



# Results- Framework Document (RFD)

for

ICAR-Directorate of Medicinal and  
Aromatic Plants Research

(2014 –2015)

**Address: Boriavi, Anand -387 310, Gujarat**  
**Website ID: [www.dmapr.org.in](http://www.dmapr.org.in)**

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

### **Vision**

Provide “Health for all” to ever-increasing world population through ensuring quality raw drug production and supply.

### **Mission**

To contribute for sustainable production of quality medicinal and aromatic plants through development of new varieties, good agricultural practices, quality assessment methodologies and using frontier cutting age technologies such as information technology and biotechnology.

### **Objectives**

1. Crop improvement of medicinal and aromatic plants
2. Development of good agricultural practices

### **Functions**

- To plan, coordinate, implement and monitor R&D programmes for sustainable production of medicinal and aromatic plants and resource conservation.

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

SI. No.	Objectives	Weight	Actions	Success Indicators	Unit	Weight	Target/Criteria value				
							Excellent	Very Good	Good	Fair	Poor
							100%	90%	80%	70%	60%
1	Crop improvement of medicinal and aromatic plants	35	Evaluation of genetic resources	Germplasm evaluated	Nos.	25	34	28	22	16	10
			Development of improved varieties and elite germplasm	Breeding lines/germplasm introduced in AICRP/ varieties released/ elite material registered	Nos.	10	6	5	4	3	2
2	Development of good agricultural practices	45	Development of good agricultural practices (GAP) for individual medicinal and aromatic plant species	Technologies developed for good agricultural practices	Nos.	10	5	4	3	2	1
			Production of quality seeds/ planting materials of medicinal and aromatic plants	Quantity of planting material produced	Nos.	15	97,200	81,000	64,800	48,600	32,400
			Standard operating protocol (SOP) development for characterization of bioactive marker compound	HPLC/HPTLC/GC MS/ LCMS/SFE/CPC method developed	Nos.	20	7	6	5	4	3
	* 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	05	04	03	02	01
			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 RFD System	3	Timely submission of Draft RFD for 2014-2015 for Approval	On-time submission	Date	2	May 15, 2014	May 16, 2014	May 19, 2014	May 20, 2014	May 21, 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

\* Mandatory Objectives (s)

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

Sl. No.	Objectives	Actions	Success Indicators	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	Crop improvement of medicinal and aromatic plants	Evaluation of genetic resources	Germplasm evaluated	Nos.	14	26	28	30	32
		Development of improved varieties and elite germplasm	Breeding lines/germplasm introduced in AICRP/ varieties released/ elite material registered	Nos.	4	4	5	5	6
2	Development of good agricultural practices	Development of good agricultural practices (GAP) for individual medicinal and aromatic plant species	Technologies developed for good agricultural practices	Nos.	2	3	4	4	5
		Production of quality seeds/ planting materials of medicinal and aromatic plants	Quantity of planting material produced	Nos.	79,000	84,250	81,000	82,000	83,000
		Standard operating protocol (SOP) development for characterization of bioactive marker compound	HPLC/HPTLC/GCMS/ LCMS/SFE/CPC method developed	Nos.	5	6	6	6	7
	* Publication/ Documentation	Publication of the research articles in the journals having the NAAS rating of 6.0 and above	Research articles published	No.	4	5	4	5	6
		Timely publication of the Institute Annual Report (2013-2014)	Annual Report published	Date	-	-	02.07.14	-	-

	* Fiscal resource management	Utilization of released plan fund	Plan fund utilized	%	100	99.35	96	99.50	99.75
	* 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**

<b>Sl.No.</b>	<b>Acronym</b>	<b>Description</b>
1.	AICRP	All India Coordinated Research Project
2.	CPC	Centrifugal Partition Chromatography
3.	DAC	Department of Agriculture and Cooperation
4.	GAP	Good Agricultural Practices
5.	GCMS	Gas Chromatography–Mass Spectrometry
6.	HPLC	High-Performance Liquid Chromatography
7.	HPTLC	High Performance Thin Layer Chromatography
8.	KVKs	Krishi Vigyan Kendras
9.	LCMS	Liquid Chromatography–Mass Spectrometry
10.	MAPs	Medicinal and Aromatic Plants
11.	NBPGR	National Bureau of Plant Genetic Resources
12.	NGOs	Non-Governmental Organizations
13.	NHB	National Horticulture Board
14.	NHM	National Horticulture Mission
15.	NMPB	National Medicinal Plant Board
16.	R & D	Research and Development
17.	SAU	State Agricultural University
18.	SFE	Supercritical Fluid Extraction
19.	SMPB	State Medicinal Plant Board
20.	SOP	Standard Operating Protocol

