

FOR OFFICIAL USE ONLY



Results-Framework Document 2010-2011

Government of India
Ministry of Agriculture
Department of Agricultural Research and Education

FOR THE PERIOD

April 1, 2010 - March 31, 2011

Department of Agricultural Research & Education

Results Framework Document: 2010-2011

Section 1: Vision, Mission and Functions

Vision

Harnessing science to ensure comprehensive and sustained physical, economic and ecological access to food and livelihood security to all Indians, through generation, assessment, refinement and adoption of appropriate technologies.

Mission

Sustainability and growth of Indian agriculture by interfacing agricultural research, higher education and front-line extension initiatives complemented with institutional, infrastructural and policy support that will create efficient and effective science-harnessing tool.

Objectives

1. Strengthening frontier research for enhancing agricultural production and productivity
2. Improving soil health and water use efficiency, and farm machinery and agricultural processing
3. Conservation of Genetic resources/germplasm and their use
4. Production management and disease diagnostics/management and value addition
5. Enhancing productivity of pulses and oilseeds
6. Production of breeder seed/planting materials
7. Commercialization of technologies developed and promoting public-private partnership
8. New institutions to support agricultural research and higher education for addressing emerging issues
9. Strengthening of higher agricultural education
10. Strengthening Agricultural Universities including modernization of AU farms
11. Strengthening extension activities of Krishi Vigyan Kendras (KVKs)
12. Support for NEH region and promoting gender issues

Functions

1. To attend to matters relating to all aspects of agricultural research and higher education; including
 - all matters concerning the national and international collaboration in agricultural research and higher education,
 - such functions as plant and animal germplasm introduction, exploration and conservation; soil and land use survey and planning;
 - participation in international conferences, associations and other bodies dealing with agricultural research and education and follow-up decisions etc.;
 - coordination and determination of scientific, technical and academic standards in institutions for higher education and research in so far as they relate to food and agriculture including animal husbandry, dairying and fisheries; and
 - Human Resource Development in agriculture and allied disciplines.

Section 2: Results Framework Document 2010-2011 of DARE: Composite View

Target/Criteria Value											
Sl.No.	Objective	Weight	Actions	Success Indicator	Unit	Weight	Excellent	Very Good	Good	Fair	Poor
							100%	90%	80%	70%	60%
1	Strengthening frontier research for enhancing agricultural production and productivity	10	Programme on climate resilient agriculture	Programme conceptualization and preparation of EFC	Date	4.0	30/06/2010	15/07/2010	31/07/2010	15/08/2010	31/08/2010
				Demonstration of technologies resilient to climate change	Number of technologies	3.0	12	10	9	8	7
				Strengthening of infrastructure of institutions	Date	3.0	30/09/2010	31/10/2010	15/11/2010	30/11/2010	31/12/2010
2	Improving soil health and water use efficiency, and farm machinery and agricultural processing	8	Development of technologies for natural resource management	Technologies developed/ tested/ validated	Number	4.0	10	8	6	4	2
			Research on design, development and refinement of technologies in agricultural engineering	Technologies designed/ fabricated/ tested	Number	4.0	10	8	6	4	2
3	Conservation of Genetic resources/ germplasm for sustainable use	3	Collection and conservation of genetic resources for sustainable use	Number of explorations made	Number	1.0	30	26	22	20	18
				Number of germplasm accessions added to Gene Bank	Number	2.0	10000	9500	9000	8500	8000

4	Production management and disease diagnostics/ management and value addition	8	Optimization of region-specific feeding modules	Number of specific feeding module	Number	2.0	8	6	5	4	3
			Development of diagnostics and vaccines	Number of diagnostics and vaccines	Number	3.0	8	6	5	4	3
			Value Added Products and Post Harvest Technology	Number of value added products and technologies	Number	3.0	8	6	4	3	2
5	Enhancing productivity of pulses and oilseeds	4	Production of breeder seed of pulses and oilseeds	Annual Quantity	Tonnes	2.0	1400	1260	1120	980	840
			Development of improved varieties and technology interventions of pulses and oilseeds	Varieties/ Technologies developed	Number	2.0	15	13	12	10	8
6.	Enhancing productivity of other crops	7	Production of breeder seeds of other crops	Annual Quantity	Tonnes	2.0	7600	6850	6000	5300	4500
			Production of planting materials of various crops	Annual Quantity	Number (in lakh)	2.0	25	22	20	17	15
			Development of improved varieties and technology interventions of	Varieties and technologies developed	Number	3.0	45	42	38	35	32

