC):

- Representation in Conference of Parties-21 (COP-21) under the United Nations
 Framework Convention on Climate Change (UNFCCC). Facilitation of Paris
 Agreement issues related to Agriculture Sector.
- Representation in Conference of Parties-22 (COP-22) at Morocco under the United Nations Framework Convention on Climate Change (UNFCCC).
- Ratification of Paris Agreement issues related to Agriculture Sector.
- Participation in five review meetings Executive Committee on Climate Change of Prime Minister's Council on Climate Change (PMCCC) under National Action Plan on Climate Change (NAPCC).
- A draft vision document for 15 years i.e. upto 2030 with 7 year Strategy and 3
 year action plan on Sustainable Development Goals (SDGs) has been submitted
 to NITI Aayog.
- Published booklet on initiatives related to climate change.
- During last three years 18.36 lakh ha area under Organic Farming, 20.07 Lakh ha area under Precision Irrigation, 6.36 Lakh ha under SRI/DSR Rice Cultivation, 2.50 Lakh ha area under Crop Diversification and 6.73 Lakh ha additional area under plantation in arable land has been brought.
- 41 New genotypes with enhanced CO2 fixation potential have been identified.
- 42 New Climate Resilient varieties have been released.
- 9.68 lakh milch animals covered under Ration Balancing Programme.

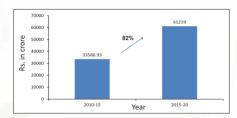


DROUGHT MANAGEMENT



- Norms for assistance for all categories increased by 1.5 times.
- The threshold for eligibility for assistance due to crop loss lowered to 33% from 50%.
- The admissibility for assistance raised from 1 ha. to 2 ha. in all cases.
- The financial assistance paid to the farmers in the event of death increased to Rs.
 4 lakh from Rs.
 1.5 lakh.

Allocation of the funds to states under state disaster response fund (SDRF)



- Allocation under SDRF has been almost doubled in 5 years.
- This Fund helps State Governments to take prompt steps to deal with disaster.

Central assistance approved to states by govt. of india under national disaster response fund (NDRF)



- Significance increase in assistance under NDRF for Drought & Hailstorm
- Rs.24555.74 crore approved in 2014-15
 2015-16 as against Rs.7318.83 crore approved in previous 2012-2014 .
- To execute relief assistance to the effected persons due to natural calamities, first time, UT-DRF fund has been created with an allocation of Rs.
 50 crore.

LAUNCH OF KISAN SUVIDHA MOBILE APP



Kisan Suvidha App was launched by Hon'ble PM on 19 March, 2016. This app provides information to farmers in respect of Weather, Plant Protection, Agriculture Advisories, Mandi Prices and Input Dealers etc.

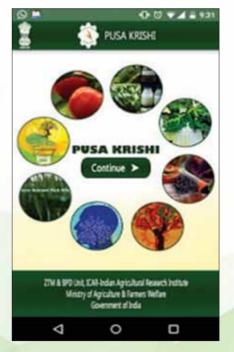
INFORMATION TECHNOLOGY

MOBILE APPS LAUNCHED FOR FARMERS



Kisan Suvidha App was launched by Hon'ble PM on March 19th, 2016 to provide information to the farmers on critical parameters viz Weather, Plant Protection, Input Dealers, Agroadvisories and Market Prices, etc.

Pusa Krishi mobile app has been launched by Union Agriculture Minister on March 21, 2016 to help farmers to get information about technologies developed by IARI to realize the dream "LAB to LAND" of our Prime Minister.



INFORMATION TECHNOLOGY



Crop Insurance mobile app is used to calculate the Insurance Premium for notified crops based on area, coverage amount and loan amount in case of loanee farmer. It can also be used to get details of normal sum insured, extended sum insured, premium details and subsidy information of any notified crop in any notified area.

AgriMarket app is use to fetch the market price of commodities from markets within the range of 50 km of the device's location using mobile GPS.

There is another option to get price of any market and any crop in case person does not want to use GPS location.



INFORMATION TECHNOLOGY

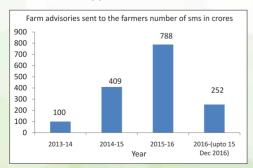


CCE AGRI - MOBILE APP

- CCE Agri mobile app has been developed to digitize the information of crop cutting experiment conducted in field.
- It automatically captures the location of field through GPS.
- Photographs and data captured through the app are transfer to web server immediately.
- Reduced claim settlement time and a level of transparency has achieved.

CROP INSURANCE PORTAL

- The only Portal for all stakeholders including Farmers, States, Insurance Companies & Banks
- Both Insurance Schemes viz. PMFBY and WBCIS Covered
- Information to Farmers on Premium, Cut Off Dates & Company Contacts for their Crop & Location on Web and through mobile app.
- Insurance Premium Calculator and Creation of Database of Notified / Allotted Dynamically
- Farmer's Application for Loan / Insurance and its Integration with Banks





SOCIAL MEDIA ACTIVITIES:

Facebook: www.facebook.com/agrigoi

Likes: 5619 Twitter @agrigoi

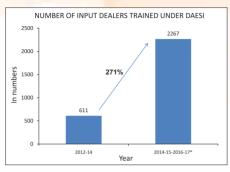
Followers: 33000

Youtube Channels: कृषि भारत और कृषि दर्शन

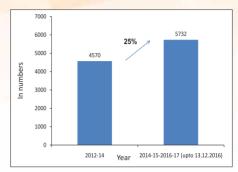
Videos: 1200

AGRICULTURAL EXTENSION

AGRI-VENTURE ESTABLISHED UNDER AGRI-CLINICS & AGRI-BUSINESS CENTRES (AC&ABC)

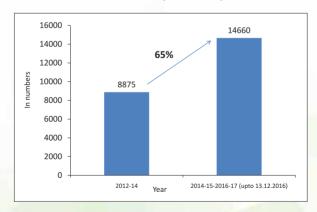


Substantial increase in the Input Dealers Training during 2014-15, 2015-16 and 2016-17.



Substantial increase in the Agri-venture established under AC&ABC scheme during 2014-15, 2015-16 and 2016-17.

CANDIDATES TRAINED UNDER AGRI-CLINICS & AGRI-BUSINESS CENTRES (AC&ABC)



Substantial increase in the candidate trained under AC&ABC scheme during 2014-15, 2015-16 and 2016-17.

