



# R F D

Results Framework Document

for

Department Of Agricultural Research &  
Education

(2009-2010)

## Section 1: Vision, Mission, Objectives 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

### 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 New, complementary institutional support to enhance agricultural research and higher education for addressing emerging issues
- 2 Support for frontier areas of research for enhancing agriculture production and productivity
- 3 Support for development of technologies for improving soil health and water use efficiency, and farm machinery and agricultural processing
- 4 Commercialization of technologies and promoting public-private partnership
- 5 Support for quality seed production
- 6 Support for development and identification of new/ improved varieties/ hybrids, production management, and disease diagnostics/ management and value addition
- 7 Strengthening of higher agricultural education
- 8 Development and strengthening of Agricultural Universities including modernization of AU farms
- 9 Support for extension activities of Krishi Vigyan Kendras (KVKs)

### Functions

- 1 To attend all matters relating to Indian Council of Agricultural Research and Central Agricultural University(ies) and to look after all aspects of the agricultural research, including fundamental, applied and operational research, and higher education (involving crops, agroforestry, horticulture, natural resources management, animal husbandry, dairying, animal health, fisheries, agriculture engineering, agricultural extension, and agricultural economics, statistics and marketing); and involving coordination between the
- 2 To attend all matters concerning the national and international collaboration in the field of agricultural research and education covering the development of new technologies in agriculture disciplines, including such functions as plant and animal germplasm introduction, exploration and conservation; soil and land use survey and planning; including relations with foreign and international agricultural research and educational institutions and organisations, including participation in international conferences, associations and other bodies dealing with agricultural research and education and follow-up decisions at such international
- 3 To attend all matters related to 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

## Section 2: Inter se Priorities among Key Objectives, Success indicators and Targets

Column 1	Column 2	Column 3	Column 4		Column 5	Column 6					
Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value					
						Excellent	VeryGood	Good	Fair	Poor	
						100%	90%	80%	70%	60%	
1 New, complementary institutional support to enhance agricultural research and higher education for addressing emerging issues	15.00	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	0.3	30/06/2010	15/07/2010	31/07/2010	31/08/2010	30/09/2010	
			Appointment/ re-deployment of staff (joining of new staff)	Number	0.45	5	4	3	2	1	
		Establishment of a new Central Agricultural University in the North Eastern Hill Region at Barapani/ Shillong (Meghalaya)	Preparation of EFC Document and submission to Appraisal Agencies	Date	0.45	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 at Jhansi (Uttar Pradesh)	Preparation of EFC Document and submission to Appraisal Agencies	Date	0.45	30/06/2010	15/07/2010	31/07/2010	31/08/2010	30/09/2010
				Establishment of National Institute on Biotic Stress Management, Raipur	Date	0.3	30/06/2010	15/07/2010	31/07/2010	31/08/2010	30/09/2010
Establishment of Indian Institute of Agricultural Biotechnology, Ranchi (Jharkhand)	Date	0.3	30/06/2010	15/07/2010	31/07/2010	31/08/2010	30/09/2010				
2 Support for frontier areas of research for enhancing agriculture production and productivity	10.00	Projects on gene discovery, bioprospecting and allele mining; nanotechnology, molecular breeding disease diagnostics and vaccines and improving	Programmes conceptualized and in	Number	1.0	6	5	4	3	1	
3 Support for development of technologies for improving soil health and water use efficiency, and farm machinery and agricultural processing	10.00	Research programmes on conservation and use efficiency of natural resources	Research Programmes supported	Number	0.6	8	7	6	5	4	
		Research on design, development and refinement of technologies in agricultural	Technologies developed	Number	0.4	7	6	5	4	3	
4 Commercialization of technologies and promoting public-private partnership	5.00	Capacity building	Programmes organized	Number	0.1	5	4	3	2	1	

