



R F D

(Results-Framework Document)

for

Department Of Agricultural Research and
Education
(2012-2013)

Section 1: Vision, Mission, Objectives and Functions

Vision

Harnessing science to ensure comprehensive and sustained physical, economic and ecological access to food and livelihood security to all Indians, through generation, assessment, refinement and adoption of appropriate technologies.

Mission

Sustainability and growth of Indian agriculture by interfacing agricultural research, higher education and front-line extension initiatives complemented with institutional, infrastructural and policy support that will create efficient and effective science-harnessing tool.

Objective

- 1 Improving natural resource management and input use efficiency
- 2 Strengthening of higher agricultural education
- 3 Utilizing frontier research in identified areas / programs for better genetic exploitation
- 4 Strengthening of frontline agricultural extension system and addressing gender issues
- 5 IP management and commercialization of technologies
- 6 Assessment and monitoring of fishery resources
- 7 Development of vaccines and diagnostics
- 8 Post harvest management, farm mechanization and value addition

Functions

- 1 To develop Public-Private-Partnerships in developing seeds, planting materials, vaccines, feed formulations, value added products, agricultural machinery etc.
- 2 To serve as a repository in agriculture sector and develop linkages with national and international organizations as per the needs and current trends.
- 3 To plan, coordinate and monitor research for enhancing production and productivity of agriculture sector.
- 4 To enhance quality of higher education in agriculture sector.
- 5 Technology generation, commercialization and transfer to end users.
- 6 Human resource development and capacity building.
- 7 To assess implementation of various programmes in relation to target sets and provide mid-course correction, if required.

Section 1: Vision, Mission, Objectives and Functions

- 8 To provide technological backstopping to various line departments.

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] Improving natural resource management and input use efficiency	17.00	[1.1] Integrated nutrient management (INM)	[1.1.1] Developing GIS based district / block level soil fertility maps	Number	2.55	112	100	88	78	67
			[1.1.2] Developing INM packages for different agro-eco regions of the country	Number	2.55	7	6	5	4	3
			[1.1.3] Organizing training & demonstrations	Number	1.70	27	25	22	19	16
		[1.2] Integrated water management (IWM)	[1.2.1] Technologies for enhancing water use efficiencies	Number	1.70	6	5	4	3	2
			[1.2.2] Technologies for water harvesting storage and groundwater recharge	Number	1.70	6	5	4	3	2
			[1.2.3] Models / DSS for multiple uses of water	Number	0.85	4	3	2	1	0
			[1.2.4] Organizing training & demonstrations	Number	1.70	17	15	14	12	10
		[1.3] Climate resilient agriculture	[1.3.1] Awareness building amongst stake holders through trainings / demonstrations	Number	1.02	170	150	136	119	102
			[1.3.2] Human resource development and capacity building	Number	1.02	170	150	136	119	102
			[1.3.3] Testing crop varieties for climate resilience at different locations	Number	2.21	12	10	9	8	7

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%
[2] Strengthening of higher agricultural education	17.00	[2.1] Accreditation / Extension of accreditation of agricultural universities	[2.1.1] Number of universities granted accreditation / extension of accreditation	Number	2.55	9	8	6	5	4
		[2.2] Grant of ICAR International fellowships to Indian and foreign students	[2.2.1] Number of fellowships awarded (subject to availability of competent candidates)	Number	2.55	13	12	10	8	6
		[2.3] Grant of JRF and SRF to students	[2.3.1] Total No. of fellowships granted every year (subject to availability of competent candidates)	Number	4.25	630	625	575	500	475
		[2.4] Establishment of experiential learning units	[2.4.1] Experiential learning units established	Number	1.70	25	22	20	18	15
		[2.5] Financial support and monitoring of progress	[2.5.1] Amount released	Rupees in crores	2.55	380	360	340	320	300
		[2.6] Capacity building and faculty up-gradation	[2.6.1] Number of teachers trained per year	Number	1.70	1000	900	800	700	600
			[2.6.2] Number of Summer / Winter Schools organized	Number	1.70	25	22	20	18	16
[3] Utilizing frontier research in identified areas / programs for better genetic exploitation	13.00	[3.1] Collection, characterization and conservation of genetic resources	[3.1.1] Number of germplasm collected / characterized and conserved (other crops)	Number	1.17	5000	4000	3000	2500	2000
			[3.1.2] Number of germplasm collected	Number	1.17	350	315	280	245	210

