



**Results-Framework Document (RFD)**  
**for**  
**Central Rice Research Institute**  
**(2012-2013)**

**Cuttack-753006 (Odisha)**

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# **Section 1:**

## **Vision, Mission, Objectives and Functions**

### **Vision**

Food and nutritional security through sustainable rice production.

### **Mission**

To develop and disseminate eco-friendly rice production technologies for enhancing productivity and profitability of rice cultivation in all agro-climatic situations.

### **Objectives**

1. Genetic enhancement of rice productivity through conventional and biotechnological means
2. Development of production technologies for profitable rice production
3. Development of protection technologies against diseases and pests
4. Dissemination of rice production technologies and identification of socio-economic issues for policy implications

### **Functions**

- Conduct basic, applied and adaptive research on crop improvement and resource management for increasing and stabilizing rice productivity in all ecologies with special emphasis on rainfed ecosystem and the related abiotic stresses.
- Generation of appropriate technology through applied research for increasing and sustaining productivity and income from rice and rice-based cropping/farming systems in all the ecosystems in view of decline in per capita availability of land.
- Collection, evaluation, conservation and exchange of rice germplasm and distribution of improved plant materials to different national and regional research centres.
- Development of technology for integrated pest, disease and nutrient management for various farming situations.
- Characterization of rice environment in the country and evaluation of physical, biological, socio-economic and intuitional constraints to rice production under different agro-ecological conditions and in farmers' situations and develop remedial measures for their amelioration.
- Maintain database on rice ecology, ecosystems, farming situations and comprehensive rice statistics for the country as a whole in relation to their potential productivity and profitability.
- Impart training to rice research workers, trainers and subject matter/extension specialists on improved rice production and rice-based cropping and farming systems.
- Collect and maintain information on all aspects of rice and rice-based cropping and farming systems in the country.

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

S. No.	Objectives	Weight	Actions	Success indicators	Unit	Weight	Target/Criteria value				
							Excellent	Very good	Good	Fair	Poor
							100%	90%	80%	70%	60%
1.	Genetic enhancement of rice productivity through conventional and biotechnological means	30	Development of elite genotypes (inbreds, hybrids and transgenics)	Breeding lines developed	Number	10	50	45	36	31	27
			Incorporation of resistance to abiotic and biotic stress in elite genotypes (inbreds, hybrids and transgenics)	Genotypes identified	Number	10	5	4	3	2	1
			Serving as National active collection centre for rice germplasm	Characterization , evaluation (morphological and DNA analysis) and registration of germplasm	Number of accessions	5	500	400	300	200	100
			Seed production of released and notified varieties	Breeder seed production	Quintals	5	300	250	200	175	150
2.	Development of production technologies for profitable rice production	20	Development and refinement of agro techniques for rice production	Agro technology for genotypes and/or ecology	Number	10	8	6	4	2	1
			Development/refinement and testing of farm machineries	Machines developed/refined	Number	5	2	1	0	0	0
3.	Development of protection technologies against diseases and pests	20	Collection and identification of microbes (endophytes/pathogens) and insects.	Isolates characterized	Number	6	50	45	40	35	30
			Identification/evaluation of effective bioagents/botanicals/pesticides for control of pests and diseases	Effective formulation identifies for large scale application	Number	6	10	9	8	7	6
			Identification of resistant/tolerant donors for diseases and pests	Donors identified	Number	8	5	4	3	2	1

4.	Dissemination of rice production technologies and identification of socio-economic issues for policy implications	18	Subject Matter Specialists/Trainers' training	Trainings conducted	Number of days	6	32	30	28	25	22
			Technology bulletins in English, Hindi and Oriya languages	Number of publications	Number	5	7	6	5	4	3
			Participation in exhibition and conducting media meet	Number of exhibition and media meet	Number	4	5	4	3	2	1
			Advisory service	Number of visitors attended	Number	3	3500	3200	2800	2500	2100
5.	Efficient functioning of RFD system	3	Timely submission of RFD for 2012-13	On-time submission	Date	2	March 23 2012	March 26 2012	March 27 2012	March 28 2012	March 29 2012
			Timely submission of Results for 2012-13	On-time submission	Date	1	May 1 2013	May 2 2013	May 3 2013	May 6 2013	May 7 2013
	Administrative Reforms	5	Implement ISO 9001	Prepare ISO 9001 action plan	Date	1	June 4 2012	June 5 2012	June 6 2012	June 7 2012	June 8 2012
				Implementation of ISO 9001 action plan	Date	2	Mar. 25 2013	Mar. 26 2013	Mar. 27 2013	Mar. 28 2013	Mar. 29 2013
			Implement mitigating strategies for reducing potential risk of corruption	% of implementation	%	2	100	95	90	85	80
	Improving Internal Efficiency/ responsiveness/ service delivery of Ministry/ Department	4	Implementation of Sevottam	Independent audit of implementation of citizen's charter	%	2	100	95	90	85	80
			Independent audit of implementation of public grievance redressal system	%	2	100	95	90	85	80	

