Results-Framework Document (RFD)

for

National Research Centre on Plant Biotechnology

(2014-2015)

Address: LBS Bldg., IARI Campus, New Delhi – 110012

Website ID: www.nrcpb.org

Section 1: Vision, Mission, Objectives and Function

Vision:

Contributing to sustainable food, nutritional, ecological and livelihood security of the country through development and deployment of tools and techniques of modern plant biotechnology

Mission:

Enhancing and sustaining crop productivity and quality by generating and harnessing the genomic, bioinformatic and trained human resources in harmony with ecology and environment

Objectives:

1. Strengthening frontier molecular biology research for enhancing agricultural production and productivity
2. Capacity building in plant biotechnology

Functions:

- To undertake plant molecular biology research for understanding molecular mechanisms underlying basic biological processes
- To devise tools and techniques of biotechnology for crop improvement
- To apply the knowledge of genomics and bioinformatics for advancing agricultural production
- To serve as a national lead centre for plant molecular biology and biotechnology research and create trained manpower in the area of plant biotechnology.

Section 2: *Inter se* priorities among Key objectives, Success Indicators and Targets

S. No.	Objectives	Wt	Actions	Success Indicators	Unit	Wt	Targets/ Criteria Value				
							Excellent	V. Good	Good	Fair	Poor
							100	90	80%	70%	60%
1.	Strengthening frontier molecular biology research for enhancing agricultural production and productivity	58	Generation of genomic resources base for gene discovery and crop genetic enhancement	Generation of genomic resources	Mb	10	540	450	360	270	180
				Generation of EST sequences	Mb	10	840	700	560	420	280
			Identification and isolation of useful genes and promoters for the development of transgenics	Cloning and characterization of genes	Number	10	15	12	9	6	3
				Designing of constructs for transgenic development	Number	10	10	8	6	4	2
				Mapping/tagging of agronomically important QTLs/genes	Number	8	8	7	6	5	4
			Maintenance and up gradation of GM crop & plant genome database at nrcpb.org	Volume of data added as genomic and EST resources	Number (lakhs)	10	25	20	15	10	5
2	Capacity building in plant biotechnology	22	Human resource development	M.Sc. degree awarded	Number	8	6	5	4	3	2
				Ph.D. degree awarded	Number	8	4	3	2	1	0
				Long term trainees (training on plant biotechnology research at NRCPB)	Number	6	42	35	28	21	14
*	Publication/Documentation	5	Publication of the research articles in the journals having the NAAS rating of 6.0 and above	Research articles published	No.	3	38	35	32	29	26
			Timely publication of the Institute Annual Report (2013-2014)	Annual Report published	Date	2	30.06.2014	02.07.2014	04.07.2014	07.07.2014	09.07.2014
	Fiscal resource management	2	Utilization of released plan fund	Plan fund utilized	%	2	98	96	94	92	90
	Efficient Functioning of the		Timely submission of	On-time submission	Date	2	May 15,	May 16,	May 19,	May 20,	May 21,

RFD System	3	Draft RFD for 2014-2015 for Approval				2014	2014	2014	2014	2014
		Timely submission of Results for 2013-2014	On-time submission	Date	1	May 1 2014	May 2 2014	May 5 2014	May 6 2014	May 7 2014
Enhanced Transparency / Improved Service delivery of Ministry/Department	3	Rating from Independent Audit of implementation of Citizens' / Clients' Charter (CCC)	Degree of implementation of commitments in CCC	%	2	100	95	90	85	80
		Independent Audit of implementation of Grievance Redress Management (GRM) system	Degree of success in implementing GRM	%	1	100	95	90	85	80
Administrative Reforms	7	Update organizational strategy to align with revised priorities	Date	Date	2	Nov.1 2014	Nov.2 2014	Nov.3 2014	Nov.4 2014	Nov.5 2014
		Implementation of agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC)	% of implementation	%	1	100	90	80	70	60
		Implementation of agreed milestones for ISO 9001	% of implementation	%	2	100	95	90	85	80
		Implementation of milestones of approved Innovation Action Plans (IAPs)	% of implementation	%	2	100	90	80	70	60