			other crops								
7	Commercialization of technologies developed and promoting public-private partnership	6	Product/Process development and commercialization	Product/Process developed/ commercialized	Number	2.0	20	15	10	8	6
			Partnership development, including licensing of ICAR technologies	Partners (private sector) identified	Number	2.0	20	15	10	8	6
			Patents and other IPR titles	Applications filed	Cumulative Number	2.0	30	25	20	15	10
8	New institutions to support agricultural research and higher education for addressing emerging issues	10	Functionalizing the National Institute on Abiotic Stress Management, Baramati (Maharashtra): layout plan and works; and appointment/ redeployment of staff	On time approval of layout plan/ initiation of building works	Date	1.0	30/06/2010	15/07/2010	31/07/2010	31/08/2010	30/09/2010
				Appointment/ re-deployment of staff (core staff members)	Number	1.0	10	9	8	7	6
			Establishment of a new Central Agricultural University in North Eastern Hill Region at Barapani/ Shillong (Meghalaya)	Preparation of EFC Document and submission to Appraisal Agencies	Date	2.0	30/09/2010	15/10/2010	31/10/2010	15/11/2010	30/11/2010

Establishment of a new Central Agricultural University in Bundelkhand Region	Preparation of EFC Document and submission to Appraisal Agencies	Date	2.0	15/04/2010	30/04/2010	15/05/2010	31/05/2010	15/06/2010
Establishment of National Institute on Biotic Stress Management, Raipur (Chhattisgarh)	Preparation of EFC Document and submission to Appraisal Agencies	Date	2.0	15/04/2010	30/04/2010	15/05/2010	31/05/2010	15/06/2010
Establishment of Indian Institute of Agricultural Biotechnology, Ranchi (Jharkhand)	Preparation of EFC Document and submission to Appraisal Agencies	Date	2.0	15/04/2010	30/04/2010	15/05/2010	31/05/2010	15/06/2010

9	Strengthening of higher agricultural education	8.5	Innovations in higher agricultural education	Number of universities having developed e-learning tools and resources	Number	2.0	15	13	12	10	9
			Accreditation/ Extension of Accreditation of agricultural universities	Number of universities granted accreditation/extension of accreditation	Number	2.5	8	7	6	5	4
			Grant of ICAR International fellowships to Indian students	Number of fellowships awarded (subject to availability of competent candidates)	Number	1.0	12	11	10	8	7
			Grant of JRF and SRF to students	Number of fellowships granted per year	Number	2.0	625	550	500	430	375

				(subject to availability of competent candidates)							
			Capacity building and faculty up-gradation	Number of teachers trained per year	Number	1.0	1000	900	800	700	600
10	Strengthening Agricultural Universities including modernization of AU farms	7	Financial support for strengthening AUs	Amount released	Rupees (in crore)	3.0	350	315	270	245	210
			Support for modernizing AU farms	Number of AUs covered	Number	2.0	49	45	40	35	30
			Establishment of experiential learning units	Number of units established	Number	1.0	25	22	20	17	15
			Timely release of funds	Time taken for release after receipt of AUCs from AUs	Days	1.0	30	27	24	21	18
11	Strengthening of extension system (ToT)	15	Operationalization of e-connectivity of KVKs for speedy dissemination of knowledge to the farmers and other stakeholders	e-connectivity facilities established in KVKs across the country	Number	3.0	100	80	60	50	40
			Establishment of demonstration/ training facilities for soil and water testing, rain water harvesting,	Additional KVKs with such facilities	Number	6.0	150	125	100	75	50

			etc.								
			Establishment of new KVKs	Number of new KVKs established	Number	4.0	15	12	10	8	6
			Technology showcasing	Demonstrations/training organized	Number (in thousands)	2.0	80	72	64	56	48
12	Support for promoting gender issues	2.5	Promotion of technologies covering Gender concerns	Gender-related technology promotion programs conducted	Number	2.5	15	13	12	10	9
*	Efficient Functioning of the RFD System	5	Timely submission of Draft for Approval	On-time submission	Date	2.0	05/03/2010	08/03/2010	09/03/2010	10/03/2010	11/03/2010
			Timely submission of Results	On- time submission	Date	1.0	02/05/2011	03/05/2011	04/05/2011	05/05/2011	06/05/2011
			Finalize a Strategic Plan	Finalize the Strategic Plan for next 5 years	Date	2.0	10/12/2010	15/12/2010	20/12/2010	24/12/2010	31/12/2010
*	Improving Internal Efficiency / responsiveness / service delivery of Ministry / Department	6	Develop RFDs for all Responsibility Centers (Subordinate Offices, Attached Offices, Autonomous Bodies)	Percentage of RCs covered	%	2.0	100	95	90	85	80
			Implementation of Sevottam	Create a Sevottam compliant to implement, monitor and review Citizen's Charter	Date	1.00	01/10/2010	05/10/2010	11/10/2010	15/10/2010	20/10/2010
				Create a Sevottam	Date	1.00	01/10/2010	05/10/2010	11/10/2010	15/10/2010	20/10/2010