### Section 3:

**Table 2: Trend values of success indicators**

Sr. No.	Objective	Actions	Success indicator	Unit	Actual value for FY 10/11	Actual value for FY 11/12	Target value for FY 12/13	Projected value for FY 13/14	Projected value for FY 14/15
1.	Genetic enhancement of rice productivity through conventional and biotechnological means	Development of elite genotypes (inbreds, hybrids and transgenics)	Breeding lines developed	Number	78	45	45	45	45
		Incorporation of resistance to abiotic and biotic stress in elite genotypes (inbreds, hybrids and transgenics)	Genotypes identified	Number	44	4	4	5	5
		Serving as National Active Collection centre for rice germplasm	Characterization , evaluation (morphological and DNA analysis) and registration of germplasm	Number of accessions	3206	500	400	500	500
		Seed production of released and notified varieties	Breeder seed production	Quintals	300	250	250	250	250
2.	Development of production technologies for profitable rice production	Development and refinement of agro techniques for rice production	Agro technology for genotypes and/or ecology	Number	8	6	4	4	4
		Development/refinement of efficient and cost effective farm machineries	Machines refined/developed	Number	1	2	1	1	1
3.	Development of protection technologies against diseases and pests	Collection and identification of microbes (endophytes/pathogens) and insects.	Isolates characterized	Number	200	220	45	40	40
		Identification/evaluation of effective bioagents/botanicals/pesticides for control of pests and diseases	Effective formulation identifies for large scale application	Number	5	4	9	9	9
		Identification of resistant/tolerant donors for diseases and pests	Donors identified	Number	5	5	4	4	4

4	Dissemination of rice production technologies and identification of socio-economic issues for policy implications	Subject Matter Specialists/Trainers' training	Trainings conducted	Number of days	24	31	30	32	32
		Technology bulletins in English, Hindi and Oriya languages	Number of publications	Number	4	8	6	10	9
		Participation in exhibition and conducting media meet	Number of exhibition and media meet	Number	9	4	4	5	5
		Advisory service	Number of visitors attended	Number	3502	4289	3200	3200	3200
5.	Efficient functioning of RFD system	Timely submission of RFD for 2012-13	On-time submission	Date	-	-	March 26 2012		
		Timely submission of Results for 2012-13	On-time submission	Date	-	-	May 2 2013		
	Administrative Reforms	Implement ISO 9001	Prepare ISO 9001 action plan	Date	-	-	June 5 2012		
			Implementation of ISO 9001 action plan	Date	-	-	Mar. 26 2013		
		Implement mitigating strategies for reducing potential risk of corruption	% of implementation	%	-	-	95		
	Improving Internal Efficiency/ responsiveness/ service delivery of Ministry/ Department	Implementation of Sevottam	Independent audit of implementation of citizen's charter	%	-	-	95		
			Independent audit of implementation of public grievance redressal system	%	-	-	95		

## **Section 4:**

### **Description and Definition of Success Indicators and Proposed Measurement Methodology**

#### **Objective 1:**

Genetic enhancement of yield through conventional and biotechnological means is the main tool for increasing the rice productivity in a sustainable way. This objective will be fulfilled through development of elite genotypes of inbreds, hybrids and transgenics, by incorporating resistance to abiotic and biotic stresses and by assessing grain and nutritional quality. Seed production of released and notified varieties and providing quality seeds as per the indent of DAC, Govt. of India, State Governments and other agencies will be another activity.

#### **Objective 2:**

In order to achieve profitable and higher rice production in all agro climatic situations, development of suitable production technologies for rice and rice based cropping systems, water saving options, nutrient management, soil health management and cost effective efficient farm machineries will be second objective of the institute.

#### **Objective 3:**

Development of protection technologies against rice pests, weeds and diseases will be an important area of the institute. This will be achieved through proper surveillance and development of forewarning systems and management of pests and pathogens by eco-friendly, efficient systems including biocontrol and IPM.

#### **Objective 4:**

The objective of effective dissemination of rice technologies and identification of socio-economic issues for policy implementation will be addressed through Scientist – Extension officers – Farmers linkages, Trainers’ training programme, publications and advisory services.

## **Section 5:**

### **Specific Performance Requirements from other Departments**

1. Quantity of seed production of released and notified varieties will depend on the indents of DAC, Govt. of India, State Governments and other agencies.
2. Rice varietal development will be accomplished with the support from national (State Governments, DAC, PPV&FRA, DBT, DST) and international (IRRI) organizations.
3. Development of rice production technologies will be achieved by taking support of national organizations like DST.
4. Development of rice protection technologies will be done with the help from other departments like DST and state line departments.
5. Successful transfer of technology programme will be addressed with the help of Central (DST, DAC) and state extension departments.



## Section 6: Outcome/Impact of activities of Organization/Ministry

Sl. No.	Outcome/Impact of organization /Ministry	Jointly responsible for influencing this outcome/impact with the following organization(s)/departments/ministry(ies)	Success Indicator(s)	Unit	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
1	Development of elite genotypes (Inbreds, hybrids, transgenics)	State Agril. Departments, DAC, IRRI, Philippines	Breeding lines developed	Number	78	45	45	45	45
2	Incorporation of resistance to abiotic and biotic stress in elite genotypes	IRRI Philippines	Genotypes identified	Number	44	15	15	15	15
3	Serving as National Active Collection centre for rice germplasm	State Agril. Departments, Govt. of Orissa, PPV & FRA	Characterization (morpho., DNA analysis, registration of germplasm)	Number	3206	1500	1500	1500	1500
4	Seed production	DAC, State Governments, Private Seed production Agencies	Breeder seed Production	Quintals	300	250	250	250	250
5	Surveillance and forewarning for disease, pest and weed occurrence in relation to climate change	DAC	Geographical areas surveyed/forewarned	Number	3	2	2	2	2