AGRICULTURAL EXTENSION

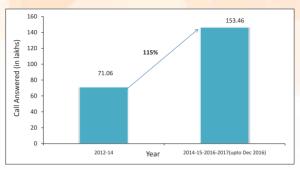
SKILL DEVELOPMENT IN AGRICULTURE:

- Accredited 100 KVKs and 8 Training institutes by Agriculture Skill Council of India (ASCI) for skill training during 2016-17.
- Rs. 3.52 crores sanctioned for conducting 216 skill training during 2016-17.
- 132 QPS developed by ASCI for skill training in agriculture and allied sector.
- More than 100 Krishi Vigyan Kendras (KVKs) to be included in next phase (2017-18)



AGRICULTURAL EXTENSION

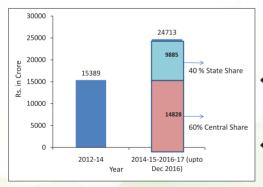
CALLS ANSWERED AT KISAN CALL CENTRE: 1800-180-1551



- 71.06 lakh call answered during 2012-14 and the number of calls answered during 2014-17 up to 15th Dec, 2016 are 153.46 lakh.
- Average calls answered per year up to 2013-14 was 35.53 lakh whereas from 2014-16 average calls answered per year is 53.79 lakh.

RASHTRIYA KRISHI VIKAS YOJANA (RKVY)

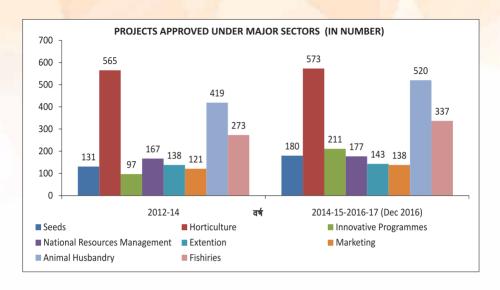
BUDGET RELEASED



Rs. 14828 crores (60 % share of Central Government) and 40% state share Rs. 9885 crore for the period of 2014-15, 2015-16 and 2016-17 (upto Dec 2016).

- Government launched restructured RKVY Scheme in 2014-15 to provide more flexibility to the States for boosting investment and enhancing productivity in agriculture and allied sector.
- Restructured RKVY also earmarks a minimum of 35% of RKVY outlay for creating agriculture infrastructure.
 - To further boost infrastructure projects in the agriculture & allied sector, Government and Quasi Government Agencies have been allowed to implement projects for creation of assets / infrastructure with 100% funding from RKVY Scheme.

RASHTRITA KRISHI VIKAS YOJANA (RKVY)



- Restructured RKVY has allowed States to keep a provision of 10% of the flexi fund which has also been utilized for drought mitigation purpose.
- In the restructured RKVY, 20% of the annual outlay has been earmarked for special schemes of national importance.

INTERNATIONAL COOPERATION



 MoA&FW has signed a Memorandum of Understanding (MOU) on cooperation in the field of agriculture and its allied sectors with 5 countries during the last two and half years:— Armenia, Madagascar, Lithuania, Japan and Kyrgystan.



- Moreover, India-Taipei Association in Taipei and Taipei Economic and Cultural Centre in India also signed a similar MOU. These bring the total MOUs signed with different countries to 58
- DAC&FW successfully organized the 6th meeting of Agriculture Ministers of the BRICS countries on 23rd September, 2016 in New Delhi. A joint declaration on the way ahead for our future initiatives and continued cooperation was adopted unanimously.
- MoA&FW in collaboration with FICCI successfully organized the India Africa-Agribusiness Forum, at New Delhi on 10-11th February, 2016 in which several Ministers, Government officials and company representatives participated.
- An MoU was signed by Govt. of India with UN-World Food Programme on 18.08.2015 and the Global Crop Diversity Trust (GCDT), Bonn, Germany on 07.11.2016.
- Agricultural workshops were held on 13th and 15th July, 2015 in Dushanbe and Bishkek respectively in Tajikistan and Kirgizstan while another one day workshop was organized on 26th April 2016 at New Delhi, with participation of experts and officials from USDA.

SWACHHTA PAKHWADA CELEBRATION IN OCTOBER, 2016



एक कदम स्वच्छता की ओर

- 271 Agricultural Mandis were covered in Swachhta Drive during the Pakhwada and cleaning drives were also undertaken in Krishi Bhawan Hqr. as well as attached offices.
- It has been decided to make provision of Rs. 10 lakhs each mandi for setting up waste management plants under e-NAM scheme.
- It was decided to formulate a Solid & Liquid waste management in agriculture plan as a Sub Scheme of Rashtriya Krishi Vikas Yojana (RKVY) for which 1% of the allocation of RKVY be made under this sub scheme for release to the states.
- A video conference was held on 27.10.2016 with representatives of States/ UTs and they have been briefed about the "Swachhta Pakhwada Activities".
 They have also been requested to make adequate provisions in their existing Schemes to prepare Compost from farm wastes.



Department of Animal Husbandry, **Dairying & Fisheries**



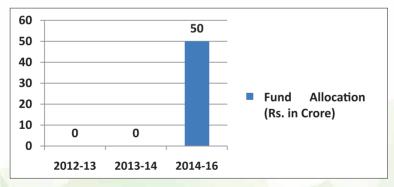
Dairy development

Funds sanctioned for development and conservation of indigenous breeds



Focus on Development & Conservation of Indigenous Breeds in a scientific and holistic manner with manifold increase in budget allocation. Budget allocation 13 times more during last two and half years compared to 2012-13 & 2013-14.

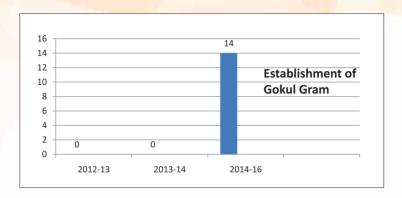
National Kamdhenu Breeding Centre



Two new National Kamdhenu Breeding Centre (one in north India-Madhya Pradesh and one in the south India- Andhra Pradesh) are being set up for which an amount of Rs. 50 crore has been released (Rs 25 crore to Madhya Pradesh and Rs 25 crore to Andhra Pradesh).

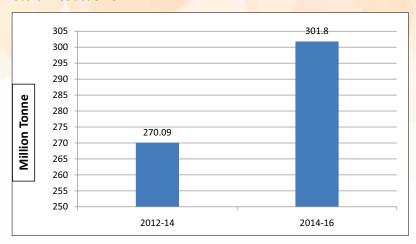
Rashtriya Gokul Mission

First time in the country- Focus on development and conservation of indigenous breeds under Rashtriya Gokul Mission



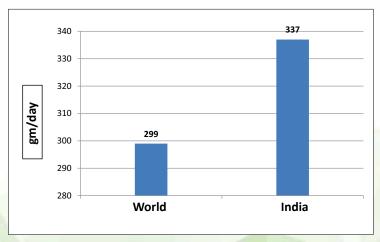
- First time in the country for development and conservation of indigenous breeds 14 gokul grams are being established.
- Funds approved and first installment released for strengthening 35 bull mother farms of indigenous bovine breeds.
- 3629 bulls of indigenous breeds inducted by the States for natural and 81 bulls of indigenous breeds have been inducted at the semen stations for semen production.
- Funds approved for establishing separate line for marketing of A2 milk in the State of Karanataka and Odisha.
- Funds approved and first installment released for establishment of Field Performance Recording Programme (FPRP) for 1,50,000 indigenous animals.
- 81 bulls of indigenous breeds inducted at the semen stations for semen production. Bull production programme for natural service for indigenous breeds have been initiated by MP, Kerala, UP, Punjab, Haryana and Gujarat.