				Compliant system to redress and monitor public Grievances							
				Independent Audit of Implementation of Citizen's Charter	%	1.00	100	95	90	85	80
				Independent Audit of implementation of public grievance redressal system	%	1.0	100	95	90	85	80

Section 3: Trend values of the success indicators for 2010-2011

Sl.No.	Objective	Weight	Actions	Success Indicator	Unit	Actual Value for FY 2008-2009	Actual Value for FY 2009-2010	Target Value for FY 2010-2011	Projected Values for FY 2011-2012	Projected Values for FY 2012-2013
1	Strengthening frontier research for enhancing agricultural production and productivity	10	Programme on climate resilient agriculture	Programme conceptualization and preparation of EFC	Date	-	-	30/6/2010	-	-
				Demonstration of technologies resilient to climate change	Number of technologies	-	-	12	15	18
				Strengthening of infrastructure of institutions	Date	-	-	30/9/2010	31/12/2011	-
2	Improving soil health and water use efficiency, and farm machinery and agricultural processing	8	Development of technologies for natural resource management	Technologies developed/ tested/ validated	Number	6	7	10	12	14
				Technologies designed/ fabricated/ tested	Number	6	8	10	12	14
3	Conservation of Genetic resources/ germplasm for sustainable use	3	Collection and conservation of genetic resources for sustainable use	Number of explorations made	Number	33	38	30	30	30
				Number of germplasm accessions added to Gene Bank	Number	13850	9526	10000	10500	11000

4	Production management and disease diagnostics/ management and value addition	8	Optimization of region-specific feeding modules	Number of specific feeding module	Number	5	6	8	10	12
			Development of diagnostics and vaccines	Number of diagnostics and vaccines	Number	7	8	8	9	9
			Value Added Products and Post Harvest Technology	Number of value added products and technologies	Number	5	6	8	9	10
5	Enhancing productivity of pulses and oilseeds	4	Production of breeder seed of pulses and oilseeds	Annual Quantity	Tonnes	1000	1200	1400	1550	1700
			Development of improved varieties and technology interventions of pulses and oilseeds	Varieties/ Technologies developed	Number	11	12	15	18	21
6.	Enhancing productivity of other crops	7	Production of breeder seeds of other crops	Annual Quantity	Tonnes	6500	7000	7600	8000	8200
			Production of planting materials of various crops	Annual Quantity	Number (in lakh)	15	20	25	30	32
			Development of improved varieties and technology interventions of	Varieties and technologies developed	Number	40	42	45	50	52

			other crops							
7	Commercialization of technologies developed and promoting public-private partnership	6	Product/Process development and commercialization	Product/Process developed/ commercialized	Number	8	15	20	25	30
			Partnership development, including licensing of ICAR technologies	Partners (private sector) identified	Number	11	16	20	25	30
			Patents and other IPR titles	Applications filed/ granted	Cumulative Number	35	58	88	120	155
8	New institutions to support agricultural research and higher education for addressing emerging issues	10	Functionalizing the National Institute on Abiotic Stress Management, Baramati (Maharashtra): layout plan and works; and appointment/ redeployment of staff	On time approval of layout plan/ initiation of building works	Date	-	-	30/6/2010	-	-
				Appointment/ re-deployment of staff (core staff members)	Number	-	5	10	15	20
			Establishment of a new Central Agricultural University in North Eastern Hill Region at Barapani/ Shillong (Meghalaya)	Preparation of EFC Document and submission to Appraisal Agencies	Date	-	-	30/9/2010	-	-

