



RFD

Results-Framework Document (RFD)

for

Directorate of Wheat Research

(2012-2013)

**Directorate of Wheat Research, Agrasain Marg, Karnal 132001.
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Section 1: Vision, Mission, Objectives and Functions

Vision

Ensuring food security of India by enhancing the productivity and profitability of wheat and barley on an ecologically and economically sustainable basis.

Mission

Sustainable growth of wheat and barley production through research and extension initiatives supported by infrastructural and policy measures.

Objectives

1. Coordinating multi-locational and multidisciplinary research programme for developing superior cultivars of wheat/barley.
2. Refinement of agronomic practices & disease management for wheat/barley
3. Strengthening basic and strategic research for enhancing wheat and barley production, productivity, quality and tolerance to biotic and abiotic stresses and germplasm conservation
4. Strengthening technology transfer, refinement and dissemination

Functions

Coordination of multidisciplinary research in wheat and barley breeding, agronomy, crop protection, quality and technology dissemination; germplasm conservation and exchange; linkage with national and international institutions for providing impetus to research activities; human resource development.

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

Objectives	Weight (%)	Actions	Success indicators	Unit	Weight (%)	Target/Criteria Value				
						Excellent	Very good	Good	Fair	Poor
						100%	90%	80%	70%	60%
Co-ordinating multi-locational and multidisciplinary research programme for developing superior cultivars of wheat/barley.	50	Coordinating trials and nurseries at different centres across the country	Number of trials and nurseries conducted	Number	10	58	45	42	40	38
		Breeder seed production	Allocation, monitoring and production of breeder seed	Quintal	10	*24,000	*22,000	21,000	20,000	15,000
		Evaluation of trial entries and advance lines for quality traits	Grain samples evaluated	Number	10	5000	4600	4200	4000	3800
		Evaluation of advanced lines and other germplasm for disease and pest resistance	Genotypes evaluated	Number	10	3000	2800	2500	2300	2000
		Evaluation of agronomic trials for yield	Agronomic trials conducted	Number	10	20	18	16	15	14
Refinement of agronomic practices & disease management for wheat/barley	8	Conducting experiments on RCTs, diversification, nutrient and weed managements etc	Experiments conducted	Number	4	25	22	20	18	16
		Survey, surveillance and issue of advisory for biotic stress management	Number of districts covered	Number	4	24	20	16	14	10
Strengthening basic and strategic research for	22	Evaluation, maintenance and	Germplasm lines evaluated and maintained	Number	6	600	500	400	200	100

enhancing wheat and barley production, productivity, quality and tolerance to biotic and abiotic stresses and germplasm conservation		characterization of germplasm	Accessions exchanged	Number	3	80	60	40	20	0
		Prebreeding for genetic enhancement	Hybridizations attempted	Number	7	200	180	160	140	120
		Molecular breeding for disease resistance and quality traits	Marker data points generated	Number	3	3000	2600	2400	2200	2000
			Germplasm screened	Number	3	500	480	460	440	420
Strengthening technology transfer, refinement and dissemination	8	Frontline demonstrations and trainings	Number of demonstrations	Number	5	650	600	550	500	400
		Impact of improved technologies	Survey of farmers	Number	3	100	95	90	85	80
Efficient Functioning of the RFD System	3	Timely submission of RFD for 2012-13	On-time submission	Date	2	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	1	May 1 2013	May 2 2013	May 3 2013	May 6 2013	May 7 2013
Administrative reforms	5	Implement ISO 9001	Prepare ISO 9001 action plan	Date	1	June 4 2012	June 5 2012	June 6 2012	June 7 2012	June 8 2012
			Implementation of ISO 9001 action plan	Date	2	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	%	2	100	95	90	85	80
Improving Internal Efficiency / responsiveness / service delivery of Ministry / Department	4	Implementation of Sevottam	Independent Audit of Implementation of Citizen's Charter	%	2	100	95	90	85	80
			Independent Audit of implementation of public grievance redressal system	%	2	100	95	90	85	80

* explained in section 4 page 7.

Section 3: Trend Values of the Success Indicators

Objectives	Actions	Success indicators	Unit	Actual Value for FY 10-11	Actual Value for FY 11-12	Target Value for FY 12-13	Projected Value for FY 13-14	Projected Value for FY 14-15
Co-ordinating multi-locational and multidisciplinary research programme for developing superior cultivars of wheat/barley.	Coordinating trials and nurseries at different centres across the country	Number of trials and nurseries conducted	Number	58	58	52	54	56
	Breeder seed production	Allocation, monitoring and production of breeder seed	Quintal	A=31468 P=41369	A=30800 P=37799	*22,000	25,000	25,000
	Evaluation of trial entries and advance lines for quality traits	Grain Samples evaluated	Number	5000	6000	4600	5000	5200
	Evaluation of advanced lines and other germplasm for disease and pest resistance	Genotypes evaluated	Number	3000	3500	2800	3200	3500
	Evaluation of agronomic trials for yield	Agronomic trials conducted	Number	22	23	18	22	24
Refinement of agronomic practices & disease management for wheat/barley	Conducting experiments on RCTs, diversification, nutrient and weed managements etc	Experiments conducted	Number	22	25	22	24	25
	Survey, surveillance and issue of advisory for biotic stress management	Number of districts covered	Number	22	24	20	24	25
Strengthening basic and strategic research for enhancing wheat and	Evaluation, maintenance and characterization of	Germplasm lines evaluated and maintained	Number	500	512	400	550	600

