

RFD

(Results-Framework Document)
for

Directorate of Sorghum Research

Hyderabad

2011-2012

Results Framework Document (RFD) for Directorate of Sorghum Research, Hyderabad
(2011-2012)

Section 1:
Vision, Mission, Objectives and Functions

Vision

Enhancing competitiveness of sorghum through value addition to food, feed, fodder, and biofuel types of sorghum, and to enable nutritional security and economic prosperity of dryland farmers

Mission

Develop technologies to enhance sorghum productivity, resource and input use efficiency and profitability of sorghum cultivation.

Objectives

1. Enhancing sorghum production, productivity and quality
2. Identification of technologies suitable for different ecological and socio-economic environment
3. Validation and dissemination of technologies developed.
4. Value addition, entrepreneurship development (ED) and establishing business partnerships

Functions

- To conduct basic and strategic research leading to technology development for increased productivity of sorghum, its diversified utilization, to promote profitability from sorghum based cropping systems and to serve as national repository of sorghum germplasm.
- To organize All-India multi-location, coordinated testing and identification of technologies for diverse sorghum ecologies.
- To coordinate breeder seed production of Sorghum varieties and hybrid parental lines.
- To coordinate Front-line demonstrations of proven varietal and production technologies.
- To disseminate knowledge and skills through formal training, informal out-reach activities and exploring ICT .

(Approved by Director)

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. Enhancing sorghum production, productivity and quality	35	Collection / augmenting	New germplasm collected & augmented.	Number	4	70	60	50	40	20
		Evaluation / utilization & documentation of genetic resources	Sorghum genetic resources for varietal improvement for biotic and abiotic stresses distributed.	Number	4	200	150	125	100	75
		Development of parental lines/varieties and superior hybrids with improved grain yield and quality	Superior experimental hybrids developed for higher protein digestibility and yield	Number	4	25	20	15	10	5
			Rabi sorghum parental lines for desired stover/grain quality and improved yield evaluated	Number	5	50	40	30	25	20
			Parents with good combining ability for stalk yield and Brix content identified	Number	3	4	3	2	1	0
			Promising forage locals and sweet sorghum lines for forage purpose identified	Number	4	4	3	2	1	0
			Sorghum lines evaluated to identify sources with improved tolerance to biotic & abiotic stresses	Number	5	300	200	150	100	50
			Improvement of sorghum through biotechnological tools	RILs for sorghum foliar disease resistance developed	Number	3	200	150	100	80
		QTL introgression progenies for shoot fly resistance developed		Number	3	40	30	20	15	10

Objective	Weight	Action	Success indicator	Unit	Weight	Target/ Criteria value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
2. Identification of technologies suitable for different ecological and socio-economic environment	20	Organization of All-India coordinated trials in different disciplines	Report preparation and presentation	Date	8	April 10 2011	April 11 2011	April 12 2011	April 13 2011	April 14 2011
			Promising entries promoted for further testing in advance trials	No.	7	8	5	4	3	2
			Release proposals of promising varieties submitted to VIC	No.	5	3	2	1	0	0
3. Validation and dissemination of technologies developed.	18	Organization of FLDs	Coordination, monitoring, data collection and preparation of all the FLDs conducted	No.	4	250	200	175	150	125
		Organization of Breeder seed production	Multilocational breeder seed production for varieties & parental lines	tonnes	5	50	40	30	20	10
		Research Publication	Research publications in national/ international journals, books, book chapters, bulletins etc.	No.	4	20	15	10	6	2
			Publication of Annual Report	Date	5	June15, 2011	June20, 2011	June25, 2011	June27, 2011	June28, 2011
4. Value addition, Entrepreneurship development (ED) and establishing business partnerships	16	Value addition through processing technologies on ready-to-eat /cook foods	Number of products standardized	No.	5	2	1	0	0	0
		ED on processing technologies and strengthen the business partnerships with food industry in PPP	Number of participants benefitted	No.	8	400	300	200	100	50
			MoU or business plan formats	No.	3	2	1	0	0	0

