



Government of India

**R F D**

(Results-Framework Document)  
for

Crop Science

(2014-2015)

## Section 1: Vision, Mission, Objectives and Functions

### Vision

Productivity enhancement in field crops.

### Mission

Developing high yielding crop cultivars (varieties/hybrids) endowed with tolerance to various biotic and abiotic stresses.

### Objectives

- 1 Development of improved cultivars for enhancing productivity of field crops.
- 2 Identification of appropriate crop production & protection technologies.
- 3 Technology dissemination and capacity building.

### Functions

- 1 Research for developing improved cultivars in field crops (food, fodder, oilseeds, pulses, fibre and sugar crops) with better nutritional quality and tolerance to biotic and abiotic stresses.
- 2 Management of plant, microbes and insect genetic resources.
- 3 Production of breeder seed as per indent of DAC.
- 4 Strengthening frontier research in identified areas/ programmes.
- 5 Adaptive research, technology assessment, and technology transfer to end users to bridge the yield gaps.
- 6 Human resource development/capacity building in the frontier areas of research in crop science.

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

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
[1] Development of improved cultivars for enhancing productivity of field crops.	60.00	[1.1] Evaluation and conservation of genetic material	[1.1.1] Germplasm and breeding lines evaluated	Number	8.00	39000	37000	35000	33000	31000
			[1.1.2] Germplasm conserved in Long Term Storage	Number	5.00	5500	5000	4500	4000	3500
			[1.1.3] Lines identified and registered for unique traits	Number	7.00	90	80	70	60	50
		[1.2] Cloning and characterization of genes	[1.2.1] Genes cloned and characterized	Number	4.00	15	12	9	6	3
		[1.3] Development of improved cultivars	[1.3.1] Entries tested in AICRP multi-location trials	Number	8.00	2600	2500	2400	2300	2200
			[1.3.2] Varieties identified by AICRP Varietal Identification Committees	Number	14.00	69	62	55	48	41
		[1.4] Quality seed production	[1.4.1] Breeder seed produced	quintal	14.00	90000	85000	80000	75000	70000
[2] Identification of appropriate crop production & protection technologies.	17.00	[2.1] Development and testing of new technologies	[2.1.1] New technologies developed and tested	Number	17.00	150	135	120	105	90
[3] Technology dissemination and capacity building.	10.00	[3.1] Demonstrations of new varieties and technologies	[3.1.1] Front line demonstrations conducted	Number	6.00	12500	12000	11500	11000	10500
		[3.2] Training programmes organization	[3.2.1] Farmers' trainings/fairs organized	Number	4.00	300	275	250	225	200

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

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
* Efficient Functioning of the RFD System	3.00	Timely submission of Draft RFD for 2014-2015 for Approval	On-time submission	Date	2.0	15/05/2014	16/05/2014	19/05/2014	20/05/2014	21/05/2014
		Timely submission of Results for 2013-2014	On-time submission	Date	1.0	01/05/2014	02/05/2014	05/05/2014	06/05/2014	07/05/2014
* Enhanced Transparency / Improved Service delivery of Ministry/Department	3.00	Rating from Independent Audit of implementation of Citizens' / Clients' Charter (CCC)	Degree of implementation of commitments in CCC	%	2.0	100	95	90	85	80
		Independent Audit of implementation of Grievance Redress Management (GRM) system	Degree of success in implementing GRM	%	1.0	100	95	90	85	80
* Administrative Reforms	7.00	Update organizational strategy to align with revised priorities	Date	Date	2.0	01/11/2014	02/11/2014	03/11/2014	04/11/2014	05/11/2014
		Implementation of agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC).	% of Implementation	%	1.0	100	90	80	70	60
		Implementation of agreed milestones for ISO 9001	% of implementation	%	2.0	100	95	90	85	80
		Implementation of milestones of approved Innovation Action Plans (IAPs).	% of implementation	%	2.0	100	90	80	70	60

\* Mandatory Objective(s)

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

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] Development of improved cultivars for enhancing productivity of field crops.	[1.1] Evaluation and conservation of genetic material	[1.1.1] Germplasm and breeding lines evaluated	Number	--	37972	37000	37000	37000
		[1.1.2] Germplasm conserved in Long Term Storage	Number	3909	6502	5000	5000	5000
		[1.1.3] Lines identified and registered for unique traits	Number	--	101	80	85	90
	[1.2] Cloning and characterization of genes	[1.2.1] Genes cloned and characterized	Number	5	13	12	12	14
	[1.3] Development of improved cultivars	[1.3.1] Entries tested in AICRP multi-location trials	Number	--	2637	2500	2500	2500
		[1.3.2] Varieties identified by AICRP Varietal Identification Committees	Number	102	89	62	62	62
	[1.4] Quality seed production	[1.4.1] Breeder seed produced	quintal	99270	96372	85000	85000	85000
[2] Identification of appropriate crop production & protection technologies.	[2.1] Development and testing of new technologies	[2.1.1] New technologies developed and tested	Number	--	158	135	140	140
[3] Technology dissemination and capacity building.	[3.1] Demonstrations of new varieties and technologies	[3.1.1] Front line demonstrations conducted	Number	--	12872	12000	12000	12000
	[3.2] Training programmes organization	[3.2.1] Farmers' trainings/fairs organized	Number	--	328	275	275	275

