

RFD
Results-Framework Document

(2011 – 2012)

Directorate of Medicinal and Aromatic Plants Research
Boriavi, Anand -387 310, Gujarat
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Section 1: Vision, Mission, Objectives and Functions

Vision

Systematic and continued accelerative efforts in research of medicinal and aromatic plants directed towards sustainable quality production for maintaining the socio-economic and ecological balance. The institute aims at achieving the future demand by working out innovative technologies with the commitments towards health security to face the challenges of population growth, soil health and biosphere management for increased productivity and cope with emerging challenges resultant of globalization

Mission

The Directorate of Medicinal and Aromatic Plants Research (NRCMAP), Boriavi, Anand, was established in 1992 has been working for enhancing, sustaining production and utilization of major agriculturally important medicinal and aromatic plants through research and development to meet the present day demands and to address future national and international challenges.

Objectives

- To identify plants which need attention of agricultural scientists and to collect, maintain and evaluate the identified plants and develop improved varieties
- To carry out those basic researches on the chosen crops, which are useful to develop their Good Agricultural Practices (GAP)
- To coordinate the activities of the centres of AINRP on Medicinal & Aromatic Plants and Betelvine located in various agro-climatic zones of India
- To provide planting material and technical know-how generated for further testing and refinement by the centres of the co-ordinated project and DMAPR

Functions

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

Section-2

Inter se priorities among key objectives, success indicators and targets

Objectives	Weight	Action	Success Indicators	Unit	Weight	Target/Criteria Value				
						Excellent 100%	Very Good 90%	Good 80%	Fair 70%	Poor 60%
To identify plants which need attention of agricultural scientists and to collect, maintain and evaluate the identified plants and develop improved varieties.	34	Collection of germplasm of MAPs	Germplasm collected	Number	5	40	35	30	25	20
		Maintenance of germplasm of MAPs	Germplasm maintained	Number	9	600	580	550	500	400
		Evaluation of germplasm of MAPs	Medicinal and Aromatic plants germplasm	Number	5	100	90	80	70	60
		Hybridization, generation advancement, selection and yield evaluation of breeding lines of mandate MAPs	Crosses made	Number	5	25	22	18	16	14
			Breeding lines/selections advanced	Number	5	134	125	110	105	100
			Breeding lines evaluated	Number	5	15	14	13	12	10
To carry out those basic researches on the chosen crops, which are useful to develop their Good Agricultural Practices (GAP)	30	Work out the soil health status of DMAPR farm	Soil sample analyzed	Number	5	45	40	35	30	25
		Carry out germination studies in medicinal and aromatic plants	Medicinal plants studied	Number	3	3	2	1	-	-
		Isolation of non obligate pathogen in Medicinal and Aromatic plants	Medicinal plants	Number	2	2	1	-	-	-
		Investigation of the role of predisposition factors in incidence of downey mildew of isabgol.	Predisposition factors	Number	2	2	1	-	-	-
		Determine engineering properties of isabgol seed/grain relevant to dehusking	Engineering properties	Number	3	5	4	3	2	1
		Extract and isolate the pure compounds from different extracts of the roots of <i>E. axillare</i>	Extracts prepared	Number	3	4	3	2	1	-
			Compound isolated and purified	Number	2	8	7	6	5	4
		Develop a HPLC and HPTLC methods for detection of isolated bioactive compounds	Method developed	Number	3	5	4	3	2	0

