RESULTS-FRAMEWORK DOCUMENT(RFD)

For

NATIONAL RESEARCH CENTRE FOR LITCHI

(2012- 2013)

Address: Mushahari Farm, Mushahari, Muzaffarpur -842002 Bihar
Website: http://www.nrclitchi.org

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

Objectives	Weight (%)	Action s	Success indicators	Unit	Weight (%)	Target /Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
Plant genetic resources management and crop improvement in litchi	34	Collection of germplasm / clonal selection	No. of germplasm/ clones	Number	8	8	6	4	2	1
		Hybridization	No. of crosses made	Number	7	3000	2500	1500	1000	500
			No. of successful crosses	Number	4	300	250	150	100	50
		Characterization of germplasm	Numbers characterized	Number	5	10	8	6	4	-
		Characterization of seedlings/ hybrids	Numbers characterized	Number	5	150	125	100	75	50
		Characterization of clones	Numbers characterized	Number	5	10	8	6	5	4
Production management and value addition in litchi	54	Development of production technology, production of planting materials and value added products in litchi								
		i. Nutrient scheduling for different age groups	NPK/ nutrients dose standardized	Number	6	2	1	-	-	-
		ii. Optimization of planting density, canopy and pruning intensity	Standardization of parameters	Number	7	2	1	-	-	-
		iii. Standardization of grafting technique	Percent successful grafts	percent	4	30	25	20	-	-
		iv. Identification of suitable intercrops	Crops identified	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/ disease identified and managed	Number	6	3	2	1	-	-
		vii. Enhancement of shelf life of fruits	Increased shelf life	Days	6	10	8	5	3	-

		viii. Development of value added products	No. of products	Number	3	2	1	-	-	-
		ix. Production of quality planting materials	Number of saplings produced	Number	10	25000	20000	15000	12000	10000
		x. Organizing training and demonstrations	Number of trainings organized	Number	5	5	4	3	2	1
Efficient functioning of the RFD system	03	Timely submission of RFD for 2012-13	On-time submission	Date	02	Mar. 23 2012	Mar. 26 2012	Mar. 27 2012	Mar. 28 2012	Mar. 29 2012
		Timely submission of results for 2012-13	On-time submission	Date	01	May 1 2013	May 2 2013	May 3 2013	May 6 2013	May 7 2013
Administrative reforms	05	Implement ISO 9001	Prepare ISO 9001 action plan	Date	01	June 4 2012	June 5 2012	June 6 2012	June 7 2012	June 8 2012
			Implementation of ISO 9001 action plan	Date	02	March 25 2013	March 26 2013	March 27 2013	March 28 2013	March 29 2013
		Implement mitigating strategies for reducing potential risk of corruption	% of implementation	%	02	100	95	90	85	80
Improving internal efficiency / responsiveness / service delivery of Ministry / Department	04	Implementation of *Sevottam*	Independent Audit of Implementation of Citizen's Charter	%	02	100	95	90	85	80
			Independent Audit of implementation of public grievance redressal system	%	02	100	95	90	85	80

Section 3: Trend Values of the Success Indicators

Objectives	Actions	Success indicators	Unit	Actual value for FY 2010-11	Actual value for FY 2011-12	Target value for FY 2012-13	Projected value for FY 2013-14	Projected value for FY 2014-15
1. Plant genetic resources management and crop improvement in litchi	Collection of germplasm / Clonal selection	No. of germplasm/ clones	Number	18	8	6	5	8
	Hybridization	No. of crosses made	Number	1800	2500	2500	3000	3500
		No. of successful crosses	Number	0	150	250	300	400
	Characterization of germplasm	Numbers characterized	Number	-	-	8	10	10
	Characterization of seedlings/ hybrids	Numbers characterized	Number	-	7	125	150	150
	Characterization of clones	Numbers characterized	Number	-	-	8	10	10
2. Production management and value addition in litchi	Development of production technology, production of planting materials and value added products in litchi							
	i. Nutrient scheduling for different age groups	NPK/ nutrients dose standardized	Number	-	-	1*	1*	1*
	ii. Optimization of planting density, canopy and pruning intensity	Standardization of parameters	Number	-	-	1*	-	1*
	iii. Standardization of grafting technique	Percent successful grafts	percent	-	-	25	30	35
	iv. Identification of suitable intercrops	Crops identified	Number	-	-	2**	2**	2**
	v. PGR for control of fruit drops and cracking	Percent reduction	percent	-	-	8	8	10
	vi. Etiology and management of pest and diseases	Number of pest/ disease identified and managed	Number	-	1#	2#	1#	2#
	vii. Enhancement of shelf life of fruits	Increased shelf life	Days	-		8	10	12
	viii. Development of value added products	No of products	Number	-	-	1	-	1
	ix. Production of quality planting materials	Number of saplings produced	Number	-	20000	20000	25000	30000
	x. Organizing training and demonstrations	Number of trainings organized	Number	-	4	4	6	8

Efficient functioning of the RFD system	Timely submission of RFD for 2012-13	On-time submission	Date	-	-	26/03/12	-	-
	Timely submission of results for 2012-13	On-time submission	Date	-	-	02/05/13	-	-
Administrative reforms	Implement ISO 9001	Prepare ISO 9001 action plan	Date	-	-	05/06/12	-	-
	Implement ISO 9001 as per the approved action plan	Implementation of ISO 9001 action plan	Date	-	-	26/03/13	-	-
	Implement mitigating strategies for reducing potential risk of corruption	% of implementation	%	-	-	95	-	-
Improving internal efficiency / responsiveness/ service delivery of Ministry / Department	Implementation of Sevottam	Independent Audit of implementation of Citizen's Charter	%	-	-	95	-	-
		Independent Audit of implementation of public grievance redressal system	%	-	-	95	-	-

- = 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

† = Mandatory objectives

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.

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	2010-11	2011-12	2012-13	2013-14	2014-15
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	2	2	1	2
			Development of quality planting materials	Number in thousands	18000	20000	25000	27000	30000
			Development of value added products	Number	0	1	2	1	0
			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	12
			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	75	100
			Increase in productivity by adoption of technology in farmers' fields	Percent	-	10	15	20	25