

RFD

RESULTS - FRAMEWORK DOCUMENT

(2011-2012)

National Research Centre for Litchi Mushahari, Muzaffarpur, Bihar-842002

Section 1: Vision, Mission, Objectives and Functions

Vision

Developing the National Research Centre for Litchi as a centre of excellence in the field of research, extension and training.

Mission

Harnessing science and technology by interfacing research and extension activities for enhanced quality production, productivity, processing and use diversification for sustained litchi production, industry and trade.

Objectives

1. Plant genetic resources management and crop improvement in litchi
2. Production management and value addition in litchi

Functions

- To undertake basic, strategic and applied research for enhancing productivity, quality and utility of litchi.
- To act as repository of genetic resources and scientific information on all aspects of litchi.
- To undertake frontline demonstration in newer technologies and to impart training for upgrading scientific knowledge.

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. Plant genetic resources management and crop improvement in litchi	35	Collection of germplasm	No. of germplasm	Number	5	5	4	3	2	1
		Clonal selection	No. of clones selected and established in field	Number	10	8	6	4	2	1
		Hybridization	No. of crosses made	Number	8	3000	2500	1500	1000	500
			No. of successful crosses	Number	7	300	250	150	100	50
		Characterization of germplasm	Numbers characterized	Number	2.5	30	20	15	10	5
		Characterization of seedlings	Numbers characterized	Number	2.5	8	7	6	5	4
2. Production management and value addition in litchi	54	Development of production technology, production of planting materials and value added products in litchi								
		i. Evaluation of various potting mixtures on establishment of litchi gooties	Percentage of well established gooties	Percent	7	80	75	70	60	50
		ii. Optimization of planting density, canopy and pruning intensity	Standardization of parameters	Number	6	3	2	1	-	-
		iii. Standardization of grafting technique	Percent successful grafts	Percent	4	25	20	18	15	-
		iv. Identification of suitable intercrops/intercrop models	Crops identified /models developed	Number	3	3	2	1	-	-
		v. PGR for control of fruit drops and cracking	Percent reduction	Percent	4	10	8	6	5	4
		vi. Etiology and management of pest and diseases	Number of pest and disease identified and managed	Number	5	3	2	1	-	-
		vii. Enhancement of shelf life of fruits	Increased shelf life	Days	6	10	8	6	5	4
		viii. Development of value added products	No. of products	Number	3	3	2	1	-	-

		ix. Production of quality planting materials	Number of saplings produced	Number	10	30000	25000	20000	15000	10000
		x. Organizing training and demonstrations	Number of trainings organized	Number	6	8	7	6	5	4
3. 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 organization activities and develop an action plan to mitigate them	Finalize an action plan to mitigate potential area 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 Charter	Date	2	Dec. 10, 2011	Dec. 15, 2011	Dec. 20, 2011	Dec. 24, 2011	Dec. 31, 2011
			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

Objective	Action	Success indicator	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. Plant genetic resources management and crop improvement in litchi	Collection of germplasm	No. of germplasm	Number	2	3	4	5	6
	Clonal selection	No. of clones selected and established in field	Number	-	18	6	6	-
	Hybridization	No. of crosses made	Number	1500	1800	2500	3000	4000
		No. of successful crosses	Number	150	200	250	300	400
	Characterization of germplasm	Numbers characterized	Number	15	18	20	25	30
	Characterization of seedlings	Numbers characterized	Number	5	6	7	10	20
2. Production management and value addition	Development of production technology, production of planting materials and value added products in litchi							
	i. Evaluation of various potting mixtures on establishment of litchi gooties	Percentage of well established gooties	Percent	65	70	75	77	80
	ii. Nutrient scheduling for different age groups	NPK/ nutrients dose standardized	Number	-	-	1	1	1
	iii. Optimization of planting density, canopy and pruning intensity	Standardization of parameters	Number	-	-	2*	2*	2*
	iv. Standardization of grafting technique	Percent successful grafts	Percent	-	-	20	25	30
	v. Identification of suitable intercrops/intercrop models	Crops identified /models developed	Number	-	-	2**	2**	-
	vi. PGR for control of fruit drops and cracking	Percent reduction	Percent	-	-	8	10	12
	vii. Etiology and management of pest and diseases	Number of pest and disease identified and managed	Number	-	1 [#]	2 [#]	2 [#]	1 [#]
	viii. Enhancement of shelf life of fruits	Increased shelf life	Days	4	6	8	10	12
	ix. Development of value added products	No of products	Number	0	1	2	1	0