		Strengthening of herbal gardens network	New herbal gardens	Number	5	10	9	8	7	6
		Record of major pests and their natural enemies associated with Isabgol & Ashwagandha	Pests and natural enemies	Number	2	3	2	1	-	-
To coordinate the activities of the centres of AINRP on Medicinal & Aromatic Plants and Betelvine located in various agro-climatic zones of India.	12	Conduct experiments in AICRPMAP&B centres for development of region specific technologies	Experiments conducted	Number	12	100	90	80	70	60
To provide planting material and technical know-how generated for further testing and refinement by the centres of the co-ordinated project and DMAPR.	13	Production of seeds of asalio, isabgol, ashwagandha,	Quantity of seeds produced	Kg	8	3000	2500	2000	1500	1000
		Production of planting material of aloe, lemongrass, palmrosa, guggle	Planting materials produced	Number	5	90,000	80,000	75,000	70,000	50,000
Efficient Functioning of the RFD System	11	Timely submission of RFD for 2011-12	On-time submission	Date	2%	June 10 2011	June 14 2011	June 16 2011	June 20 2011	June 22 2011
		Timely submission of Results for 2011-12	On-time submission	Date	1%	May 1 2012	May 3 2012	May 4 2012	May 5 2012	May 6 2012
		Finalize a Strategic Plan for RC	Finalize the Strategic Plan for next 5 years	Date	2%	Dec. 10 2011	Dec. 15 2011	Dec. 20 2011	Dec. 24 2011	Dec. 31 2011
		Identify potential areas of corruption related to organisation activities and develop an action plan to mitigate them	Finalize an action plan to mitigate potential areas of corruption	Date	2%	Dec. 10 2011	Dec. 15 2011	Dec. 20 2011	Dec. 24 2011	Dec. 31 2011
		Implementation of Sevottam	Create a Sevottam compliant system to implement, monitor and review Citizen's	Date	2%	Dec. 10 2011	Dec. 15 2011	Dec. 20 2011	Dec. 24 2011	Dec. 31 2011

			Charter							
			Create a Sevottam Compliant system to redress and monitor public Grievances	Date	2%	Dec. 10 2011	Dec. 15 2011	Dec. 20 2011	Dec. 24 2011	Dec. 31 2011

Section 3
Trend values of the success indicators

Objectives	Action	Success Indicators	Unit	Actual value for FY 09/10	Actual Value for FY 10/11	Target value for FY 11/12	Projected value for FY 12/13	Projected Value for FY 13/14
1. To identify plants which need attention of agricultural scientists and to collect, maintain and evaluate the identified plants and develop improved varieties.	Collection of germplasm of MAPs	Germplasm collected	Number	25	30	35	45	45
	Maintenance of germplasm of MAPs	Germplasm maintained	Number	500	520	580	620	660
	Evaluation of germplasm of MAPs	Medicinal and Aromatic plants germplasm	Number	75	80	90	100	100
	Hybridization, generation advancement, selection and yield evaluation of breeding lines of mandate MAPs.	Crosses made	Number	20	21	22	25	30
		Breeding lines/selections advanced	Number	100	110	125	200	210
		Breeding lines evaluated	Number	10	12	14	16	18
2. To carry out those basic researches on the chosen crops, which are useful to develop their Good Agricultural Practices (GAP)	Work out the soil health status of DMAPR farm	Soil sample analyzed	Number	10	20	40	45	50
	Carry out germination studies in medicinal and aromatic plants	Medicinal plants studied	Number	1	2	2	3	3
	Isolation of non obligate pathogen in Medicinal and Aromatic plants	Medicinal plants	Number	-	-	1	1	-
	Investigation of the role of predisposition factors in incidence of downey mildew of isabgol.	Predisposition factors	Number	-	-	1	1	-
	Determining the engineering properties of isabgol seed/grain relevant to dehusking	Engineering properties	Number	-	-	4	-	-
	Extract and isolate the pure compounds from different extracts of the roots of <i>E. axillare</i>	Extracts prepared	Number	-	-	3	-	-
		Compound isolated and purified	Number	-	-	7	-	-
	Develop a HPLC and HPTLC methods for	Method developed	Number	-	-	4	4	5