1. Record Production of Milk



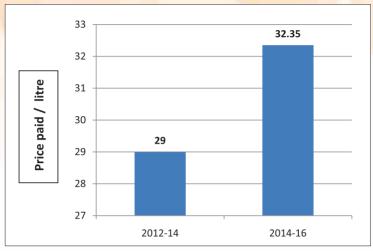
In comparison with (2014-16), growth rate between (2012-14) is 11.7%. For the first time, annual milk production has increased by 6.3% during 2015-16.

2. Per capita availability of milk (gms/day)



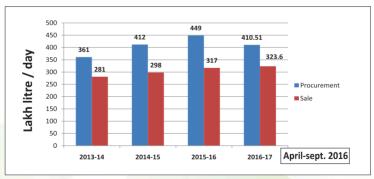
India is No. 1 in milk Production and it contributes 19% of the World Milk Production

3. Increase in average price paid to farmers



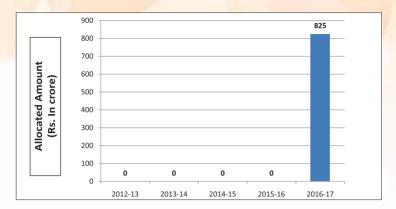
The earnings of dairy farmers registered an average increase of 11.5% during last two and half years.

4. Impressive increase in milk procurement/sale



Cooperative Strength: 75% of Consumer Price goes to Farmers

New Schemes



The scheme National Mission on Bovine Productivity has been approved with Rs 825 croreover a period of three years from 2016-17 to 2018-19 in the following components:

- Pashudhun Sanjivni: an animal wellness programme encompassing:

 i) animal health cards (Nakul Swasthya Patra); ii) Unique Identification number and iii) national data base.
- Advanced Breeding Technology: including assisted reproductive technique improving availability of disease free female bovines.
- Creation of e-pashudhanHaat: an e-market portal for bovine germplasm for connecting breeders and farmers of indigenous bovine breeds.
- National Genomic Centre: National Genomic Centre would be established to enhance milk production and productivity of indigenous breeds through rapids genetic upgradation.

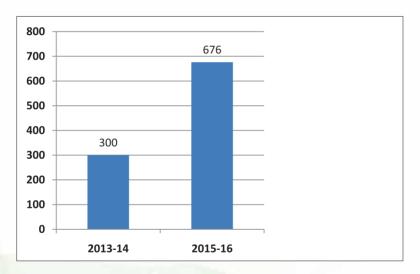
E-Pashudhan Haat Portal (First Time in Country) :

- For the first time in the country under National Mission on Bovine Productivity E-Pashudhan Haat portal has been developed. This portal will play important role in connecting breeders and farmers of indigenous breeds.
- At present there is no authentic market for bovine germplasm in the form of semen, embryos, male & female calves; heifers and adult bovines. Farmers depend on middlemen for sale and purchase of quality germplasm.
- Breed wise information on availability of bovine germplasm is not available which is essential for promotion of indigenous bovine breeds.

- Through this portal farmers will be aware about breed wise information on indigenous breeds. Farmers/breeders can sale animals of indigenous breeds through this portal. Information on all forms of germplasm has been uploaded on the portal. Immediately farmers can obtain benefits of the portal.
- This portal will give new dimensions to development and conservation of indigenous breeds as at present information on availability of germplasm of indigenous breeds is not available with the farmers.
- Through the portal there will be no involvement of middlemen in sale and purchase of animals. Portal for sale and purchase of germplasm in all the forms is not available even in developed dairy countries.

National Livestock Mission

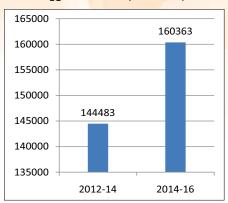
First time all the districts and animals covered under Livestock Insurance Scheme



The scope and coverage of Livestock Insurance has been increased from 300 districts to all districts and from only 2 milch animals to 5 milch animals/ other animals or 50 small animals.

Egg Production and Availability

Egg Production (In million)



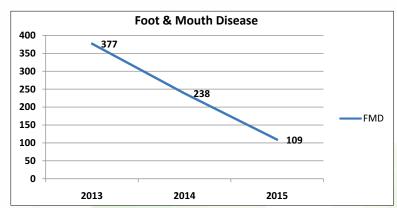
Growth rate between (2012-14) in comparison with (2014-16) is 10.99%. The annual growth rate of egg production is 5% during 2015-16.

Egg per capita (No. /annum)



Per capita availability has increased to 66 eggs per annum.

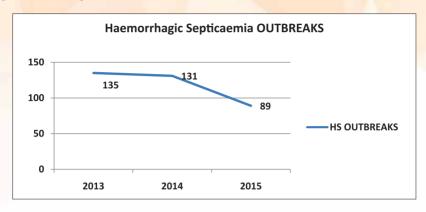
Livestock Health



FMD outbreaks recorded were 377 during the year 2013 while during the year 2015, outbreaks dropped to mere 109 which is considered to be an impressive achievement. During 2016 (Jan-June) only 106 outbreaks have been reports.

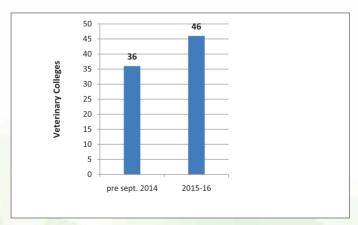
Based on the effective implementation of FMD control programme, three zones have been established as FMD free zones with vaccination as per OIE guidelines.

Significant drop in HS Outbreaks



In comparison to the year 2013, HS outbreaks have been reduced significantly during the year 2014 and further reduced to 89 during the year 2015. During 2016 (January-June) only 40 outbreaks have been reported.

No. of Veterinary Colleges Increased



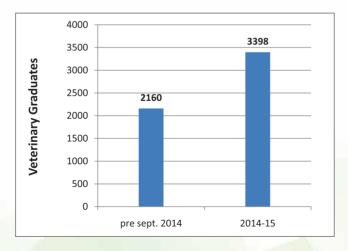
B.V.Sc.&AH qualification of 10 more Veterinary colleges has been recognized and no. of colleges included in First Schedule of IVC Act, 1984 have increased from 36 to 46.