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

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
* Efficient Functioning of the RFD System	Timely submission of Draft RFD for 2014-2015 for Approval	On-time submission	Date	--	--	16/05/2014	--	--
	Timely submission of Results for 2013-2014	On-time submission	Date	--	--	02/05/2014	--	--
* 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	--	--	02/11/2014	--	--
	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	--	--

\* Mandatory Objective(s)

## Section 4: Acronym

Sl.No	Acronym	Description
1	AICRP	All India Coordinated Research Project
2	DAC	Department of Agriculture and Cooperation
3	FLD	Front Line Demonstration
4	NBPGR	National Bureau of Plant Genetic Resources

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

Sl.No	Success indicator	Description	Definition	Measurement	General Comments
1	[1.1.1] Germplasm and breeding lines evaluated	Source material for the improved varieties to be evaluated	Material generated from the basic germplasm	Number of breeding lines evaluated	May not increase with every passing year.
2	[1.1.2] Germplasm conserved in Long Term Storage	Diverse germplasm is the basic requirement to bred new improved varieties	Basic genetic resource for crop improvement	Number of germplasm/lines conserved	May not increase with every passing year
3	[1.1.3] Lines identified and registered for unique traits	Germplasm/breeding lines are evaluated to select the useful germplasm/breeding lines to be utilized in crop improvement programme. Such trait specific germplasm /lines are registered with NBPGR, New Delhi	Germplasm/breeding lines identified for specific traits such as resistant to a particular biotic stress or tolerant to abiotic stress or quality parameters	Number of such lines registered with NBPGR	May not increase with every passing year
4	[1.2.1] Genes cloned and characterized	This is an important step in unraveling the role of individual genes	Total number of genes cloned and characterized	Number	-
5	[1.3.1] Entries tested in AICRP multi-location trials	AICRP centres, after testing their breeding lines/entries in common varietal trials, contribute entries to AICRP trials for multilocation testing.	Promising breeding lines being tested in AICRP multilocation trials	Number of such breeding lines/entries tested	May not increase with every passing year.



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

SI.No	Success indicator	Description	Definition	Measurement	General Comments
6	[1.3.2] Varieties identified by AICRP Varietal Identification Committees	Breeding lines tested along with checks in multilocation trials through All India Coordinated Research Projects and the best performing entries compared to checks are identified as new improved varieties for release.	Best performing entries identified as a new variety for release	Number of such varieties identified	Targets for varieties identified given in Section 2 and their respective trend values in Section 3 may vary as the identification of varieties depend upon the availability of superior material with respect to yield, resistance/tolerance to biotic and abiotic stresses over the existing varieties.
7	[1.4.1] Breeder seed produced	Produced from nucleus seed, breeder seed is the starting point in seed chain of producing quality seeds for farmers	Genetically pure seed produced under direct control of plant breeder and which provides the source for the initial and recurring production of foundation seed.	Quantity produced (quintals)	Quantity may vary as per indent from DAC
8	[2.1.1] New technologies developed and tested	The Crop Science Division through its institutes is continuously developing new production and protection technologies for improving productivity and production of field crops. Once developed, these technologies need to be tested and validated before dissemination.	New technique/method/tool/agent/molecule etc which can be used to improve crop production.	The number of technologies tested and recommended is indicator of the success.	

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

SI.No	Success indicator	Description	Definition	Measurement	General Comments
9	[3.1.1] Front line demonstrations conducted	Dissemination of scientific knowledge /technologies is an important activity of the Crop Science Division. The institutes under Crop Science Division conducts FLDs. Through front line demonstrations (FLD), the new varieties/hybrids, new products and technological innovations are demonstrated to farmers.	Demonstration of new variety/technology/package of practices etc. on farmers field under close supervision of scientist.	The number of FLDs conducted are indicators to measure the progress of this success indicator	
10	[3.2.1] Farmers' trainings/fairs organized	Capacity building of stakeholders regarding advancements in farm technologies is an important activity of the Crop Science Division. The institutes under Crop Science Division conducts farmers training programmes/organize farmers' fairs etc.	Training is an organized activity to impart latest information/knowledge to the participants about the crop production and protection technologies (in case of Crop Science Division). Farmers' fair is also an organized activity where farmers are exposed to the latest available technologies at one place.	The number of training programmes /farmers' fairs organized are indicators to measure the progress of this success indicator.	

## Section 5 : Specific Performance Requirements from other Departments

Location Type	State	Organisation Type	Organisation Name	Relevant Success Indicator	What is your requirement from this organisation	Justification for this requirement	Please quantify your requirement from this Organisation	What happens if your requirement is not met.
Central Government		Other	Other	[1.4.1] Breeder seed produced  [3.1.1] Front line demonstrations conducted	Indent for quantity of breeder seed  Allotment of FLD	Variety wise indent for breeder seed  FLD allotment to centres	Quantity of breeder seed is produced as per indent  Number of FLD allotted	Less or more quantity of breeder seed will be produced  Number of FLD conducted may vary as per allotment

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

Outcome/Impact of Department/Ministry	Jointly responsible for influencing this outcome / impact with the following department (s) / ministry(ies)	Success Indicator	Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
1 Availability of new varieties	DAC	New varieties developed	Number	102	89	62	62	62