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%
			(horticultural crops)							
		[3.2] Evaluation of genetic resources / improved varieties for suitable crop husbandry practices	[3.2.1] Number of germplasm evaluated	Number	1.17	3000	2500	2000	1500	1000
		[3.3] Production of breeder seed, other seeds and planting materials	[3.3.1] Quantity of breeder seed produced (other crops)	Tonnes	1.30	8500	8200	8000	7500	7000
	[3.3.2] Quantity of breeder seed produced (horticultural crops)		Tonnes	1.17	4000	3600	3200	2800	2400	
	[3.3.3] Quantity of planting materials produced annually		Number (in lakhs)	1.17	45	40.5	36	31.5	27	
		[3.4] Development of improved varieties suited to diverse agro ecologies	[3.4.1] Number of varieties developed (other crops)	Number	1.17	15	12	10	8	5
	[3.4.2] Number of varieties developed (pulses / oilseeds)		Number	1.17	17	13	11	9	7	
	[3.4.3] Number of varieties developed (horticultural crops)		Number	1.17	20	18	16	14	12	
		[3.5] Production of piglets (8-12 weeks of age)	[3.5.1] Provisioning of piglets to farmers and development agencies	Number	1.17	1000	900	800	600	550
		[3.6] Production of day old as well as 6 weeks old	[3.6.1] Provisioning of day old / 6 weeks	Number (in	1.17	2.5	2	1.5	1	0.5

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%
		chicks	old chicks to farmers and development agencies	lakhs)						
[4] Strengthening of frontline agricultural extension system and addressing gender issues	13.00	[4.1] Technology assessment through on-farm trials	[4.1.1] Number of technologies assessed	Number	5.20	240	220	200	150	140
		[4.2] Capacity building through training programmes	[4.2.1] Number of training programmes organized	Number	5.20	20000	18000	16000	15000	14000
		[4.3] Promotion of technologies covering gender concerns	[4.3.1] Gender-related technology promotion programs conducted	Number	2.60	30	25	20	16	15
[5] IP management and commercialization of technologies	9.00	[5.1] Partnership development, including licensing of ICAR technologies	[5.1.1] Partners (private sector) identified	Number	4.50	30	25	20	15	10
		[5.2] Patents and other IPR titles	[5.2.1] Applications filed	Number	4.50	95	90	80	70	60
[6] Assessment and monitoring of fishery resources	6.00	[6.1] Fish resources assessment and eco-system monitoring	[6.1.1] Number of explorations / surveys carried out	Number	3.60	70	65	60	55	50
			[6.1.2] Development of GIS based aquatic resource database	Number	2.40	8	6	5	4	3
[7] Development of vaccines and diagnostics	5.00	[7.1] Production of diagnostic kits and field validation	[7.1.1] Diagnostic kits developed	Number	3.00	5	3	2	1	0
		[7.2] Production of vaccines against important animal diseases and their validation	[7.2.1] Production of vaccines	Number	2.00	3	2	1	0	0
[8] Post harvest management, farm mechanization and value addition	5.00	[8.1] Develop / refine equipment for crop production & processing	[8.1.1] Equipment developed / refined	Number	1.25	20	18	16	14	12