Increase of seats in 17 Veterinary colleges



In order to meet the shortage of trained veterinary manpower, intake of students in various Veterinary Colleges was enhanced from 60 to 100 seats. Total number of seats has been increased to 1,334 from 914 in 17 Veterinary Colleges.

No. of Veterinary Graduates Increased

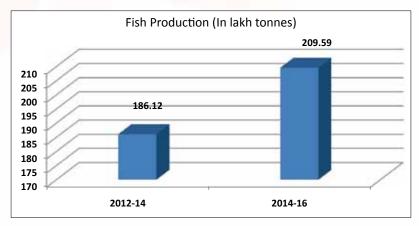


Consequent upon inclusion of 10 more colleges in the First Schedule of IVC Act, 1984, the B.V.Sc. qualification of 3,398 pass-out students from these colleges have been recognized.

Initiatives under "Ease of Doing Business"

- Implementation of Single Window System for on-line clearance of livestock and livestock products by all six Animal Quarantine & Certification Services Stations at Delhi, Mumbai, Kolkata, Chennai, Hyderabad and Bengaluru.
- Sanitary Import Permit(SIP) website for online receipt and processing of SIP applications for import of livestock products fully implemented since 01.10.2016.

Fisheries - Blue Revolution

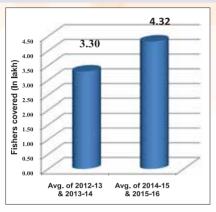


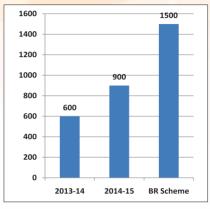
Growth rate between (2012-14) in comparison with (2014-16) is 12.61%. The annual growth rate of fish production is 6.21% during 2015-16.

Saving Cum-Relief

Comparison of fishers covered for Saving-cum-Relief under the CSS on National Scheme for Welfare of Fishermen

Saving-cum-relief amount enhanced (In Rs.)

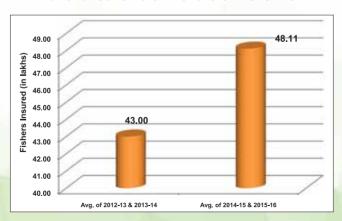




Under Blue Revolution: Integrated Development Management of Fisheries- Saving Cum Relief Amount provided to fishermen during fishing ban in period of 3 months was increased:

2013-14: Rs. 600 per month 2014-15: Rs. 900 per month BR Scheme: Rs. 1500 per month

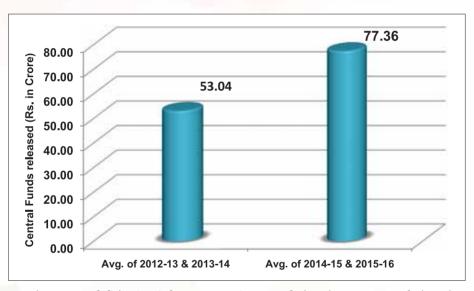
Comparision of Fishers Insured under the CSS on National Scheme of Welfare of Fishermen



Achievments under Fisherman Insurance Scheme

- Annual Insurance premium for fisher folk brought down to Rs. 20.34 from Rs. 29.00.
- Insurance cover increased to Rs. 2.00 lakh from Rs. 1.00 lakh for accidental death and permanent disability.

Comparison in Central Funds Released for Fisheries Infrastructure Development



Development of fisheries infrastructure is one of the thrust areas of the Blue Revolution scheme. Fisheries infrastructure includes fishing harbours/ fish landing centres etc.

Celebration of World Fisheries day on 21st of November, 2016



Department of Animal Husbandry Dairying and Fisheries has successfully organized World Fisheries Day on 21st of November, 2016 at Vigyan Bhawan, New Delhi. More than four hundred participants attended the function, comprising of VIPs, Senior Officials of Government of India, State Governments, UTs, Fishers, Fish Farmers, representatives of Fisheries Cooperatives, Entrepreneurs/Exporters and other related stakeholders.

Celebration of World Egg Day 2016 on 14th October, 2016



The Department of Animal Husbandry, Dairying and Fisheries, Government of India is facilitated celebration of the "World Egg Day" on 14th October 2016 to increase awareness on the nutritive value of eggs and highlighting its importance in human nutrition. Around 250 poultry farmers were invited.

Celebration of National Milk Day on 26th November, 2016



National Milk Day is celebrated in India on the birth anniversary of Dr. Verghese Kurien, the Father of White Revolution. National Milk Day was celebrated on November 26, 2016 at the Nasc Complex, Pusa, New Delhi. On this occasion, scientists, representatives of authorities and Milk Unions from around the country were present. On this occasion of National Milk Day, first time in the country, e-pashuhat portal was launched.



Department of Agricultural Research & Education/ Indian Council of Agricultural Research

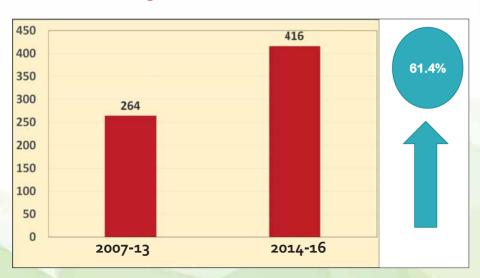




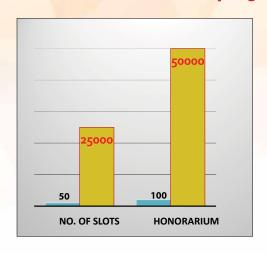
Enhanced Agricultural Education Budget



New Experiential Learning Units opened at Agricultural Universities



Emeritus Scientist programme strengthened



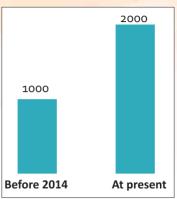
- Increased the number of slots from 50 to 100
- Enhanced the honorarium from Rs 25,000 to Rs 50,000

Increase in UG & PG admission in SAUs through ICAR



National Talent Scholarship for UG doubled





- From Rs 1000 p.m. to Rs 2000 p.m.
- Number of beneficiaries: 1351

Enhanced Fellowships to Research Scholars



Revised Curricula by Fifth Deans' Committee



Approval of Fifth Deans' Committee Report (29 June 2016)

New Programmes introduced

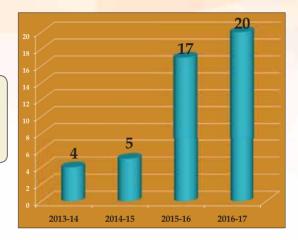
- B. Tech (Biotechnology)
- B.Sc. Community Science
- B.Sc. Food Nutrition & Dietetics
- B.Sc. Sericulture
- Degrees in Agricultural Sciences declared Professional