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

SI.No.	Success Indicator	Description	Definition	Measurement	General Comments
1.	Germplasm evaluated	Diverse germplasm is the basic requirement to bred new improved varieties	Basic genetic resource for crop improvement	Number of germplasm samples/accessions	
2.	Breeding lines/germplasm introduced in AICRP/ varieties released/ elite material registered	Breeding lines tested along with checks in multi-location trials through All India Coordinated Research Projects and the best performing entries compared to checks are identified as new improved varieties for release. The germplasm or breeding lines that are having a specific traits of scientific/ academic/commercial values identified for registration	Best performing entries identified as a new variety for release. The distinct germplasm/ breeding line having valuable traits identified for registration as valuable germplasm at NBPGR, New Delhi	Number of such varieties identified. Number of germplasm/ breeding line registered.	Targets for varieties identified given in Section 2 and their respective trend values in Section 3 may vary as the identification of varieties/ germplasm depend upon the availability of superior material with respect to yield, biotic and abiotic resistance/tolerance over the existing varieties
3.	Technologies developed for good agricultural practices	Certain ideas and technologies may be directly developed that may be combined with other technologies to form good agricultural practices for production of medicinal and aromatic plants	To develop protocols and production technologies in medicinal plants. Development of methods to control pest and diseases.	Number of technologies/ methods GAP / database / value added products developed, etc.	
4.	Quantity of planting material produced	Production of planting material of vegetatively propagated medicinal and aromatic plant species	It is a process of vegetative means by which new individuals arise without production of seeds or spores	Number of saplings/plants produced	In a wider sense, planting material arise from vegetative propagation include cutting, vegetative apomixis, layering, division, budding, grafting and tissue culture
5.	HPLC/HPTLC/GCMS/ LCMS/SFE/CPC method developed	Proper method is essential for estimation of active ingredients in medicinal plants.	SOPs developed	Number of SOPs developed	



**Section 5: Specific performance requirement for other departments that are critical for delivering agreed results**

Location Type	State	Organisation Type	Organization Name	Relevant Success Indicator	What is your requirement for this organization	Justification for this requirement	Please quantify your requirement from this organization	What happens if your requirement is not met
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

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

Sl. No.	Outcome / Impact of Department / Ministry	Jointly responsible for influencing this outcome/ impact with the following organization(s)/ Department(s)/ Ministry(ies)	Success Indicator (s)	Unit	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
1.	Availability of improved technologies for cultivation and collection of MAPs	DAC/SAU/NHB/NHM/NMPB, SMPB /KVKs, NGOs, Forest Department, Private pharmaceutical industries, Department of Ayush, farmers, traders, etc.	Growth in consumption/export of crude drugs and extracts	%	0.90	1.00	1.00	1.25	1.50

**Classification of Success Indicators according to its Category**

<b>S.No.</b>	<b>Success Indicator(s)</b>	<b>Input</b>	<b>Activity</b>	<b>Internal Output</b>	<b>External Output</b>	<b>Outcome</b>	<b>Measures Qualitative Aspects</b>
<b>1.</b>	Germplasm evaluated	False	False	False	False	True	False
<b>2.</b>	Breeding lines/germplasm introduced in AICRP/ varieties released/ elite material registered	False	False	False	False	True	True
<b>3.</b>	Technologies developed for good agricultural practices	False	False	False	False	True	False
<b>4.</b>	Quantity of planting material produced	False	False	False	False	True	True
<b>5.</b>	HPLC/HPTLC/GCMS/LCMS/SFE/CPC method developed	False	False	False	False	True	True

## Supplementary Information for RFD 2014-15

**Table 1: Past achievements of the Success Indicators**

SI.No.	Success indicator (s)	Past Achievements of the Success Indicators								Mean of the Achievements	Projected value of the success indicator for 2014-2015 as approved RFD 2013-2014
		n <sup>th</sup> year	VII 2007- 2008	VI 2008- 2009	V 2009- 2010	IV 2010- 2011	III 2011- 2012	II 2012- 2013	I 2013- 2014		
1.	Germplasm evaluated	-	20	20	100	15	20	14	26	19.2	28
2.	Breeding lines/germplasm introduced in AICRP/ varieties released/ elite material registered	-	4	4	4	3	4	4	6	4	5
3.	Technologies developed for good agricultural practices	-	5	5	4	4	3	2	3	4	4
4.	Quantity of planting material produced	-	80,000	76,000	76,000	80,000	80,000	79,000	84,250	79,000	81000
5.	HPLC/HPTLC/GC MS/ LCMS/SFE/CPC method developed	-	5	4	4	6	5	5	5	6	6