			Establishment of a new Central Agricultural University in Bundelkhand Region	Preparation of EFC Document and submission to Appraisal Agencies	Date	-	-	15/4/2010	-	-
			Establishment of National Institute on Biotic Stress Management, Raipur (Chhattisgarh)	Preparation of EFC Document and submission to Appraisal Agencies	Date	-	-	15/4/2010	-	-
			Establishment of Indian Institute of Agricultural Biotechnology, Ranchi (Jharkhand)	Preparation of EFC Document and submission to Appraisal Agencies	Date	-	-	15/4/2010	-	-
9	Strengthening of higher agricultural education	8.5	Innovations in higher agricultural education	Number of universities having developed e-learning tools and resources	Number	-	10	15	30	45
			Accreditation/ Extension of Accreditation of agricultural universities	Number of universities granted accreditation/ extension of accreditation	Number	8	8	8	8	8
			Grant of ICAR International fellowships to Indian students	Number of fellowships awarded (subject to availability of competent candidates)	Number	-	6	12	15	15
			Grant of JRF and SRF to students	Number of fellowships granted per year	Number	644	600	625	650	650

				(subject to availability of competent candidates)						
			Capacity building and faculty up-gradation	Number of teachers trained per year	Number	1200	950	1000	1000	1000
10	Strengthening Agricultural Universities including modernization of AU farms	7	Financial support for strengthening AUs	Amount released	Rupees (in crore)	225	250	350	350	350
			Support for modernizing AU farms	Number of AUs covered	Number	45	49	49	-	-
			Establishment of experiential learning units	Number of units established	Number	-	20	25	25	25
			Timely release of funds	Time taken for release after receipt of AUCs from AUs	Days	45	45	30	30	30
11	Strengthening of extension system (ToT)	15	Operationalization of e-connectivity of KVKs for speedy dissemination of knowledge to the farmers and other stakeholders	e-connectivity facilities established in KVKs across the country	Number	100	150	100	200	-
			Establishment of demonstration/ training facilities for soil and water testing, rain water harvesting,	Additional KVKs with such facilities	Number	-	58	150	200	-

			etc.								
			Establishment of new KVKs	Number of new KVKs established	Number	3	6	15	16	18	
			Technology showcasing	Demonstrations/training organized	Number (in thousands)	70	75	80	90	100	
12	Support for promoting gender issues	2.5	Promotion of technologies covering Gender concerns	Gender-related technology promotion programs conducted	Number	11	12	15	20	25	
*	Efficient Functioning of the RFD System	5	Timely submission of Draft for Approval	On-time submission	Date	0					
			Timely submission of Results	On- time submission	Date						
			Finalize a Strategic Plan	Finalize the Strategic Plan for next 5 years	Date						
*	Improving Internal Efficiency / responsiveness / service delivery of Ministry / Department	6	Develop RFDs for all Responsibility Centers (Subordinate Offices, Attached Offices, Autonomous Bodies) Implementation of Sevottam	Percentage of RCs covered	%						
				Create a Sevottam compliant to implement, monitor and review Citizen's Charter	Date						
				Create a Sevottam Compliant system to redress and monitor public Grievances	Date						
				Independent Audit of Implementation of Citizen's Charter	%						

				Independent Audit of implementation of public grievance redressal system	%						
--	--	--	--	--	---	--	--	--	--	--	--

Section 4: Description and definition of success indicators and proposed measurement methodology for 2010-2011

Objective 1: With respect to strengthening the frontier research for enhancing agriculture production and productivity, it is stipulated to develop a programme on climate resilient agriculture initiative as the main programme in the target period. The programme conceptualization is envisaged to be completed by end of June 2010.

Objective 2: With respect to improving soil health and water use efficiency, and farm machinery and agricultural processing, the action points/success indicators cover technologies developed in natural resource management and agricultural engineering fields. The emphasis on natural resource management is laid to ensure efficient use of natural resources under the changing situations and climate change. This can be equally supported by appropriate new engineering technologies and tools.

Objective 3: With respect to conservation of genetic resources for sustainable use, it is envisaged to conserve plant, animal, fish and microbe genetic resources to have a repository and their evaluation. This will support development of varieties, breeds, strains for different agro-eco regions.

Objective 4: With respect to production management, and disease diagnostics/ management and value addition, this is identified as the key objective of the Department. The actions will cover all aspects of crops, livestock/poultry and fisheries, and the success indicators are optimization of region-specific feeding schedules; development of diagnostics and vaccines, value added products and post harvest technologies.

Objective 5: With respect to enhancing pulse and oil seed productivity the main thrust is on development of varieties for biotic and abiotic stress tolerance and increasing availability of breeder seed.