Holistic distribution of courses in UG

- Traditional Courses in I Year
- Technology based Courses in II Year
- Talent based Courses in III Year
- Trade based Courses in IV Year
- Compulsory common courses introduced

Emphasis on Accreditation of Agricultural Universities

No. of universities accredited



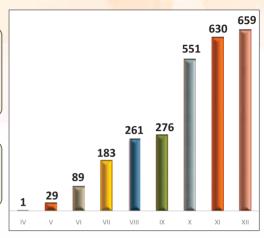
Capacity building of ICAR employees



Growth of Krishi Vigyan Kendras (KVKs)

Period	New KVKs	
	established	
2014-16	22	
2012-14	7	

Number of KVKs at the end of different Plan **Periods**



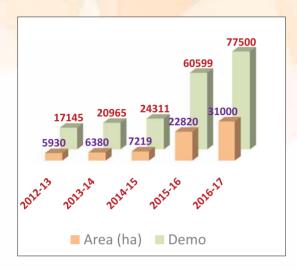
ACHIEVEMENTS OF KVKs

Mobile Agro advisory (Lakh) Planting Material Produced (Lakh)



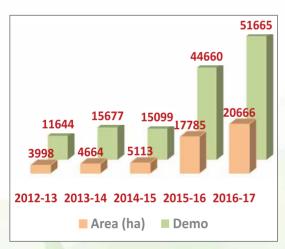


Pulses Demonstrations by KVKs





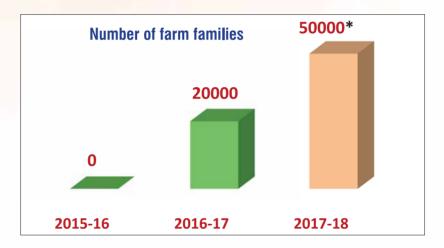
Oilseeds Demonstrations by KVKs







Farmer FIRST Enriching knowledge integrating technology

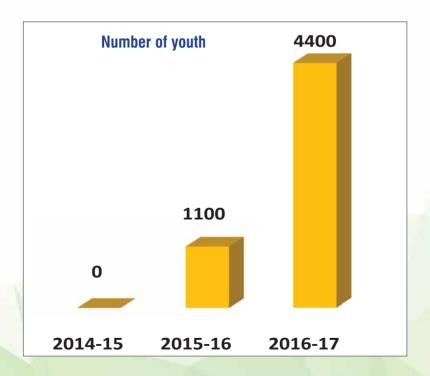


- Enhancing Farmers –Scientist interface
- Technology Assemblage, Application and feedback
- Partnership and Institution Building
- Content Mobilization
- 33 Projects sanctioned to ICAR Institutes/AUs with an outlay of Rs. 13.09 crore
- 50000* families to be involved during 2017-18



Attracting and Retaining Youth in Agriculture (ARYA)

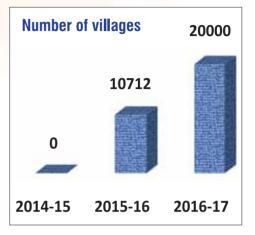
- Attract and empower the youth in rural areas for various agriculture, allied and service sector enterprises
- Emphasis on processing, value addition, marketing and networking
- Entrepreneurship development and value chain management
- ◆ 200-300 youth per district are involved through 25 KVKs in 25 States



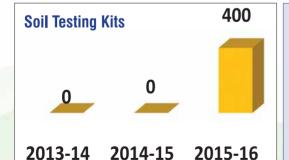


Mera Gaon Mera Gauray

- Group of 4 Scientists working with 5 identified villages
- 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



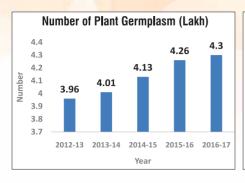
Soil Health

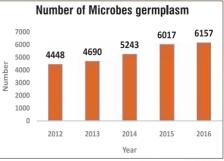


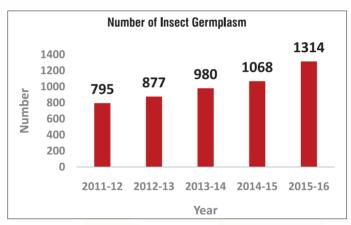
- 400 Soil Testing Kits provided during 2015-16
- 250 Soil Testing Kits approved during 2016-17

- 2.5 lakh soil health cards distributed during 2015- Nov. 2016
- 1.21 lakh soil health cards distributed on December 5, 2016

Genetic Resource Management



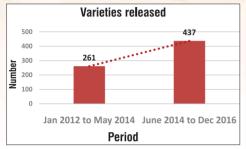




Genetic resources added since 2014

- 29000 plant germplasm
- 1467 microbes germplasm
 - 334 insect germplasm

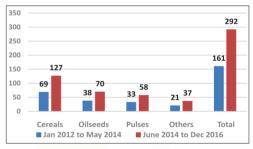
Crop varieties released during the last five years



Crop group	Jan 2012 to May 2014	June 2014 to Dec 2016
Cereals	158	238
Pulses	33	58
Oilseeds	38	70
Others	32	71
Total	261	437

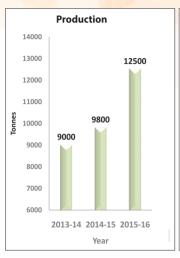
Number of climate-resilient released varieties tolerant/ resistant to abiotic stresses

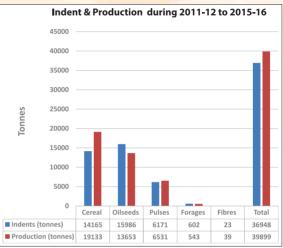
Crop	Jan 2012 to	June 2014 to
	May 2014	Dec 2016
Cereals	69	127
Oilseeds	38	70
Pulses	33	58
Others	21	37
Total	161	292



Breeder Seed Production

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

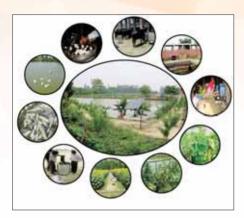




Notified varieties of Horticultural crops during the period 1966 to 2016

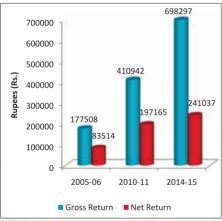
Commodities	1966-2002 (36 years)	2003-2007 (4 years)	2008-2013 (5 years)	2014-16 (2 years)
Fruits	3	14	2	8
Vegetables (including potato and onion)	370	169	83	74
Spices and Condiments	0	14	11	18
Plantation crops	3	0	9	8
Flowers	4	5	1	4
Medicinal & Aromatic Plants	1	0	7	1
Tubers & Rhizomes	29	8	2	2
Total	410	210	115	115

