



# **Results-Framework Document (RFD)**

**for**

**Indian Agricultural Statistics Research  
Institute**

**(2012-2013)**

Address

IASRI, Library Avenue, Pusa,  
New Delhi-110 012

Website ID

[www.iasri.res.in](http://www.iasri.res.in)

## **SECTION 1: Vision, Mission, Objectives and Functions**

### **Vision**

Statistics and Informatics for enriching the quality of agricultural research.

### **Mission**

Undertake research, education and training in agricultural statistics and computer applications for agricultural research.

### **Objectives**

1. To support for research in bio-informatics for enhancing agricultural production and productivity
2. To develop efficient designs and analytical techniques for enhancing the efficiency of agricultural systems research
3. To develop methodology for precise estimation of important parameters related to agriculture/allied areas
4. To provide Information Communication Technology activities for enhancing efficiency of the system
5. To develop modeling and forecasting techniques for biological phenomenon
6. To impart training for human resources development

### **Functions**

1. Undertaking basic, applied, adaptive, strategic and anticipatory research in agricultural statistics and related fields and use these researches in meeting challenges and improving quality of agricultural research
2. Conduct post-graduate teaching and in-service, customized and sponsored training courses in Agricultural Statistics and Computer Applications at National and International level so as to be a lead centre of excellence in human resource development
3. Providing methodological support in strengthening National Agricultural Statistics System by establishing linkages with State departments of agriculture and allied fields, other research institutions, industry etc
4. Development of Agricultural Knowledge Management and Information System for National Agricultural Research System
5. Providing advisory and consultancy services for strengthening the National Agricultural Research System and undertaking sponsored research and consultancy for National and International organizations

**SECTION 2:**  
**Inter se Priorities among key Objectives, Success Indicators and Targets**

Objectives	Weight (%)	Actions	Success Indicators	Unit	Weight (%)	Target/Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
To Support for research in bio-informatics for enhancing agricultural production and productivity	19	Establishment of a new National Agricultural Bio-informatics Grid (NABG) and undertaking collaborative research projects with Institutions under NARS	Establishment of grid and collaborative research projects	Date	11	25/03/13	27/03/13	29/03/13	30/03/13	31/03/13
		Development of methodologies and tools for the analysis of biological data	Number of methodologies and tools developed	Number	8	3	2	1	0	0
To develop efficient designs and analytical techniques for enhancing the efficiency of agricultural systems research	19	Development of efficient designs and analytical techniques for agricultural systems research and/or making them available on web	Methodologies developed, designs generated and catalogued and web resources developed	Number	12	4	3	2	1	0

		Support to three AICRPs/ network projects in planning and designing of experiments and analysis of experimental data	Number of experimental trials analysed	Number	7	60	50	40	30	20
To develop methodology for precise estimation of important parameters related to agriculture/allied areas	9	Development and application of small area estimation techniques in agricultural/allied surveys	Methodology development and application	Date	5	25/03/13	26/03/13	27/03/13	29/03/13	31/03/13
		Development and application of traditional/remote sensing and GIS based techniques for estimation of parameters in agricultural/allied areas	Methodology development and application	Date	4	25/03/13	26/03/13	27/03/13	29/03/13	31/03/13
To provide Information Communication Technology activities for enhancing efficiency of the system	19	Development of IS/DSS/Expert System/Software	IS/ESS/ Software	Number	19	2	1	0	0	0

To develop modeling and forecasting techniques for biological phenomenon	9	Development of pest/disease forewarning models in important crops	Model development and validation	Number	3	2	1	0	0	0
		Development of forecasting models for crops/fisheries	Model development and validation	Number	3	2	1	0	0	0
		Development of forecasting models based on time series data using advance statistical techniques	On-time completion	Date	3	25/02/13	28/02/13	05/03/13	10/03/13	15/03/13
To impart training for human resources development	13	Customized and sponsored training programmes	Number of training programmes organized	Number	13	5	4	3	2	1
Efficient functioning of the RFD system	03	Timely submission of RFD for 2012-13	On-time submission	Date	02	23/03/12	26/03/12	27/03/12	28/03/12	29/03/12
		Timely submission of results for 2012-13	On-time submission	Date	01	01/05/13	02/05/13	03/05/13	06/05/13	07/05/13
Administrative reforms	05	Implement <i>ISO 9001</i>	Prepare ISO 9001 action plan	Date	01	04/06/12	05/06/12	06/06/12	07/06/12	08/06/12
			Implementation of ISO 9001 action plan	Date	02	25/03/13	26/03/13	27/03/13	28/03/13	29/03/13

		Implement mitigating strategies for reducing potential risk of corruption	% of implementation	%	02	100	95	90	85	80
Improving internal efficiency / responsiveness / service delivery of Ministry / Department	04	Implementation of Sevottam	Independent Audit of implementation of Citizen's Charter	%	02	100	95	90	85	80
			Independent Audit of implementation of public grievance redressal system	%	02	100	95	90	85	80