## Section 2: Inter se Priorities among Key Objectives, Success indicators and Targets

Column 1	Column 2	Column 3	Column 4		Column 5	Column 6				
Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value				
						Excellent	VeryGood	Good	Fair	Poor
						100%	90%	80%	70%	60%
		Partnership development, including licensing of ICAR technologies, for technology transfer/commercialization	Partners identified	Number	0.15	15	13	12	10	8
5 Support for quality seed production	5.00	Production of breeder seeds and planting materials	Annual Quantity	Tonnes	0.25	7500	7300	7000	6000	5000
6 Support for development and identification of new/ improved varieties/ hybrids, production management, and disease diagnostics/ management and value addition	15.00	Development of new/ improved varieties/ hybrids	Number of Varieties/ hybrids	Number	0.75	60	50	45	40	30
		Optimization of region-specific feeding schedules	Number of specific feeding schedule	Number	0.45	6	5	4	3	2
		Development of diagnostics/vaccines	Number of diagnostics	Number	0.45	8	6	5	4	2
		Value addition of animal/fish products	Number of value added products	Number	0.6	6	5	4	3	2
7 Strengthening of higher agricultural education	10.00	Innovations in agricultural education	Number of universities having developed e-learning tools and	Number	0.2	10	8	6	5	4
		Accreditation/ Extension of Accreditation of agricultural universities	Number of universities granted accreditation/extension of	Number	0.2	8	6	4	3	2
		Grant of ICAR International fellowships to Indian and foreign students	Number of fellowships awarded (subject to availability of competent	Number	0.2	6	5	4	3	2
		Grant of JRF and SRF to students	Number of fellowships granted per year (subject to availability of competent	Number	0.2	600	550	500	450	400
		Capacity building and faculty upgradation	Number of teachers trained per year	Number	0.2	1000	800	500	400	300
8 Development and strengthening of Agricultural Universities including modernization of AU farms	10.00	Financial support and monitoring of progress	Amount released	Rupees in Lakh	1.0	175	160	140	120	100
9 Support for extension activities of Krishi Vigyan Kendras (KVKs)	15.00	Operationalization of e-connectivity of KVKs for speedy	e-connectivity facilities established in KVKs across	Number	1.2	60	50	40	30	20

## Section 2: Inter se Priorities among Key Objectives, Success indicators and Targets

Column 1	Column 2	Column 3	Column 4		Column 5	Column 6				
Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value				
						Excellent	VeryGood	Good	Fair	Poor
						100%	90%	80%	70%	60%
		of knowledge to the farmers and other stakeholders	country							
		Establishment of demonstration/ training facilities for soil and water testing, rain water	Additional KVKs with such facilities	Cumulative Number	1.05	20	15	10	8	5
* Efficient Functioning of the RFD System	5.00	Timely submission of Draft for Approval	Delay in On time submission (from the due date Nov. 29, 2009)	Number	2.0	0.00	1.00	2.00	3.00	4.00
		Timely submission of Results	Delay in On time submission (from the due date April 30 2010)	Number	2.0	0.00	1.00	2.00	3.00	4.00
		Finalize a Strategic Plan	Delay in Finalizing the Action Plan to make the Strategic Plan for next 5 years (from due date Feb.	Number	1.0	0.00	1.00	2.00	3.00	4.00

\* Mandatory Objective(s)

### Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 07/08	Actual Value for FY 08/09	Target Value for FY 09/10	Projected Value for FY 10/11	Projected Value for FY 11/12
1 New, complementary institutional support to enhance agricultural research and higher education for addressing emerging issues	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	Date	--	--	30/06/2010	31/12/2010	31/03/2012
		Appointment/ re-deployment of staff (joining of new staff)	Number	--	--	5	15	25
	Establishment of a new Central Agricultural University in the North Eastern Hill Region at Barapani/ Shillong	Preparation of EFC Document and submission to Appraisal Agencies	Date	--	--	30/09/2010	31/12/2010	31/12/2011
	Establishment of a new Central Agricultural University in Bundelkhand Region at Jhansi (Uttar Pradesh)	Preparation of EFC Document and submission to Appraisal Agencies	Date	--	--	30/06/2010	30/09/2010	31/12/2011
	Establishment of National Institute on Biotic Stress Management, Raipur (Chhattisgarh)	Preparation of EFC Document and submission to Appraisal Agencies	Date	--	--	30/06/2010	31/03/2011	31/03/2012
	Establishment of Indian Institute of Agricultural Biotechnology, Ranchi	Preparation of EFC Document and submission to Appraisal Agencies	Date	--	--	30/06/2010	31/03/2011	31/03/2012
2 Support for frontier areas of research for enhancing agriculture production and productivity	Projects on gene discovery, bioprospecting and allele mining; nanotechnology, molecular breeding disease diagnostics and vaccines and improving	Programmes conceptualized and in progress	Number	4	4	6	8	10
3 Support for development of technologies for improving soil health and water use efficiency, and farm machinery and agricultural processing	Research programmes on conservation and use efficiency of natural resources	Research Programmes	Number	4	6	8	10	12
	Research on design, development and refinement of technologies in agricultural	Technologies developed	Number	6	7	7	8	8

### Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 07/08	Actual Value for FY 08/09	Target Value for FY 09/10	Projected Value for FY 10/11	Projected Value for FY 11/12
4 Commercialization of technologies and promoting public-private partnership	Capacity building	Programmes organized	Number	5	9	5	5	5
	Partnership development, including licensing of ICAR technologies, for technology transfer/commercialization	Partners identified	Number	10	12	15	20	30
5 Support for quality seed production	Production of breeder seeds and planting materials	Annual Quantity	Tonnes	7162	7393	7500	7600	7800
6 Support for development and identification of new/ improved varieties/ hybrids, production management, and disease diagnostics/ management and value	Development of new/ improved varieties/ hybrids	Number of Varieties/ hybrids	Number	96	76	60	60	60
	Optimization of region-specific feeding schedules	Number of specific feeding schedule	Number	4	5	6	6	6
	Development of diagnostics/vaccines	Number of diagnostics	Number	6	7	8	8	8
	Value addition of animal/fish products	Number of value added	Number	4	5	6	6	6
7 Strengthening of higher agricultural education	Innovations in agricultural education	Number of universities having developed e-learning tools and resources	Number	--	--	10	15	15
	Accreditation/ Extension of Accreditation of agricultural universities	Number of universities granted accreditation/extension of	Number	14	8	8	8	8
	Grant of ICAR International fellowships to Indian and foreign students	Number of fellowships awarded (subject to availability of competent	Number	--	--	6	12	15
	Grant of JRF and SRF to	Number of fellowships granted per year (subject to availability of competent	Number	614	644	600	625	650
	Capacity building and faculty upgradation	Number of teachers trained per year	Number	1200	1500	1200	1000	1000
8 Development and strengthening of Agricultural Universities including	Financial support and monitoring of progress	Amount released	Rupees in Lakh	104	197	250	250	200

### Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 07/08	Actual Value for FY 08/09	Target Value for FY 09/10	Projected Value for FY 10/11	Projected Value for FY 11/12
modernization of AU farms								
9 Support for extension activities of Krishi Vigyan Kendras (KVKs)	Operationalization of e-connectivity of KVKs for speedy dissemination of knowledge to the farmers and	e-connectivity facilities established in KVKs across the country	Number	192	192	200	300	450
	Establishment of demonstration/ training facilities for soil and water testing, rain water harvesting,	Additional KVKs with such facilities	Cumulative Number	--	--	58	189	196



## Section 4: Description and Definition of Success Indicators and Proposed Measurement Methodology

- The success indicators in terms of new institutional and capacity building initiatives are envisaged based upon their timely approvals, timely appointment of Research Management Positions (RMPs), research, teaching and other staff, timely procurements, approval of layout plans, initiation and completion of works (buildings and labs), intake of students, pass-outs, etc.

- The proposed methodology, as indicated in Table 1, will cover performance evaluation in terms of dates of completion of targets (timeliness), physical and financial achievements in terms of numbers and allocation of funds. Objective 1: With respect to 'New, complementary institutional support to enhance agricultural research and higher education for addressing emerging issues' this Department has envisaged establishment of three new institutions under ICAR and two central universities to promote research and higher education in agriculture. The following actions/success indicators are envisaged:

In relation to the Action point Establishment of a National Institute on Abiotic Stress Management at Baramati (Maharashtra) the EFC approval was conveyed in February 2009. In the target period, it is envisaged to make the institute functional. This includes two success indicators, namely, on time approval of layout plan/ initiation of building works; and appointment/ re-deployment of staff (joining of new staff). The target is to complete pre-processes and initiate works by 30.9.2010 and to initiate appointment/redeployment of requisite staff. The trend value is not indicated under the columns 2007-08 and 2008-09 as this a new initiative beginning with effect from 2.12.2008; for which the CCEA approval of EFC was conveyed in February 2009.

In relation to the Action point Establishment of a new Central Agricultural University in the North Eastern Hill Region at Barapani/ Shillong (Meghalaya) it is envisaged to prepare and submit EFC Document to Appraisal Agencies by March 2010. Since, this is also a new initiative, the trend lines for FY 07-08 and 08-09 are obviously left blank. The project value for FY 10-11 pertains to approval and appointment of Vice Chancellor and in the FY 11-12 this pertains to pre-processing and commencement of works.

In relation to the Action point Establishment of a new Central Agricultural University in Bundelkhand Region at Jhansi (Uttar Pradesh), the parameters and proposed measurement methodology for the success indicators will be identical as above.

In relation to the Action point Establishment of National Institute on Biotic Stress Management, Raipur (Chhattisgarh), this is also a new initiative and, therefore, the trend lines for FY 07-08 and 08-09 are not shown. However, the EFC clearance is in process and is envisaged to be completed by 30.6.2010. In the FY 10-11, it is envisaged to complete the process of appointment of Director and also initiate appointment/deployment of other staff as well as the infrastructural development process. During FY 11-12, it is envisaged that the institute will be fully functional.

In relation to the Action Establishment of Indian Institute of Agricultural Biotechnology, Ranchi (Jharkhand) the parameters and proposed measurement methodology for the success indicators will be identical as above.

Objective 2: With respect to "Support for frontier areas of research for enhancing agriculture production and productivity", the actions/success indicators involve support for Projects on gene discovery, bioprospecting and allele mining; nanotechnology, molecular breeding disease diagnostics and vaccines and improving nutrient bioavailability. The trend value indicates number of programmes conceptualized and in progress. An increasing emphasis on development/approval of such programmes is given over the FY 09-10, 10-11 and 11-12.