Integrated Farming System Model for Doubling Farm Income



Household size: 1.20 ha, 7 member family

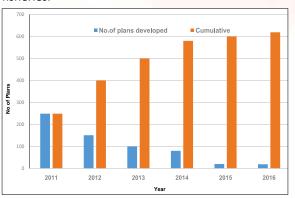
Field crops	0.84 ha		
Hort. crops	0.22 ha		
Dairy	2 Buffalo + 1 Cow		
Fishery	0.10 ha		
Vermi-compost	0.01 ha		
Mushroom	12 nos. 4 tier racks		
Boundary Plantation (200m running length)			



- 45 IFS models developed for different agro-ecological regions of the country.
- IFS linked to profitability, livelihood generation and risk minimization.
- IFS provide more stable incomes even during years of extreme weather events
- Need dedicated scheme for promotion of multi-entreprise IFS.
- Net Profit (mean of 3 years): Rs 2.5 lakhs during 2014-15
- Recycling: 34 % of total inputs except labour
- Value of additional employment: Rs. 88,000

District Contingency Plans

Developed 619 District agricultural contingency plans: Technological interventions for various weather aberrations addressing different sectors of agriculture including horticulture, livestock, poultry, fisheries.

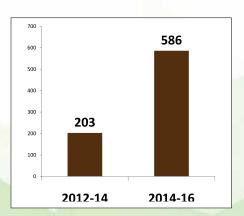




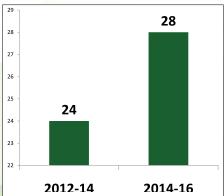


Entrepreneurship Development

Agri-entrepreneurs incubated



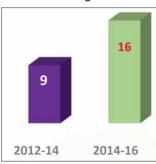
Agro-processing centres established



Animal Genetic Resources of India CURRENT SCENARIO

Species	No. of Breeds
Cattle	40
Buffalo	13
Goat	26
Sheep	42
Camel	9
Horse	6
Pig	6
Donkey	1
Chicken	17
Total	160





- 7 new indigenous breeds registered in 2014 2015.
- 9 new indigenous breeds registered in 2015 2016.





















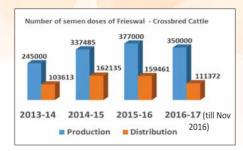


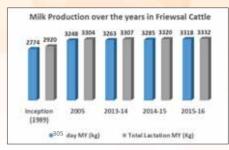






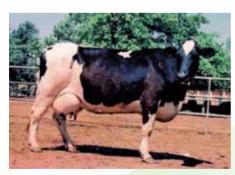
Impact of Technology Intervention













Vaccines developed

- Johne's disease
- Peste des petits ruminants (PPR)
- Goat Pox
- Equiherpabort
- Classical Swine Fever















Diagnostics kits developed

- ◆ ELISA kit Theileria equi
- ELISA kit Japanese encephalitis
- Lateral Flow Assay Brucellosis
- Lateral Flow Assay Trypanosoma evansi
- Paper strip assay Pesticides residues in milk

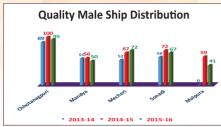
DBT

Biotech Product Award to NIVEDI For the development of ELISA kits for diagnosis of brucellosis

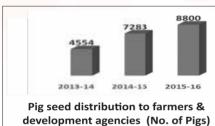




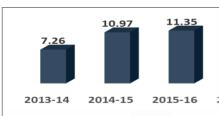
Distribution of quality livestock germplasm











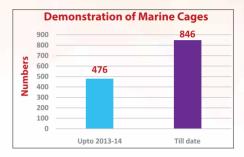


Poultry Seed distribution to farmers & development agencies (lakh chichs)

Open-Sea Cage Aquaculture

- Marine cage culture of Cobia (Rachycentron canadum) and Silver Pompano (Trachinotus blochii) technology demonstration
- Demonstrated avg. production levels of 3.0 tonnes in 6 months (6 m dia x 6 m depth): 25-30 kg/m3
- Cost of production Rs. 120/kg; Farm gate price - Rs. 350/kg (cobia) & Rs. 300/kg (silver pompano)

 846 cages installed all along the coast of India with the technical support of ICAR-CMFRI





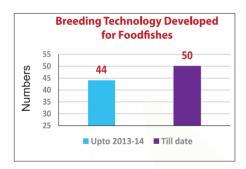




Diversified Fish Species for Marine Cage Culture

- Developed breeding and seed production technologies for commercially-important marine species for open-sea cage culture
 - Cobia (Rachycentron canadum)
 - Silver pompano (Trachinotus blochii)
 - Orange-spotted grouper (Epinephelus coioides)

Technology of breeding and seed production developed for 6 new food fish species







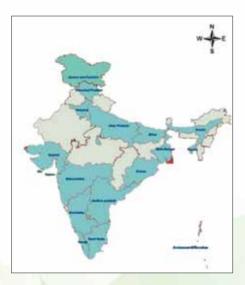


Fish Health Management

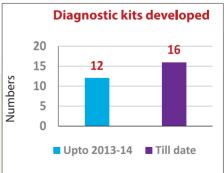
- Operation of National Aquatic Animal Diseases Surveillance Programme (NSPAAD) - 15 states & 2 UTs in 115 districts - 25 organisations
- Preparedness for emerging disease outbreaks with establishment of 3 Referral labs and Emergency Response system under NSPAAD
- Established National Repository of Fish cell lines possessing 50 cell lines

Development of Disease Diagnostic Kits

- βNodadetect for detection of β-nodavirus in marine finfish
- White Spot Syndrome Virus detection kit for shrimp
- Koi herpes virus (KHV) and Spring Viraemia of Carp Virus (SVCV) detection in freshwater fish







Landmark achievements in agricultural research

- Mridaparikshak a minilab for soil analysis, capable of measuring 12 soil parameters of SHC (pH, EC, OC, available N, P, K, S and Fe, Zn, Cu, Mn & B)
- India's First Nanocellulose Pilot Plant for the production of natural rubber, craft paper and cement concrete as a filler or composite mix established at CIRCOT Mumbai
- Multi Plant Virus Detection Technology capable of simultaneously detecting 1155 viruses at this molecular diagnostic platform developed
- Breakthroughs achieved in the breeding and seed production of Milkfsh (Chanos chanos), Hilsa (Tenualosa ilisha) and long whiskers catfish (Mystus gulio)













Bringing self sufficiency in pulses: First-of-its-kind globally

- Earliest maturing mungbean variety "IPM 205-7 (Virat)" released
- The earliest maturing (52-55 days) summer mungbean variety
- Yield potential of 10-12 q/ha
- Highly resistant to Mungbean Yellow Mosaic Viral disease and other diseases

CO-0238: The wonder variety of Sugarcane

- High in sugar recovery (up to 12%) in comparison to other varieties (up to 9%) in North India
- High cane yield (81 tonnes/ha)





Reversal of trend: Demands of seed also from tropical states like Maharashtra, Tamil Nadu and Andhra Pradesh for sub-tropical variety for the first time

High Density planting and Canopy Management for Higher Apple Productivity

- Planting: high density (2.5m×2.5m).
- Tree training: Modified Central Leader System in combination with regular annual pruning.