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%
		[8.2] Testing of commercial prototypes / technologies	[8.2.1] Commercial test reports / samples tested	Number	1.25	12	11	10	8	6
		[8.3] Process protocols for product development, storage, safety and improved quality	[8.3.1] Process protocols	Number	1.25	11	10	8	6	5
		[8.4] Development / refinement of products from crops, fibres, natural gums / resins, livestock / fishes	[8.4.1] Value-added products	Number	1.25	14	12	10	8	6
* Efficient Functioning of the RFD System	3.00	Timely submission of Draft for Approval	On-time submission	Date	2.0	05/03/2012	06/03/2012	07/03/2012	08/03/2012	09/03/2012
		Timely submission of Results	On- time submission	Date	1.0	01/05/2012	03/05/2012	04/05/2012	05/05/2012	06/05/2012
* Administrative Reforms	6.00	Implement mitigating strategies for reducing potential risk of corruption	% of implementation	%	2.0	100	95	90	85	80
		Implement ISO 9001 as per the approved action plan	Area of operations covered	%	2.0	100	95	90	85	80
		Identify, design and implement major innovations	Implementation of identified innovations	Date	2.0	05/03/2013	06/03/2013	07/03/2013	08/03/2013	09/03/2013
* Improving Internal Efficiency / responsiveness / service delivery of Ministry / Department	4.00	Implementation of Sevottam	Independent Audit of Implementation of Citizen's Charter	%	2.0	100	95	90	85	80
			Independent Audit of implementation of public grievance redressal system	%	2.0	100	95	90	85	80
* Ensuring compliance to the Financial Accountability Framework	2.00	Timely submission of ATNs on Audit paras of C&AG	Percentage of ATNs submitted within due date (4 months) from date of presentation of Report to Parliament by CAG during the year.	%	0.5	100	90	80	70	60

* Mandatory Objective(s)

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%
		Timely submission of ATRs to the PAC Sectt. on PAC Reports.	Percentage of ATRS submitted within due date (6 months) from date of presentation of Report to Parliament by PAC during the year.	%	0.5	100	90	80	70	60
		Early disposal of pending ATNs on Audit Paras of C&AG Reports presented to Parliament before 31.3.2012.	Percentage of outstanding ATNs disposed off during the year.	%	0.5	100	90	80	70	60
		Early disposal of pending ATRs on PAC Reports presented to Parliament before 31.3.2012	Percentage of outstanding ATRS disposed off during the year.	%	0.5	100	90	80	70	60

* Mandatory Objective(s)

Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value	Actual Value	Target Value	Projected Value for	Projected Value for
				FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
[1] Improving natural resource management and input use efficiency	[1.1] Integrated nutrient management (INM)	[1.1.1] Developing GIS based district / block level soil fertility maps	Number	10	13	100	71	15
		[1.1.2] Developing INM packages for different agro-eco regions of the country	Number	4	4	6	6	8
		[1.1.3] Organizing training & demonstrations	Number	15	18	25	25	25
	[1.2] Integrated water management (IWM)	[1.2.1] Technologies for enhancing water use efficiencies	Number	4	4	5	2	2
		[1.2.2] Technologies for water harvesting storage and groundwater recharge	Number	5	5	5	3	3
		[1.2.3] Models / DSS for multiple uses of water	Number	2	2	3	1	1
		[1.2.4] Organizing training & demonstrations	Number	10	13	15	15	16
	[1.3] Climate resilient agriculture	[1.3.1] Awareness building amongst stake holders through trainings / demonstrations	Number	0	100	150	100	100
		[1.3.2] Human resource development and capacity building	Number	0	100	150	50	100
		[1.3.3] Testing crop varieties for climate resilience at different locations	Number	0	7	10	10	10

Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value FY 10/11	Actual Value FY 11/12	Target Value FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
[2] Strengthening of higher agricultural education	[2.1] Accreditation / Extension of accreditation of agricultural universities	[2.1.1] Number of universities granted accreditation / extension of accreditation	Number	8	8	8	10	10
	[2.2] Grant of ICAR International fellowships to Indian and foreign students	[2.2.1] Number of fellowships awarded (subject to availability of competent candidates)	Number	12	12	12	14	15
	[2.3] Grant of JRF and SRF to students	[2.3.1] Total No. of fellowships granted every year (subject to availability of competent candidates)	Number	625	625	625	650	650
	[2.4] Establishment of experiential learning units	[2.4.1] Experiential learning units established	Number	20	25	22	35	37
	[2.5] Financial support and monitoring of progress	[2.5.1] Amount released	Rupees in crores	289	325	360	375	385
	[2.6] Capacity building and faculty up-gradation	[2.6.1] Number of teachers trained per year	Number	1000	1000	900	1000	1000
		[2.6.2] Number of Summer / Winter Schools organized	Number	40	35	22	35	35
[3] Utilizing frontier research in identified areas / programs for better genetic exploitation	[3.1] Collection, characterization and conservation of genetic resources	[3.1.1] Number of germplasm collected / characterized and conserved (other crops)	Number	2000	2000	4000	2200	2300

Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value FY 10/11	Actual Value FY 11/12	Target Value FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
		[3.1.2] Number of germplasm collected (horticultural crops)	Number	45	300	315	400	400
	[3.2] Evaluation of genetic resources / improved varieties for suitable crop husbandry practices	[3.2.1] Number of germplasm evaluated	Number	1800	2000	2500	2200	2400
	[3.3] Production of breeder seed, other seeds and planting materials	[3.3.1] Quantity of breeder seed produced (other crops)	Tonnes	8000	8000	8200	8200	8500
		[3.3.2] Quantity of breeder seed produced (horticultural crops)	Tonnes	2250	3500	3600	4500	4800
		[3.3.3] Quantity of planting materials produced annually	Number (in lakhs)	13	40	40.5	50	52
	[3.4] Development of improved varieties suited to diverse agro ecologies	[3.4.1] Number of varieties developed (other crops)	Number	10	10	12	12	12
		[3.4.2] Number of varieties developed (pulses / oilseeds)	Number	--	--	13	13	13
		[3.4.3] Number of varieties developed (horticultural crops)	Number	4	15	18	20	20
	[3.5] Production of piglets (8-12 weeks of age)	[3.5.1] Provisioning of piglets to farmers and development agencies	Number	900	900	900	900	1000
	[3.6] Production of day old as well as 6 weeks old chicks	[3.6.1] Provisioning of day old / 6 weeks old chicks to farmers	Number (in lakhs)	0.6	2	2	2	2.5

Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value FY 10/11	Actual Value FY 11/12	Target Value FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
		and development agencies						
[4] Strengthening of frontline agricultural extension system and addressing gender issues	[4.1] Technology assessment through on-farm trials	[4.1.1] Number of technologies assessed	Number	--	200	220	260	280
	[4.2] Capacity building through training programmes	[4.2.1] Number of training programmes organized	Number	--	--	18000	20000	22000
	[4.3] Promotion of technologies covering gender concerns	[4.3.1] Gender-related technology promotion programs conducted	Number	--	20	25	30	35
[5] IP management and commercialization of technologies	[5.1] Partnership development, including licensing of ICAR technologies	[5.1.1] Partners (private sector) identified	Number	20	25	25	35	40
	[5.2] Patents and other IPR titles	[5.2.1] Applications filed	Number	70	90	90	130	150
[6] Assessment and monitoring of fishery resources	[6.1] Fish resources assessment and eco-system monitoring	[6.1.1] Number of explorations / surveys carried out	Number	40	60	65	70	75
		[6.1.2] Development of GIS based aquatic resource database	Number	4	6	6	7	8
[7] Development of vaccines and diagnostics	[7.1] Production of diagnostic kits and field validation	[7.1.1] Diagnostic kits developed	Number	2	4	3	3	4
	[7.2] Production of vaccines against important animal diseases and their validation	[7.2.1] Production of vaccines	Number	2	2	2	3	3
[8] Post harvest management, farm mechanization and value addition	[8.1] Develop / refine equipment for crop production & processing	[8.1.1] Equipment developed / refined	Number	20	20	18	25	25

Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value FY 10/11	Actual Value FY 11/12	Target Value FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
	[8.2] Testing of commercial prototypes / technologies	[8.2.1] Commercial test reports / samples tested	Number	12	12	11	15	15
	[8.3] Process protocols for product development, storage, safety and improved quality	[8.3.1] Process protocols	Number	10	11	10	13	13
	[8.4] Development / refinement of products from crops, fibres, natural gums / resins, livestock / fishes	[8.4.1] Value-added products	Number	12	14	12	18	18
* Efficient Functioning of the RFD System	Timely submission of Draft for Approval	On-time submission	Date	05/03/2010	06/03/2011	06/03/2012	--	--
	Timely submission of Results	On- time submission	Date	27/04/2011	--	03/05/2012	--	--
* Administrative Reforms	Implement mitigating strategies for reducing potential risk of corruption	% of implementation	%	--	--	95	--	--
	Implement ISO 9001 as per the approved action plan	Area of operations covered	%	--	--	95	--	--
	Identify, design and implement major innovations	Implementation of identified innovations	Date	--	--	06/03/2012	--	--
* 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	%	--	--	95	--	--

* Mandatory Objective(s)

Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value FY 10/11	Actual Value FY 11/12	Target Value FY 12/13	Projected Value for FY 13/14	Projected Value for FY 14/15
		system						
* Ensuring compliance to the Financial Accountability Framework	Timely submission of ATNs on Audit paras of C&AG	Percentage of ATNs submitted within due date (4 months) from date of presentation of Report to Parliament by CAG during the year.	%	--	--	90	--	--
	Timely submission of ATRs to the PAC Sectt. on PAC Reports.	Percentage of ATRS submitted within due date (6 months) from date of presentation of Report to Parliament by PAC during the year.	%	--	--	90	--	--
	Early disposal of pending ATNs on Audit Paras of C&AG Reports presented to Parliament before 31.3.2012.	Percentage of outstanding ATNs disposed off during the year.	%	--	--	90	--	--
	Early disposal of pending ATRs on PAC Reports presented to Parliament before 31.3.2012	Percentage of outstanding ATRS disposed off during the year.	%	--	--	90	--	--

* Mandatory Objective(s)

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

Objective 1. Improving natural resource management and input use efficiency

Improving natural resource management and input use efficiency with respect to improving soil health and water productivity, integrated nutrient and water management are essential. The action points/ success indicators for INM cover developing GIS based soil fertility maps, macro / micro-level land use plans, developing and disseminating integrated nutrient management packages, technologies for improving the productivity of problem soils, IFS models etc. For facilitating IWM, enhancing water storage and ground water recharge, multiple uses of water, precision/micro-irrigation systems, recycling of wastewater and other on-farm management issues like resource conservation technologies, deficit irrigation, tools and models to support decision making are planned. For mitigating adverse impact of climate change on crops, livestock, horticulture and fisheries, emphasis will specifically be on climate resilient agriculture through identifying the vulnerable zones and mitigating measures through basic and strategic research. In order to improve the capacity of research and developmental organizations and their staff, provision has been made for strengthening them with state of the art technologies through training programmes / field demonstrations etc.

Objective 2. Strengthening of higher agricultural education

The success will be measured from the indicator the number of universities having developed appropriate e-learning tools and resources. Similarly, Accreditation / Extension of accreditation of agricultural universities will require number of universities granted accreditation / extension of accreditation; Grant of ICAR International fellowships to Indian and foreign students, and JRF and SRF, as applicable, will cover number of such fellowships awarded. However, such numbers of grants will also depend upon the availability of competent candidates for the fellowships. Capacity building and faculty upgradation of teachers will be measured from the number of teachers trained per year.