**SECTION 3:  
Trend Values of the success indicators**

<b>Objectives</b>	<b>Actions</b>	<b>Success Indicators</b>	<b>Unit</b>	<b>Actual value for FY 10/11</b>	<b>Actual value for FY 11/12</b>	<b>Target value for FY 12/13</b>	<b>Projected value for FY 13/14</b>	<b>Projected value for FY 14/15</b>
To support for research in bio-informatics for enhancing agricultural production and productivity	Establishment of a new National Agricultural Bio-informatics Grid (NABG) and undertaking collaborative research projects with Institutions under NARS	Establishment of grid and collaborative research projects	Date	25/03/11	11/01/12	27/03/13	25/03/14	-
	Development of methodologies and tools for the analysis of biological data	Number of methodologies and tools developed	Number	Program did not exist	Program did not exist	2	3	3
To develop efficient designs and analytical techniques for enhancing the efficiency of agricultural systems research	Development of efficient designs and analytical techniques for agricultural systems research and/or making them available on web	Methodologies developed, designs generated and catalogued and web resources developed	Number	5	5	3	4	4

	Support to three AICRPs/ network projects in planning and designing of experiments and analysis of experimental data	Number of experimental trials analysed	Number	60	75	50	90	100
To develop methodology for precise estimation of important parameters related to agriculture/allied areas	Development and application of small area estimation techniques in agricultural/ allied surveys	Methodology development and application	Date	25/03/11	03/02/12	26/03/13	25/03/14	25/03/15
	Development and application of traditional/ remote sensing and GIS based techniques for estimation of parameters in agricultural/allied areas	Methodology development and application	Date	25/03/11	23/03/12	26/03/13	25/03/14	25/03/15
To provide Information Communication Technology activities for enhancing efficiency of the system	Development of IS/DSS/Expert System/ Software	IS/ESS/ Software	Number	1	2	1	2	2
To develop modeling and forecasting techniques for biological	Development of pest/disease forewarning models in important crops	Model development and validation	Number	Program did not exist	2	1	2	-



phenomenon	Development of forecasting models for crops/fisheries	Model development and validation	Number	Program did not exist	Program did not exist	1	2	2
	Development of forecasting models based on time series data using advance statistical techniques	On-time completion	Date	Program did not exist	Program did not exist	28/02/13	05/02/14	05/02/15
To impart training for human resources development	Customized and sponsored training programmes	Number of training programmes organized	Number	5	5	4	5	5
Efficient functioning of the RFD system	Timely submission of RFD for 2012-13	On-time submission	Date	-	-	26/03/12	-	-
	Timely submission of results for 2012-13	On-time submission	Date	-	-	02/05/13	-	-
Administrative reforms	Implement ISO 9001	Prepare ISO 9001 action plan	Date	-	-	05/06/12	-	-
		Implementation of ISO 9001 action plan	Date	-	-	26/03/13	-	-

	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**

With respect to support for research in bio-informatics for enhancing agricultural production and productivity, methodologies and tools for the analysis of biological data are proposed to be developed. Collaborative research projects shall be undertaken with institutions under NARS over National Agricultural Bio-informatics Grid (NABG) shall be established.

**Objective-2**

Under this head it is proposed to develop efficient and robust designs both in terms of cost and precision and appropriate analytical techniques for experimental data. Methods of constructions of designs would be developed and catalogues of efficient designs would be prepared. Indian NARS Statistical Computing Portal and web resources on design of experiments would be strengthened. Besides, support to three AICRPs will be provided by way of planning and designing of experiments and analysis of experimental data.

**Objective-3**

Established survey sampling techniques like small area estimation technique shall be applied on the available data for estimation of crop yield at district level. Appropriate methodology shall be developed for estimation of cotton production estimation based on a few pickings. Area under agro-forestry shall be estimated using Remote Sensing and GIS.

**Objective-4**

Information Communication Technology activities for enhancing efficiency of the system will be achieved through development of information system/decision support system/expert system, development of a Web Enabled Statistical Package for Factorial Experiments (SPFE 2.0).

**Objective-5**

Under this objective, models for forecasting fish production will be developed. Also, non-linear model for forecasting of rice production will be developed. Weather-based regression models with time-varying coefficients shall be developed along with confidence bands and their application to wheat yield data. Besides, pest disease, forecasting models will be developed.

**Objective-6**

Human resources development shall be achieved through up-gradation of skills of in service candidates by organizing customized training programmes.

**SECTION 5:**  
**Specific Performance Requirements from other Departments**

1. Approval of layout plans and execution of works will require commitment and timeliness on the part of the Works Departments like CPWD etc.
2. Timely clearance of all tender documents related to infrastructure development is needed from World Bank
3. Feedback from the user organization will help in fine tuning the various models and training programmes
4. Sponsoring the officials by the concerned State Department of Agriculture for the training programme is critical for the success of the programmes.

**SECTION 6:**  
**Outcome / Impact of activities of organization ministry**

<b>Outcome / Impact of organisation /RCs</b>	<b>Jointly responsible for influencing this outcome / impact with the following organisation (s) / departments/ministry(ies)</b>	<b>Success Indicator(s)</b>	<b>Unit</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>
Improving statistical computing for appropriate research data analysis	ICAR Institutes/ SAUs/AICRPs	Increase in number of service oriented computing modules/macros for customized analysis/web enabled software modules	Number	2	1	1	1	1
Enhancing efficiency of the system through Information Communication Technology	Post Graduate School of IARI, New Delhi.  Directorate of Maize Research, New Delhi	Increased percentage accessibility of information	%	5	5	5	5	5
Human resource development	Various ICAR Institutes, State Govt. Officials in Directorate of Economics and Statistics and Ministry of Statistics and Programme Implementation	Number of quality personnel trained with upgraded statistical skills	Number	97	144	170	185	200