- Drip irrigation & recommended manures, fertilizers and plant protection.
- Increased productivity from existing
 7.5 t/ha to 30-35 t/ha



Multipurpose Rubber Dam for Water Harvesting in Watersheds

- Developed multipurpose, inflatable, flexi Rubber Dam for watershed.
- Can store 20-25% additional water in comparison to traditional check dam.
- Facilitate ground water recharging.
- Provide irrigation in critical stages of crop growth
- Cost : Nearly Rs. 8 lakhs (width 5 m x
 1.5 m height)
- Cost recovery within a span of 3 years.

 Installed 43 rubber dams in 6 states (Odisha, Uttarakhand, Maharashtra, Madhya Pradesh, Gujarat and Jharkhand)



New improved agricultural machinery

- Broad bed former-cum-seeder
- Multipurpose platform for orchard management
- Single bud cutting machine and Single bud settling planter for Sugarcane









New landmark crop varieties & technologies developed by ICAR

- High yielding rice varieties resistant to draught (1), Blast (3) and Bacterial leaf blight (5) developed using marker assisted selection
- Rice Variety (CR Dhan 310) with high protein content (10.3%) developed
- Rice Variety (DRR Dhan 45)with high Zn content (22ppm) developed
- Dual purpose wheat (grain & fodder) variety (VL Gehun 829) developed
- Low Erucic Acid (<2%) containing mustard variety Pusa Mustard 30

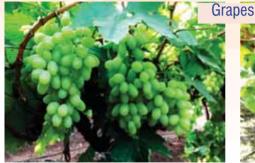


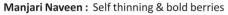






New improved fruit varieties for export developed







Medika: Anti-oxidant rich





Cashew Hybrid (H-126) with jumbo nut (11-12 g)

New improved fruit crop varieties & technologies developed

- Lalima, a high yielding crimson coloured Apple variety
- Dhawal, a heavy bearer and tastier Grava variety
- Arka Kiran, a high lycopritein containing Guava hybrid
- A high yielding Coconut hybrid for Tamilnadu (VPM -5)







New landmark vegetable crop varieties & technologies developed

- A beta carotene (8.0 10.0ppm) rich Cauliflower variety (Pusa Kesari vit A1) developed
- Extra early Cucumber variety (Pusa Seedless Cucumber-6) for protected cultivation released
- High yielding Downy Mildew resistant Ridge gourd variety (VRRG-27) developed

New high yielding Potato Variety
Kufri Mohan for medium duration
(50 days)









Vegetable varieties for specific needs

Onion: Arka Kalyan, Arka Swadista,

Arka Bindu, Arka Ujjwal

Mushroom strains

Shiitake DMR-shiitake-38,

DMR-shiitake-388

Macrocybe DMR-macrocybe-01

Tomato: Arka Rakshak,

Arka Samrat























Bio-control success stories

Success achieved	Natural enemy	Monetary benefits in India (Rs.) / year
Sugarcane woolly aphid	Dipha / Encarsia / Micromus	1500 crore
Papaya mealybug	Acerophagus	1600 crore
 Root grub on arecanut, sugarcane & groundnut 	Entomopathogenic nematode	300 crore
Sugarcane & Rice borers	Trichogramma	37500 / ha

Natural Enemies



Encarsia flavoscutellum Woolly aphid parasitoid



Heterorhabditis indica



Acerophagus papayae – Exotic parasitoid of papaya mealybug

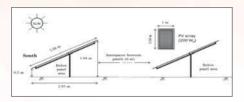


Trichogramma chilonis sugarcane and rice borers

Agri-Voltaic System/Solar Farming

Agri-voltaic system

Growing crops and generating electricity through PV modules simultaneously from a piece of land



Model area: 1 ha

- Solar PV generation capacity: 0.5
- Electricity generation per day: 2500 kWh
- Investment : Rs. 2.5 crores
- Income generation from electricity:
 About Rs 45 lakhs per annum
- Life of the system : 25 years
- Total cost recovery in 7 years
- Moong bean yield: 4 q/ha

Ridge furrow seed drill for in-situ soil moisture conservation in solar farming system









Development of solar PV sprayer for spraying agricultural chemicals in solar farming system





Water/ Fertilizer Saving through Micro Irrigation

G .	6	Yield	Water saving	Fertilizer saving	
Centre	Crop	(t/ha)	(%)	(%)	
Rahuri	Banana	83	25	17	
Parbhani	Cotton	2.9	20	25	
Madurai	Dry Chilli	2.2	40	25	
Bhavanisagar	Tomato	27	40	50	
Centre	Crop	Yield (t/ha)	Yield increase(%)	Water saving(%)	
Bathinda	Garlic	13.1	18	23	
Gayeshpur	Onion	16.0	22	25	
Bilaspur	Wheat	1.98	16	41	
Belvatagi	Maize	8.28	21	12	
Sriganganagar	Gram	2.57	14	32	

Irrigation	Yield (q/ha)	WUE (kg/ha-mm)	Yield increase(%)	Water saving(%)		
Micro-sprinkler irrigation in onion						
Flood irrigation	128.1	24.73				
Micro-sprinkler	185.2	46.11	44.6	22.4		







Sprinkler Irrigation





Micro Sprinkler Irrigation





Nano Fertilizers for enhanced nutrients use efficiency developed

Seed treatment with nano-ZnO @ 50 mg Zn/g seed found a successful method to meet the Zn requirement of the crop in Zn deficient areas

4G Nano based nutritional agri inputs (Phosphours, Magnesium, Zinc and Iron)

using microbial secrets. Micronutrient use efficiency increased to 5-7% from 1-2%

Developed nano rock phosphate coated urea with P use efficiency comparable to SSP.









Soybean



Maize



New technologies developed and commercialized



- A handy and user friendly electronic "Soil Moisture Indicator" to save water and facilitate irrigation scheduling
- Licensed to M/s Tech Source Soln, Bengaluru and others.
- Improved Light
 Trap safe to
 beneficial insects
 (parasitoids) &
 non-targeted
 insects
- Revenue of Rs. 3.02 crores generated during 2014-16.