Objective 3. Utilizing frontier research in identified areas / programs for better genetic exploitation

The emphasis on natural resource management is laid to ensure efficient use of natural resources under the changing situations. This can be supported by developing high yielding varieties, requiring less input like fertilizers, water and pesticides. With respect to conservation of genetic resources for sustainable use, it is envisaged to conserve plant genetic resources to have repository, evaluation and further utilization of resources for improving yield in a sustainable manner. The genetic diversity of various horticultural crops will be collected from different eco-regions, characterized and utilized to develop varieties for higher yields, quality and biotic and abiotic stresses. The action points /success indicators include production of quality seed and planting materials.

Objective 4. Strengthening of frontline agricultural extension system and addressing gender issues

The success indicators with respect to assessment of technology through OFTs is measured by the actual number of technologies assessed by conducting on farm trials. Capacity building and trainings organized are measured with the actual numbers of such programme / activities undertaken by the KVKs. Regarding support for promoting gender issues is measured through the success indicators of actual number of gender related technology promotion programmes conducted by the DRWA.

Objective 5. IP management and commercialization of technologies

With respect to commercialization of technologies and promoting public-private partnership, it is envisaged to bring commercial ethos in agricultural research. Indicators for commercialization of

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

technologies, promoting public-private partnership, and protection of intellectual property rights will be determined by the commercialization through partnership development, including licensing of ICAR technologies. The increasing numbers over the years may indicate a higher emphasis on technology transfer through enterprises; thereby contributing to larger adoption and improved socioeconomic impact of ICAR technologies.

Objective 6. Assessment and monitoring of fishery resources

To enhance fish production and productivity on a sustainable basis from the available resources, and to address the issues and strategies to overcome the critical research gaps in realizing the full production potential from fisheries and aquaculture sector, the research activities have been consolidated and prioritized. The action points and the success indicators under this objective have been identified depending on the priority and availability of the resources and the needs and requirements of the stakeholders. It is expected that by undertaking these programmes, there would be an increase in fish production, conservation of resources, more opportunities for livelihood and employment generation.

Objective 7. Development of vaccines and diagnostics

The production of diagnostic kits and vaccines would involve delineation of process (processes) and thereby denoting a specific number for field testing / validation.

Objective 8. Post harvest management, farm mechanization and value addition

The action points / success indicators for development / refinement of equipment would include intended performance of the equipment and its commercial viability. Test results and on-farm trials will be used to judge the expected output. The success indicators will cover technologies developed to create innovative products that are commercially acceptable in competitive markets.

Section 5: Specific Performance Requirements from other Departments

1. A strong network support for channelizing awareness through training programmes, inputs like monetary support / loans, availability of germplasm, medicines, etc. and market access through state development agencies, KVKs and NGOs would play a major role. (State AH departments, DADF, KVKs, NGOs).

2. Development of animal disease diagnostics and vaccines requires sound commitment for monitoring support for production of diagnostic vaccines whereas for validation under field conditions, a strong commitment and participation of state agencies will be required. (State AH departments, Pvt. Industry for up-scaling).

3. 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.

4. Technology adoption would depend upon the proactive role of development departments namely DAC, DST, DBT, DADF, SAUs etc.

5. Regarding the achievements related to technology assessment through OFTs and capacity building through training programme, the support of ICAR institutions and SAUs are required in order to ensure timely technology and methodology backstopping. In addition, farmers participation, sponsorship of trainees from the line departments, availability of required demonstration plots for conducting OFTS trials are some of the much needed support from the stakeholders.

6. The success with respect to promotion of technologies covering gender issues requires the collaboration of AICRP centres, Agricultural Engineering Division and the line departments are important in generating suitable gender data base, assessment of the technologies keeping in view the gender perspectives and their dissemination.

7. Popularization and commercialization of tools and equipment will require continued support of Department of Agriculture and Cooperation, Ministry of Agriculture for frontline demonstrations on large scale and capacity building of stakeholders and proactive role taken by various line departments in promoting improved technologies.