Section 3: Trend Values of the Success Indicators

S. No.	Objective	Action	Success Indicator	Unit	Actual Value for FY 12-13	Actual Value for FY 13-14	Target Value for FY 14-15	Projected Value for FY 15-16	Projected Value for FY 16-17
1.	Strengthening frontier molecular biology research for enhancing agricultural production and productivity	Generation of genomic resources base for gene discovery and crop genetic enhancement	Generation of genomic resources	Mb	200	200	450	500	500
			Generation of EST sequences	Mb	620	600	700	750	750
		Identification and isolation of useful genes and promoters for the development of transgenics	Cloning and characterization of genes	Number	5	12	12	15	15
			Designing of constructs for transgenic development	Number	5	5	8	8	8
			Mapping/tagging of agronomically important QTLs /genes	Number	6	8	7	8	8
		Maintenance and up gradation of GM crop & plant genome database at nrcpb.org	Volume of data added as genomic and EST resources	Number (millions)	18	40	20	25	25
2	Capacity building in plant biotechnology	Human resource development	M.Sc. degree awarded	Number	5	4	5	4	4
			Ph.D. degree awarded	Number	2	3	3	3	4
			Long term trainees (training on plant biotechnology research at NRCPB)	Number	47	38	35	37	38
*	Publication/Documentation	Publication of the research articles in the journals having the NAAS rating of 6.0 and above	Research articles published	No.	35	35	35	36	36
		Timely publication of the Institute Annual Report (2013-2014)	Annual Report published	Date	-	-	02.07.2014	-	-
	Fiscal resource management	Utilization of released plan fund	Plan fund utilized	%	100	100	96	96	96
	Efficient Functioning of the RFD System	Timely submission of Draft RFD for 2014-2015 for Approval	On-time submission	Date	-	-	May 16, 2014	-	-
		Timely submission of Results for 2013-2014	On-time submission	Date	-	-	May 2 2014	-	-
	Enhanced Transparency / Improved Service delivery of Ministry/Department	Rating from Independent Audit of implementation of Citizens' / Clients' Charter (CCC)	Degree of implementation of commitments in CCC	%	-	-	95	-	-
		Independent Audit of implementation of Grievance Redress Management (GRM) system	Degree of success in implementing GRM	%	-	-	95	-	-

	Administrative Reforms	Update organizational strategy to align with revised priorities	Date	Date	-	-	Nov.2 2014	-	-
		Implementation of agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC)	% of implementation	%	-	-	90	-	-
		Implementation of agreed milestones for ISO 9001	% of implementation	%	-	-	95	-	-
		Implementation of milestones of approved Innovation Action Plans (IAPs)	% of implementation	%	-	-	90	-	-

Section 4 (a): Acronyms

S.No	Acronym	Description
1	EST	Expressed Sequence Tags
2	Mb	Mega base pair
3	QTL	Quantitative Trait Loci
4	GM	Genetically Modified
5	NRCPB	National Research Centre on Plant Biotechnology
6	M. Sc.	Master of Science
7	Ph. D.	Doctorate in Philosophy
8	ASRB	Agricultural Scientist Recruitment Board
9	CSIR	Council for Scientific and Industrial Research
10	SAUs	State Agricultural Universities
11	NARS	National Agricultural Research System

Section 4 (b): Description and definition of success indicators and proposed measurement methodology

Sl. No.	Success Indicator	Description	Definition	Measurement	General Comments
1	Generation of genomic resources	Genome sequencing projects are the basis for many aspects of molecular biology and precise crop breeding or enhancement such as gene discovery, isolation and marker development	Total no. of bases sequenced in different crops genome	Mb	-
2	Generation of EST sequences	This is also sequence information related or specific to functional aspects of gene	Total no. of bases sequenced in different ESTs of different crops and microbes under stress	Mb	-
3	Cloning and characterization of genes	This is an important step in unraveling the role of individual genes	Total no. of genes cloned and characterized	Number	-
4	Designing of constructs for transgenic development	This is an important step in transgenic development which are required for both functional validation of genes and crop improvement	How many number of transgenics have been developed	Number	-
5	Mapping/tagging of agronomically important QTLs /genes	This is an important step for dissecting agronomically and nutritionally important traits which have a complex inheritance pattern	Total no. of QTLs and genes, which are mapped in different mandate crops	Number	-
6	Volume of data added as genomic and EST resources	This is major resource repository of all the sequence related information available across the world	How much volume (number of entries) of data is incorporated in the database	Number (millions)	-
7	M. Sc. degree awarded	Pertains to human resource development which is one of the major mandate of the organization	No. of students awarded M. Sc. degree during the year	Number	-
8	Ph.D. degree awarded	Pertains to human resource development which is one of the major mandate of the organization	No. of students awarded Ph.D. degree during the year	Number	-
9	Long term trainees (training on plant biotechnology research at NRCPB)	Pertains to human resource development which is one of the major mandate of the organization; generates revenue	No. of long term trainees trained for dissertation work during the academic year	Number	-

Section 5: Specific performance requirement from other department that is critical for delivering agreed results

Location Type	State	Organization Type	Organization Name	Relevant Success Indicator	What is your requirement from this organization	Justification for this requirement	Please quantify your requirement from this Organization	What happens if your requirement is not met?
Urban	Delhi	Funding Agency	Department of Biotechnology	Generation of genomic resources	Project funding	Project oriented additional funding	10 %	No major impact
Urban	Delhi	Funding Agency	Department of Science and Technology	Generation of EST sequences	Project funding	Project oriented additional funding	3 %	No major impact

Section 6:
Outcome/Impact of activities of Department/Ministry

Sl. No.	Outcome/ Impact	Jointly responsible for influencing this outcome / impact with the following organization(s)/department(s)/ministry(ies)	Success Indicators	Unit	2012-13	2013-14	2014-15	2015-16	2016-17
1	Per cent students employed	ASRB/ Public funded Scientific Res. Institutes and Universities like CSIR, Central Universities, SAUs etc./ Biotechnology companies	1. M.Sc. degree awarded	Per cent	100	100	NA	NA	NA
			2. Ph.D. degree awarded	Per cent	100	100	NA	NA	NA
2	Knowledge enhancement after imparting training	NA	Long term trainees (training on plant biotechnology research at NRCPB)	Per cent	Data not available	48.78	NA	NA	NA