- Sugarcane juice powder for usage as healthy drink
- Licensed to M/s G Beverages, Belgaum





New improved varieties of pig and poultry developed

- Three new crossbred Pig varieties namely Rani, Asha, HD-K75 and Jahrsuk developed
- Three new varieties of Poultry birds (Kamrupa, Narmadanidhi and Jharsim) developed





Indigenous fish feed formulation for enhancing efficiency & cutting cost developed

- Vannamei* A grow-out feed for Pacific white shrimp, L. vannamei (Commercialized)
- Cost advantage- Rs 15/kg over commercial feeds (Cost of commercial feed Rs. 75/kg)









Varna & Varsha - Fish feeds for Marine and Freshwater ornamental fishes



CIFABROOD - A carp broodstock diet advancing gonad growth and maturation

Neutraceuticals from aquatic organisms

- Development of high value compounds and neutraceuticals for human health:
 - Green mussel extract (Cadalmin[™] GMe) for pain & arthritis
 - Green algal extract (Cadalmin[™] GAe) for pain & arthritis
 - Seaweed antidiabetic extract (Cadalmin[™] Ade) a green remedy for type-2 diabetes
 - Seaweed nutraceutical drink for enhancing micronutrients
 - Fish Sausage fortified with seaweed extract for easy digestibility









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



Financial Support to New Universities



ANGRAU, Andhra Pradesh &SKLTSHU, Telangana Released Rs 122.5 crores each

University Scholarships



Granted Professional status to Degrees in Agriculture and Allied sciences

Initiated Emeritus Professor Scheme in 2016-17 to utilize the services of outstanding superannuated teachers/scientists from NARES system for teaching specialized courses and develop instructional material.

Introduced National Talent Scholarships-PG from 2016-17 @ Rs. 3,000 p.m. for all the students who take admission in the State other than their domicile State.

Number of beneficiaries: 1,512

Student READY

Launched by Hon'ble Prime Minister on 25 July 2015

Introduction of Fellowship from 2016-17 @ Rs 3,000 p.m. for all the students for a period of 6 months during Student READY which was RS. 1000 p.m. earlier

Components of Student READY

- 1. Experiential Learning (EL)
- 2. Rural Agriculture Work Experience (RAWE)
- 3. In Plant Training/ Industrial Attachment/Internship
- 4. Skill Development Training
- 5. Student Project



Netaji Subhas – ICAR International Fellowships

- to develop competent human resources that are trained in the identified best laboratories in the world (for Indian candidates) - 79 students
- to expose overseas candidates to the best Indian Agricultural Universities (AUs) in the ICAR-AU system for creating a pool of scientist-envoys for enhanced future co-operation – 23 students

Annually 30 Fellowships

- @ US \$ 2000 p.m. for Indian candidates and
- @ Rs 40,000 p.m. for Overseas candidates
- Fresh and in-service (ICAR / SAUs)



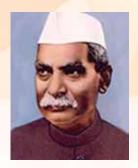


Four New ICAR Awards

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

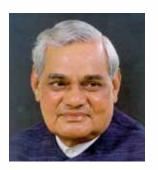
Pt. Deendayal Upadhyay Unnat Krishi Shiksha Yojana

- 130 training programmes 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, Kolapur, Avikanagar, Amritsar and Jhansi)



National Agricultural Education Day

Declared 3rd December as National Agricultural Education Day in the memory of First Food and Agriculture Minister Dr. Rajendra Prasad





Jai Kisan - Jai Vigyan Week

On the occasion of birthday of former Prime Ministers Shri Chaudhary Charan Singh ji and Shri Atal Bihari Vajpayee ji, the Jai Kisan - Jai Vigyan Week is being celebrated in the whole country since 2015.

National Agricultural Higher Education Project

- Proposed with an outlay of USD 165.0 million (Rs. 1000 crores)
- Funded by the World Bank and Government of India on 50:50 cost sharing basis
- Duration of the Scheme: six years (2016-17 to 2021-22)
- EFC circulated among the Departments concerned

2016: The International Year of Pulses

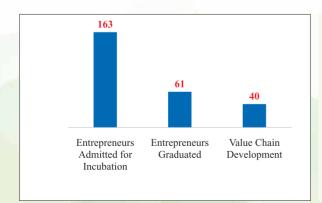
New Programmes on Pulses initiated under NFSM for attaining self-sufficiency



- Establishment of 150 "Seed-Hubs on Pulses" for augmenting the supply of quality seeds of pulses
- Production of minimum 3717 quintals additional breeder seed by 2016-17 and 5801 quintals by 2018-19
- Strengthening production and supply units of bio-fertilizer and bio-control agent at 24 centres

Agri-Business at ICAR

25 Agri-Business Incubation (ABI) Centres Established (2015-16)



Subject Area:Animal Science:

Animal Science: 5
Crop Science: 4
Agril. Engineering: 4
Agril. Education: 2
Horticulture: 5
Fisheries: 4
NRM: 1

New ICT Apps and Portals

- PUSA KRISHI- Technology Mobile App
- Mobile app "riceXpert"
- E-Kapas Network and Technology Documentation
- PulsExpert for pests & diseeases
- e-Pest Surveillance and Advisory System for Horti Crops
- Online Pest Monitoring and Advisory Services
- Pest Forewarning application
- ◆ KRISHI-Digital data portal
- Goat Management Information Software (GMIS)





New initiatives by KVKs

- Web Portal- Krishi Vigyan Kendra Knowledge Network
- mKisan Portal- 90 lakh farmers are being provided advisory by the KVKs
- Automatic Weather Stations at 100 KVKs by India Meteorology Department
- Climate Resilient Initiatives at 121 KVKs (21 included in 2015-16)
- National Initiative on Fodder Technology Demonstration (NIFTD)- 100 KVKs.

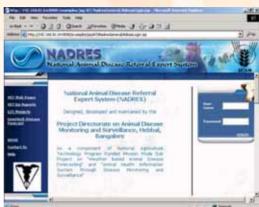
Disease Forecasting

Lateral flow assay for diagnosis of brucellosis

National Animal Disease Referral Expert System (NADRES)

Forecasting/forewarning of 15 important livestock diseases





Cooperation

- MoU with ICAR ICMR Areas (Zoonotic Diseases, Anti-microbial Resistance, Nutrition and Pesticide Resistance)
- International Collaborations (ILRI, CDC and MSU & BMGF, USA)



Training and Entrepreneurship development for Jeggery and Gur making

- This initiative was taken with the objective of providing alternate avenues of income to the sugarcane growing farmers in the sugarcane belt of Bihar and UP where a large number of sugarcane mills have closed down.
- On 5th March 2016, the Agriculture and Farmers Welfare Minister Shri Radha Mohan Singh inaugurated the Training and Entrepreneurship Development Centre for Jeggery and Gur making at Motipur, research station of IISR, Lucknow.
- Hon'ble Minister while addressing the farmers informed that such processing centres are of crucial importance towards increasing the income of the farmers and the Motipur Jeggery unit will prove an important milestone in this regard.













Ministry of Agriculture & Farmers Welfare Government of India

Website: http://agriculture.gov.in