	x. Production of quality planting materials	Number of saplings produced	Number	18000	20000	25000	27000	30000
	xi. Organizing training and demonstrations	Number of trainings organized	Number	3	4	7	8	10
3. Efficient functioning of the RFD system	Timely submission of RFD for 2011-12	On time submission	Date	-	-	June 14, 2011	-	-
	Timely submission of results for 2011-12	On time submission	Date	-	-	May 3, 2012	-	-
	Finalize a Strategic Plan for RC	Finalize the Strategic Plan for next 5 years	Date	-	-	Dec. 15, 2011	-	-
	Identify potential areas of corruption related to organization activities and develop an action plan to mitigate them	Finalize an action plan to mitigate potential area of corruption	Percent	-	-	Dec. 15, 2011	-	-
	Implementation of Sevottam	Create a Sevottam compliant system to implement, monitor and review Citizen's Charter	Date	-	-	Dec. 15, 2011	-	-
		Create a Sevottam Compliant system to redress and monitor public grievances	Date	-	-	Dec. 15, 2011	-	-

- = No activities/programme during the year

* = Every year different parameter to be standardized

** = One year vegetable crop based intercrop model, another year fruit crop based model to be identified

= Every year different insect pests/disease

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

Objective 1

The germplasm will be collected from different areas to have a repository which will be utilized in crop improvement programme for development of new varieties with superior traits. Through hybridization improvement of various traits viz. fruit size, yield, quality, shelf life, extending harvesting period in litchi, and constraint such as irregular bearing habit in litchi is aimed to be addressed.

Objective 2

Production technology for sustainable litchi production and quality planting material will be addressed. Efforts will be made to produce quality planting materials through grafting technique. For scheduling of fertilizer application, soil and leaf nutrient standards will be determined. To enhance production and improved quality of litchi etiology of emerging and existing pest and diseases will be studied and management practices will be worked out. With respect to post-harvest management and value addition, success indicators will be diversified value added products, extending shelf life and reduction in post-harvest losses by development of packaging system and minimization of pathogenic fruit rots. Technology developed at the centre particularly rejuvenation, intercropping and IPM in litchi is aimed to be disseminated among stakeholders. Supply of quality planting material will be done catering the demand by various stakeholders.

Section 5: Specific Performance Requirements from Other Departments

1. Financial support as per EFC/ SFC allocation of institute including AICRP/ Network projects.
2. Technology adoption would depend upon the proactive role of state development department/ NGO/ stakeholders involved in processing of litchi.
3. Financial and technological support from other government departments like NHB, NHM, APEDA, state line departments and others, including foreign collaborations.
4. For survey and explorations, cooperation of Forest Department/state department would be required.
5. Technology adoption would depend upon the proactive role of state development department/ NGO/ stakeholders involved in processing of litchi.

Section 6: Outcome/ Impact of activities of Organization

Sl. No.	Outcome/ Impact of organization/ RCs	Jointly responsible for influencing this outcome/ impact with the following organization(s)/ departments	Success indicators	Unit	2009-10	2010-11	2011-12	2012-13	2013-14
1.	Production of quality planting materials of litchi, development of improved cultivars and technology including value added products	DAC/ SAUs/ NHB/ NHM/ APEDA/ State Line Departments/ KVKs etc.	Development of production technology	Number	1	1.5	2	2.5	3
			Development of quality planting materials	Number in thousands	18000	20000	25000	27000	30000
			Development of value added products	Number	0	1	2	2.5	3
			Enhancement of shelf life of litchi	Days	4	6	8	10	12
			Awareness of stakeholders through training and demonstrations	Number	4	5	4	6	8
			Capacity building of scientists through training	Number	2	3	4	6	8
			Research papers published/ communicated in refereed journals	Number	4	6	7	8	10
			Popular articles published	Number	2	8	12	14	15
			Technical bulletin/books	Number	4	5	8	3	4
			Technology adoption by farmers	Number	-	20	30	50	100
			Increase in productivity by adoption of technology in farmers' fields	Percent	-	10	15	20	25