barley production, productivity, quality and tolerance to biotic and abiotic stresses and germplasm conservation	germplasm	Accessions exchanged	Number	80	80	60	90	100
	Pre-breeding for genetic enhancement	Hybridizations attempted	Number	200	250	180	250	300
	Molecular breeding for disease resistance and quality traits	Marker data points generated	number	3000	4000	2600	4500	5000
Germplasm screened		number	500	500	480	600	700	
Strengthening technology transfer, refinement and dissemination	Frontline demonstrations and trainings	Number of demonstrations	Number	800	1000	600	800	1000
	Impact of improved technologies	Survey of farmers	Number	100	120	95	125	130
Efficient Functioning of the RFD System	Timely submission of RFD for 2012-13	On-time submission	Date	--	--	March 26 2012	--	--
	Timely submission of Results for 2012-13	On-time submission	Date	--	--	May 2 2013	--	--
Administrative reforms	Implement ISO 9001	Prepare ISO 9001 action plan	Date	--	--	June 5 2012	--	--
		Implementation of ISO 9001 action plan	Date	--	--	March 26 2013	--	--
	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	--	--

* explained in section 4 page 7.

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

- *Objective No. 1. With regard to coordinated research system, it is stipulated to organize, coordinate and monitor multi-locational and multi-disciplinary research for developing and identifying superior wheat and barley varieties having better quality and tolerant to biotic and abiotic stresses under varied agro-climatic zones; coordinate and organize nucleus and breeder seed production; to coordinate and organize training related to wheat and barley improvement, production, protection and utilization.
- Objective No. 2. Develop strategic research, which will lead into precision farming, enhance input use efficiency, optimal use of renewable resources and enhance the sustainability of wheat based cropping systems. With regard to biotic stress management in wheat/barley, it is envisaged to monitor the disease and pest situation and develop strategies and issue advisories to mitigate crop losses due to pests and diseases by taking timely action.
- Objective No. 3. With respect to strengthening the frontier research for enhancing wheat and barley production, it is stipulated to strengthen basic and strategic research for a major advance in genetic yield potential, quality and tolerance to biotic and abiotic stresses through the utilization of genetic resources and genetic enhancement. In addition, national and international linkages will be established to further strengthen basic research. With regard to conservation of genetic resources for their sustainable use, it is envisaged to collect, acquire, evaluate, catalogue, maintain and share germplasm collections of wheat and barley with focused attention on identifying suitable donors for yield components, biotic and abiotic stresses and quality traits.
- Objective No. 4. With respect to strengthening of extension system (Transfer of frontline technologies), it is envisaged to conduct demonstration/training for dissemination of information so that the technology reaches to the farmers in time.

* With regard to allocation and production of breeder seed, there was higher allocation and production during 2010-11 and 2011-12. However, allocation of breeder seed has been reduced to 22000 quintals of wheat and barley during 2012-13 by DAC, Government of India to rationalize breeder seed requirements. This was done to discourage very old varieties which have become susceptible to diseases.

Section 5:

Specific Performance Requirements from other Departments

1. Ministry of Finance considers/concurs/approves the EFC proposals of the Department in terms of the financial and manpower requirement. This support of Department of Expenditure, Ministry of Finance will be crucial for realization of appropriate performance, including meeting the deadlines and also in providing funds as per the SFC/EFC allocation.
2. Strengthening of agricultural universities will depend on their initiative/responsiveness, including the timely implementation by the respective SAUs/AUs and fund utilization.
3. Approval of layout plans and execution of works will require commitment and timeliness on the part of the works departments.
4. The quantity of breeder seed produced is based on the quantity indented by Department of Agriculture and Cooperation, which in turn collects indents from various seed agencies including State Departments of Agriculture.
5. Technology adoption would depend upon the proactive role of developmental departments of wheat/barley growing states.

Section 6: Outcome / Impact of activities of DWR

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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15
1	Enhanced wheat and barley production and productivity	DAC, AICRP Centres	Breeder seed production	Quintal	*41369	37799	28000	25000	25000
			Release of new varieties	Number	9	10	8	9	10
2	Evaluation, maintenance and collection and exchange of germplasm	AICRP centres	Germplasm lines evaluated	Number	500	512	550	600	650
			Germplasm shared	Number	80	80	100	110	120
3	Evaluation of wheat and barley genotypes for different traits	AICRP centres	Genotypes evaluated	Number	600	650	650	700	700
4	Enhanced availability of technology to farmers	DAC and AICRP centres	Demonstrations organized on technologies	Number	800	1000	1000	1100	1100
5	Survey, surveillance and issue of advisory for biotic stress management in wheat	null	Districts covered	Number	22	24	25	25	26
6	Enhancing frontier research programme	null	Technical papers published in recognized journals	Number	28	30	30	32	32

* With regard to allocation and production of breeder seed, there was higher allocation and production during 2010-11 and 2011-12. However, allocation of breeder seed has been reduced to 22000 quintals of wheat and barley during 2012-13 by DAC, Government of India to rationalize breeder seed requirements. This was done to discourage very old varieties which have become susceptible to diseases.

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