Objective	Weight	Action	Success indicator	Unit	Weight	Target/ Criteria value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
5. Efficient functioning of RFD system	11	Timely submission of draft approval	On-time submission	Date	2	June 10, 2011	June 14, 2011	June 16, 2011	June 20, 2011	June 22, 2011
		Timely submission of results	On-time submission	Date	1	May 01, 2012	May 02, 2012	May 03, 2012	May 04, 2012	May 05, 2012
		Finalize the strategic plan for DSR	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 area of corruption related to organization activities and develop an action plan to mitigate them	Finalize the 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

(Approved by Director)

Section 3:

Trend Values of the Success Indicators

Objective	Action	Success indicator	Unit	Actual Value FY 09-10	Actual Value FY 10-11	Target value FY11-12	Projected value FY 12-13	Projected value FY 13-14
1. Enhancing sorghum production, productivity and quality	Collection / augmenting /	New germplasm collected & augmented.	Number	100	30	60	60	60
	Evaluation / utilization & documentation of genetic resources	Sorghum genetic resources for varietal improvement for biotic and abiotic stresses distributed.	Number	3564	3152	3000	3000	3000
	Development of parental lines/varieties and superior hybrids with improved grain yield and quality	Superior hybrids developed for higher protein digestibility and yield	Number	-	-	20	20	20
		Rabi sorghum parental lines for desired stover/grain quality and improved yield evaluated	Number	-	60	40	40	40
		Parents with good combing ability for stalk yield and Brix content evaluated	Number	-	-	3	3	3
		Promising forage locals and sweet sorghum lines for forage purpose identified	Number	-	2	3	3	3
		Sorghum lines evaluated to identify sources with improved tolerance to biotic & abiotic stresses	Number	150	190	200	200	200
	Improvement of sorghum through biotechnological tools	RILs for sorghum foliar disease resistance developed	Number	-	-	150	100	100
		QTL introgression progenies for shoot fly resistance developed	Number	-	-	30	20	10

Objective	Action	Success indicator	Unit	Actual Value FY 09-10	Actual Value FY 10-11	Target value FY11-12	Projected value FY 12-13	Projected value FY 13-14
2. Identification of technologies suitable for different ecological and socioeconomic environment	Organization of All-India coordinated trials in different disciplines	Report preparation and presentation	Date	-	-	April 11 2011	April 11 2011	April 11 2011
		Promising entries promoted for further testing in advance trials	Number	5	5	5	5	5
		Release proposals of promising varieties submitted to VIC	Number	-	2	2	2	2
3. Validation, and dissemination of technologies developed .	Organization of FLDs	Coordination, monitoring, data collection and preparation of all the FLDs conducted	Number	-	-	200	200	200
	Organization of Breeder seed production	Multilocational breeder seed production for varieties & parental lines	tonnes	27.2	12.0	20	20	20
	Research Publication	Research publication in national/ international journal, books, book chapter, bulletins etc	Number	-	-	15	15	15
		Publication of Annual Report	Date	May, 30 2011	May, 30 2011	June, 20 2011	June, 20 2011	June, 20 2011
4. Value addition, Entrepreneurship development (ED) and establishing business partnerships	Value addition through processing technologies on ready-to-eat/cook foods	Number of products standardized	Number	2	2	1	1	1
	ED on processing technologies and strengthen the business partnerships with food industry in PPP mode	Number of participants benefitted	Number	200	400	300	300	300

Objective	Action	Success indicator	Unit	Actual Value FY 09-10	Actual Value FY 10-11	Actual value FY11-12	Projected value FY 12-13	Projected value FY 13-14
5. Efficient functioning of RFD system	Timely submission of draft approval	On-time submission	Date	-	March 16 2011	March 31 2011	March 31 2012	March 31 2013
	Timely submission of results	On-time submission	Date	-	March 31 2011	May 01 2012	May 01 2013	May 01 2014
	Finalize the strategic plan for DSR	Finalize the strategic plan for next 5 years	Date	-	-	Dec 15, 2011	Dec 15, 2012	Dec 15, 2013
	Identify potential area of corruption related to organization activities and develop an action plan to mitigate them	Finalize the action plan to mitigate potential area of corruption	Date	-	-	Dec 15, 2011	Dec 15, 2012	Dec 15, 2013
	Implementation of Sevottam	Create a Sevottam compliant system to implement, monitor and review Citizen's Charter	Date	-	-	Dec 15, 2011	Dec 15, 2012	Dec 15, 2013
		Create a Sevottam compliant system to redress and monitor public grievances	Date	-	-	Dec 15, 2011	Dec 15, 2012	Dec 15, 2013