Objective 3: With respect to "Support for development of technologies for improving soil health and water use efficiency, and farm machinery and agricultural processing", the action points/success indicators cover support for Research programmes on conservation and use efficiency of natural resources, and Research on design, development and refinement of technologies in agricultural engineering in terms of Technologies developed, and Number Research Programmes supported, respectively. Increasing emphasis on technologies related to natural resource management over the years is meant to ensure efficient use of natural resources under the changing situations and climate change.

Objective 4: With respect to "Commercialization of technologies and promoting public-private partnership", Capacity building is envisaged with respect to bringing commercial ethos and business planning and development in agricultural research. The constant trend values for the FY 09-10, 10-11 and 11-12 indicates capacity building at the zonal level in five zones identified under three-tier intellectual property and technology management system established in ICAR. Further, in relation to the action point partnership development, including licensing of ICAR technologies, the increasing numbers over the years indicate higher emphasis on technology transfer through enterprises; thereby contributing to both higher production and improved socio-economics in agriculture sector.

Objective 5: With respect to "Support for quality seed production" the production of breeder seeds and planting materials will be assessed in terms of Annual Quantity of Breeder Seed produced in Tonnes. A marginal rise over the years is envisaged as may be seen from the trend value.

## Section 4: Description and Definition of Success Indicators and Proposed Measurement Methodology

Objective 6: With respect to “Support for development and identification of new/ improved varieties/ hybrids, production management, and disease diagnostics/ management and value addition”, this is identified as the key objective of the Department and the success indicators will cover actions in terms of Development of new/ improved varieties/ hybrids; Optimization of region-specific feeding schedules; Development of and diagnostics and vaccines, Value addition of animal/fish products in terms of numbers of such product/ processes/technologies.

Objective 6: With respect to “Support for development and identification of new/ improved varieties/ hybrids, production management, and disease diagnostics/ management and value addition”, this is identified as the key objective of the Department and the success indicators will cover actions in terms of Development of new/ improved varieties/ hybrids; Optimization of region-specific feeding schedules; Development and validation of diagnostic kits and vaccines, and Value addition of animal/fish products in terms of numbers of such product/ processes/technologies.

Objective 7: With respect to “Strengthening of higher agricultural education”, the action ‘Innovations in agricultural education’ was initiated only in FY 09-10 and, hence trend value has not been indicated for FY 07-08 and 08-09. The success will be measured from the indicator number of universities having developed appropriate e-learning tools and resources. Similarly, Accreditation/ Extension of Accreditation of agricultural universities will require number of universities granted accreditation/extension of accreditation; Grant of ICAR International fellowships, and JRF and SRF to Indian and foreign students, as applicable, will cover number of such fellowships awarded. However, such numbers of grants will also depend upon the availability of competent candidates for the fellowships. The award of international fellowships programme has been initiated only recently and, therefore, no trend value has been indicated for the FY 07-08 and 08-09. Capacity building and faculty upgradation of teachers will be measured from the number of teachers trained per year.

Objective 8: With respect to “Development and strengthening of Agricultural Universities including modernization of AU farms”, the success will be measured in terms of the financial support provided and the monitoring of the financial progress. It is envisaged to modernize the facilities within the Plan period and, therefore, more budgetary releases are targeted in the FY 09-10 and 10-11 as compared to the final year of the Plan period.

Objective 9: With respect to “Support for extension activities of Krishi Vigyan Kendras (KVKs)” it is envisaged to operationalize the e-connectivity of KVKs for speedy dissemination of knowledge to the farmers and other stakeholders. Although e-connectivity facilities were established in some of the KVKs across the country in the FY 2007-08, these were operationalized only in 2008-09. The trend values indicate increasing number of such e-connectivity being operationalized in more number of KVKs so that in the final year of the Plan period 450 KVKs shall be operationalized with e-connectivity to the benefit of a better front-line extension to farmers in their catchments. Further, 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.

## Section 5: Specific Performance Requirements from other Departments

1. Support of Planning Commission is necessary to take up the new initiatives/ proposals of the Department. Timely approvals and also allocation of approved funds is critical

Subsequent to the Annual Plan 2010-11 discussions held in Planning Commission on 13.1.2010 on the proposals/ Justification submitted, budget has been reduced from the proposed Rs. 4000 crore to Rs. 2400 crore, which could hamper the realization of the envisaged success indicators.

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

3. Strengthening of agricultural universities will depend on their initiative/responsiveness, including the timely implementation by the respective SAUs/AUs.

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.

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Minister  
Name of the Ministry

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Secretary  
Department/Ministry

Place: \_\_\_\_\_

Date \_\_\_\_\_