8. The Fisheries Division is working in close coordination and linkages with the Ministry of Agriculture; Ministry of Commerce; Ministry of Science & Technology; Ministry of Environment & Forest; Ministry of Earth Sciences; Ministry of Food Processing Industries, funding institutions, private entrepreneurs, NGOs, stakeholders etc. through interface and participation in various committees and meetings addressing the researchable issues in fisheries and aquaculture for formulating the strategies and guidelines for policy interventions to facilitate increasing fish production and productivity. Support from all these agencies and organizations are essential for achieving the mission of providing required food, nutritional, socio-economic and livelihood security.

9. The support of the Ministry of Finance and the Planning Commission would be crucial for realizing of set objectives, target and goals. Further, successful executing of the programmes would depend on the proactive role of other line departments of states and stakeholders for technology adoption and timely implementation of suggested strategies & guidelines.

10. Support from the concerned central / state line departments / SAUs, soil testing laboratories, KVKs, watershed associations, Pani Panchayat for promoting adoption of developed technologies.

11. Support from associated Institutes/DUs/SAUs/line departments for promoting adoption of developed technologies.

12. Financial support as per EFC / SFC allocation of institute under Horticulture

Section 5: Specific Performance Requirements from other Departments

Division including AICRP / network projects.

13. Support from SAUs, KVKs and line departments for promotion and adoption of technologies developed by the institutes.

14. Financial and technological support from other government departments like, DAC, NMPB, NHB, APEDA, MoRD, MoHFA, MoWR etc., State line departments and others including foreign collaborations.

15. The development and strengthening of the SAUs / AUs will depend upon the support / timely availability of sufficient fund from the central government.

Section 6: Outcome/Impact of Department/Ministry

Outcome/Impact of Department/Ministry	Jointly responsible for influencing this outcome / impact with the following department (s) / ministry(ies)	Success Indicator	Unit	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
1 Enhanced agriculture productivity	DADF, DAC, Planning Commission, Ministry of Environment & Forests, Ministry of Panchayati Raj, Ministry of Rural Development and State Governments	Increase in agriculture productivity	%	0	2	2	2	2
2 Enhanced milk, egg, meat & fish productivity	DADF, Ministry of Panchayati Raj, Ministry of Rural Development, State Governments and NGOs	Increase in milk productivity	%	0	3.8	4	4	4
		Increase in egg productivity	%	0	2	2	2	2
		Increase in meat productivity	%	0	2.5	2.5	2.5	2.5
		Increase in fish productivity	%	0	4	4	4	4
3 Enhanced availability of quality human resources for agricultural research & development activities	SAUs, SVUs, Ministry of Panchayati Raj, Ministry of Rural Development and State Governments	Increase in Graduates / PG students passed out and capacity building	%	0	5	5	5	5
4 Enhanced rural livelihood security	DAC, DADF, SAUs, SVUs, Ministry of Panchayati Raj, Ministry of Rural Development, Ministry of Fertilizers and State Governments	Decrease in rural poverty	%	0	1	1	1	1
		Increase in farm income	%	0	3	2	2	2
5 Improved nutritional security	DST, DBT, ICMR, Ministry of Food Processing, Ministry of Panchayati Raj, Ministry of Rural Development and State Governments	Increase in per capita availability of agricultural products	%	0	1.6	0.8	0.8	0.8
6 Enhancing frontier research / programmes		Technical papers published in recognized journals	Number	0	4000	4500	5000	5000

Section 6: Outcome/Impact of Department/Ministry

Outcome/Impact of Department/Ministry	Jointly responsible for influencing this outcome / impact with the following department (s) / ministry(ies)	Success Indicator	Unit	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
		New varieties developed	Number	0	60	70	80	80
7 Commercialization of technologies	SAU/DU	Research converted into commercialized technology	Number	0	10	10	10	10