(Approved by Director)

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

Objective 1: With respect to Enhancing sorghum production, productivity and quality, the major focus will include the collection of new germplasm from hot spots, evaluations for DUS traits, develop superior hybrids in yield and quality, to intensify research to develop genotypes with desirable seed traits and postflowering drought tolerance in rabi sorghum. Research on sweet sorghum will be targeting to identify the genotypes with high brix and stalk yield. Forage sorghum research will be aimed at identifying good combiners for fodder yield and quality. Research efforts will be focused on to identify the improved sources of tolerance to shoot fly, stem borers, shoot bug and other insect pests. In additions studies will be conducted to understand the mechanisms of shoot-fly and stem borer resistance. On disease management front, major focus will be on grain mold management. Research on integrated nutrient and water management will be targeting to improve nutrient and water-use efficiency; and identify the suitable genotypes for new niche areas like sorghum in rice fallows. Biotechnological tools will be used to augment the research for improving biotic and abiotic stress tolerance

Objective 2: Identification of technologies suitable for different ecological and socio-economic environment through the AICSIP network on Sorghum aims at rapid identification of varietal and other Sorghum production technologies and facilitates rapid dissemination of seeds of promising varieties. The network caters to all the sorghum ecologies, and socio-economic environment of the sorghum farmers.

Objective 3: With respect to validation and dissemination of technologies developed, it is aimed to take proven technologies to the farmers door step and layout frontline demonstrations, undertake massive breeder seed production for newly developed sorghum varieties and parental lines of the sorghum hybrids developed under public sector. Research publications in national/international journal, books, book chapter, bulletins etc will be targeting to disseminate and share the new knowledge with the scientific world and other stakeholders in the area of sorghum improvement

Objective 4: Our activities on value addition, entrepreneurship development and establishing business partnerships will be targeting value addition through processing technologies on ready-to-eat/cook foods, popularization of product specific cultivars in farmers fields, entrepreneurship development on processing technologies and business partnerships with food industry in PPP mode

(Approved by Director)

Section 5: Specific Performance Requirements from other Departments

Our germplasm evaluation programme is linked to making available the germplasm from the NBPGR, New Delhi.

Conduct of Frontline Demonstrations is in collaboration and cooperation of the Department of Agriculture and Cooperation.

Breeder seed production is taken up at the behest of indents received from DAC, and seed will be produced by our cooperators.

(Approved by Director)

Section 6:
Outcome/impact of Department/Ministry

Outcome/ impact of Department / ministry	Jointly responsible for influencing this outcome / impact with the following departments	Success indicator	Unit	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14
Enhanced Sorghum production	SAUs, AICSIP centers	Identification of improved technologies	Number	-	-	2	2	2
Enhanced availability of quality human resources for agricultural research & development activities	SAUs, ICAR	Capacity building	Number	-	-	2	2	2
Enhanced rural livelihood security	SAUs, state governments	Release of high yielding / improved varieties/hybrids	Number	-	-	1	1	1
Improved nutritional security	SAUs, ICMR	Popularizations of sorghum based products	Number	-	-	2	2	2
Enhanced Frontier research / programmes in sorghum R & D		Technical papers published in recognized journals	Number	-	-	15	15	15
		New varieties developed	Number	-	-	2	2	2
Commercialization of Sorghum based technologies	SAUs, ICMR, State governments	Research converted in commercialized technologies	Number	-	-	1	1	1

(Approved by Director)