Objective 6: With respect to enhancing productivity of crops, other than pulses and oilseeds, the actions are directed to develop improved varieties and associated production and protection technologies, and production of breeder seed and planting material. A rise in productivity over the years is envisaged as may be seen from the trend values.

Objective 7: With respect to commercialization of technologies and promoting public-private partnership, it is envisaged to bring commercial ethos in agricultural research. Indicators for commercialization of technologies, promoting public-private partnership, and protection of intellectual property rights will be determined by the commercialization through partnership development, including licensing of ICAR technologies. The increasing numbers over the years may indicate a higher emphasis on technology transfer through enterprises; thereby contributing to larger adoption and improved socio-economic impact of ICAR technologies. Trend in IPR protection is shown as cumulative number to appreciate its commercial value over the time.

Objective 8: With respect to new institutions to enhance agricultural research and higher education for addressing emerging issues, establishment of two new institutions under ICAR and two central universities has been envisaged for promoting research and higher education in agriculture. The success indicators in terms of new institutional and capacity building

initiatives are envisaged based upon timely approval of EFCs, timely appointment of Research Management Positions (RMPs), staff, timely procurements, approval of layout plans, initiation and completion of works (buildings and labs), etc.

Objective 9: With respect to strengthening of higher agricultural education, success will be measured from the indicator number of universities having developed appropriate e-learning tools and resources, accreditation of agricultural universities, grant of ICAR International fellowships to Indian students, and JRF and SRF. Capacity building and faculty upgradation of teachers will be measured from the number of teachers trained per year to have a strong human resource base in the niche areas of excellence.

Objective 10: With respect to strengthening of Agricultural Universities including modernization of AU farms, success will be measured in terms of the financial support provided, number of AUs covered and timely release of funds, which is directly dependent on the furnishing of the AUCs from the respective AUs. This activity will be completed within the XI Plan period.

Objective 11: With respect to strengthening of extension system (Transfer of Frontline/First-Line Technologies), it is envisaged to operationalize the e-connectivity of KVKs for speedy dissemination of knowledge to the farmers and other stakeholders. In terms of establishment of demonstration/ training facilities for soil and water testing, rain water harvesting, etc., the success will be measured by the additional numbers of KVKs with such facilities. The number of trainings/demonstrations conducted will indicate quantum of outreach efforts.

Objective 12: The objective of support for promotion of gender issues aims at addressing the R&D needs of farm women. The performance indicator gives number of gender-specific programmes conducted and technology backstopping provided.

Performance and monitoring requirements for the mandatory indicators concerning the RFD will be followed as per the uniform parameters to be decided for the RFMS by the Performance Management Division, Cabinet Secretariat.

Section 5: Specific performance requirements from other departments that are critical for delivering agreed results for 2010-2011

1. Support of Planning Commission is necessary to take up the new initiatives/ proposals of the Department. Timely approvals and allocation of approved funds is critical for achieving the targets. Subsequent to the Annual Plan 2010-11 discussions held in Planning Commission on the proposals/justification submitted, against the proposed demand of Rs. 4000 crore only Rs. 2300 crore has been allocated at BE stage. This could greatly hamper the realization of the envisaged success indicators, and also have a cascading effect in the subsequent years.
2. Ministry of Finance considers/concurs/approves the EFC proposals of the Department in terms of the financial and manpower requirement. This support of Department of Expenditure, Ministry of Finance will be crucial for realization of appropriate performance, including meeting the deadlines and also in providing funds as per the SFC/EFC allocation.
3. Strengthening of agricultural universities will depend on their initiative/responsiveness, including the timely implementation by the respective SAUs/AUs and fund utilization.
4. Approval of Layout plans and execution of works will require commitment and timeliness on the part of the Works Departments.
5. The quantity of breeder seed produced is based on the quantity indented by Department of Agriculture and Cooperation, which in turn collects indents from various seed agencies including State Departments of Agriculture.
6. Establishment of KVKs and strengthening of existing KVK shall depend upon timely availability of sufficient funds and other resources, and cooperation from state departments and local bodies, and a smooth implementation by the agencies managing KVKs.
7. Technology adoption would depend upon the proactive role of development departments namely DAC, DAHD&AF; and SAUs, etc.

Signed

**Minster of Agriculture, Consumer
Affairs, Food & Public Distribution**

**Secretary, DARE and
Director General, ICAR**