	detection of isolated bioactive compounds							
	Strengthening of herbal gardens network	New herbal gardens	Number	-	-	9	5	5
	Record of major pests and their natural enemies associated with Isabgol & Ashwagandha	Pests and natural enemies	Number	-	-	2	2	1
3. To coordinate the activities of the centres of AINRP on Medicinal & Aromatic Plants and Betelvine located in various agro-climatic zones of India.	Conduct experiments in AICRPMAP&B centres for development of region specific technologies	Experiments conducted	Number	-	-	90	90	90
4. To provide planting material and technical know-how generated for further testing and refinement by the centres of the co-ordinated project and DMAPR.	Production of seeds of asalio, isabgol, ashwagandha,	Quantity of seeds produced	Kg	-	-	2500	2500	2500
	Production of planting material of aloe, lemongrass, palmrosa, guggle	Planting materials produced	Number	-	-	80,000	81,000	82,000
1. Efficient Functioning of the RFD System	Timely submission of RFD for 2011-12	On-time submission	Date	-	-	14.06. 2011	-	-
	Timely submission of Results for 2011-12	On-time submission	Date	-	-	03.05.2012	-	-
	Finalize a Strategic Plan	Finalize the Strategic Plan for next 5 years	Date	-	-	15.12.2011	-	-
	Identify potential areas of corruption related to organisation activities and develop an action plan to mitigate them	Finalize an action plan to mitigate potential areas of corruption.	Date	-	-	15.12.2011	-	-

	Implementation of Sevottam	Create a Sevottam compliant system to implement, monitor and review Citizen's Charter	Date	-	-	15.12.2011	-	-
		Create a Sevottam Compliant system to redress and monitor public Grievances	Date	-	-	15 .12.2011	-	-

Section 4: Description and definition of success indicators and proposed measurement methodology.

Objective 1: The objective aims at development of improved varieties medicinal plants. This activity will be achieved by collection, conservation, evaluation and utilization of MAP germplasm for breeding improved cultivars. Both conventional and non-conventional approaches will be used for germplasm management as well as breeding improved cultivars in major medicinal and aromatic Plants. The success of the task will be measured in terms of germplasm conserved and utilized, number of improved germplasm registered with NBPGR, New Delhi and development of improved varieties.

Objective 2: As the demand of MAPs are increasing both in national and international market and supply from the natural resources is decreasing, the future requirement should come out from the cultivation of these plants. Hence, the identification suitable plant for cultivation and development of Good Agricultural Practices (GAP), Good Collection Practices (GCP) are very important in this point of time. The activity will be assessed based on number of cultivation practices developed for each MAPs.

Objective 3: Medicinal plants are plenty in numbers and that are grown in diversified climatic condition. Hence, development of regions specific agro-techniques is essential. Hence, we coordinate to conduct the required experiments in 22 All India Coordinated Research Project on Medicinal & Aromatic Plants and Betel vine that are located in different states throughout the country.

Objective 4: Production and supply of quality seed and planting material of medicinal and aromatic plants is an important activity for ensuring the supply of required quality quantity raw material for MAPs based industries. Success will be measured in terms of quantity of good quality planting materials produced.

Section 5: Specific performance requirements from other Departments.

1. With respect to survey and collection of MAPs the assistance from Forest department, Biodiversity authority of India, SAUs / Hort. Departments and local bodies would be required.
2. For development of DUS descriptors of major medicinal plants (financial) support from PPVFR is needed.
3. Capacity building training of manpower would depend upon financial assistance from different departments like NMPB (Department of Ayush), State Medicinal Plant Board, State Departments of Hort./ Agriculture and NHM (DAC).

Section 6: Outcome / Impact of activities of organisation

S. No	Outcome / Impact of organisation /RCs	Jointly responsible for influencing this outcome / impact with the following organisation (s) / departments/ministry(ies)	Success Indicator (s)	Unit	2009-10	2010-2011	2011-2012	2012-2013	2013-2014
1	Production of quality seed/planting material, development of improved varieties/germplasm, and technologies including value added products	DAC/SAU/NHB/NHM/NMPB, SMPB /KVKs, NGOs, NBPGR, etc.	Increase in production of major medicinal and aromatic plants (MAPs)	%	2	3	4	4	5
			Development of improved varieties of MAPs	Number	0	0	1	1	1
			Registration of elite germplasm of MAPs with NBPGR	Number	1	2	2	3	4
			Development of production technologies for MAPs	Number	1	1	1	2	2
			Production of quality seed/planting material	Kg	1000	1500	2500	2500	2500
			Development of value added products and post harvest technology	Number	0	1	1	2	3
			Awareness of Stakeholders/farmers and capacity building of the scientists through training/demonstration	Number	1	1	1	2	3