



# **Results-Framework Document (RFD)**

**for**

## **National Research Centre on Equines (2014-2015)**

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## **Section – 1: Vision, Mission, Objectives and Functions**

### ***Vision***

Generation of demand driven technologies for equine health and production management and capacity building for competitive power utilization in agriculture operations to serve the underprivileged under changed environmental and socioeconomic scenario

### ***Mission***

- Achieving freedom from dreaded equine diseases through development of modern diagnostics and vaccines.
- Technology transfer for superior mule and true-to-breed indigenous horse production in their home tracts using artificial insemination.
- Enhancing performance of working equids especially in arid, semi-arid and mountainous regions.
- Income generation through market intelligence activities.

### ***Objectives***

- To develop diagnostics/ biologicals for major equine diseases.
- Diagnosis, surveillance and monitoring of equine diseases.
- Maintenance of National repository of microorganisms of animal origin.
- Conservation & enhancing productivity of equines.
- Providing diagnostic, advisory and consultancy services.

### ***Functions***

To attend to all matters related to the welfare of equines (horses, mules and donkeys) and economic upliftment of equine owners including developing necessary infrastructural framework for conducting basic, applied and strategic researches in the areas of equine health and production; undertaking research in nutrition, physiology, breeding, reproduction, conservation and preservation of precious germplasm of indigenous breeds of horses and donkeys as well as in conducting basic, strategic, anticipatory, and translational research on major equine diseases and also as National Referral facility for diagnosis, surveillance and monitoring of equine diseases at National level.

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

S. No.	Objective(s)	Weight	Action(s)	Success Indicator(s)	Unit	Weight	Target/Criteria value				
							Excellent	Very Good	Good	Fair	Poor
							100%	90%	80%	70%	60%
1	To develop diagnostics/biologicals for major equine diseases	16	Development of recombinant antigen and monoclonal antibody based diagnostic assays for <i>Trypanosoma evansi</i>	Development of diagnostic recombinant antigen(s) and monoclonal antibody	Date	16	10/03/2015	15/03/2015	20/03/2015	25/03/2015	30/03/2015
2	Diagnosis, surveillance and monitoring of equine diseases	16	Surveillance, monitoring and control of common equine diseases	Testing of biological samples for equine diseases	Number	16	1400	1300	1200	1100	1000
3	Maintenance of National repository of microorganisms of animal origin	16	Identification, characterization, reposition and maintenance of animal microbes	Reposition & maintenance of microbial strains/isolates plasmids, genomic DNA clones etc	Number	16	320	300	280	260	240
4	Conservation & enhancing productivity of equines	16	Cryopreservation of equid semen	Semen doses cryopreserved	Number	8	375	350	325	300	275
			Artificial insemination in mares and jennies	Artificial inseminations performed	Number	8	50	45	40	35	30

5	Providing diagnostic, advisory and consultancy services	16	Testing of bio-samples for EIA, CEM & Glanders	Samples tested	Number	8	7500	7000	6500	6000	5500
			Organization of equine health camps	Health camps organized	Number	8	14	12	10	8	6
*	Publication/Documentation	5	Publication of the research articles in the journals having the NAAS rating of 6.0 and above	Research articles published	No.	3	20	18	16	14	12
			Timely publication of the Institute Annual Report (2013-2014)	Annual Report published	Date	2	30/06/2014	02/07/2014	04/07/2014	07/07/2014	09/07/2014
*	Fiscal resource management	2	Utilization of released plan fund	Plan fund utilized	%	2	98	96	94	92	90
*	Efficient Functioning of the RFD System	3	Timely submission of Draft RFD for 2014-2015 for Approval	On-time submission	Date	2	15/05/2014	16/05/2014	19/05/2014	20/05/2014	21/05/2014
			Timely submission of Results for 2013-2014	On-time submission	Date	1	1/05/2014	2/05/2014	5/05/2014	6/052014	7/052014
*	Enhanced Transparency / Improved Service delivery of Ministry/Department	3	Rating from Independent Audit of implementation of Citizens' / Clients' Charter (CCC)	Degree of implementation of commitments in CCC	%	2	100	95	90	85	80

			Independent Audit of implementation of Grievance Redress Management (GRM) system	Degree of success in implementing GRM	%	1	100	95	90	85	80
*	Administrative Reforms	7	Update organizational strategy to align with revised priorities	Date	Date	2	1/11/2014	2/11/2014	3/11/2014	4/11/2014	5/11/2014
			Implementation of agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC).	% of Implementation	%	1	100	90	80	70	60
			Implementation of agreed milestones for ISO 9001	% of implementation	%	2	100	95	90	85	80
			Implementation of milestones of approved Innovation Action Plans (IAPs).	% of implementation	%	2	100	90	80	70	60

### Section 3: Trend Values of the Success Indicators

S. No.	Objective	Action	Success Indicator	Unit	Actual Value for FY 2012-2013	Actual Value for FY 2013-2014	Target Value for FY 2014-2015	Projected Value for FY 2015-2016	Projected Value for FY 2016-2017
1	To develop diagnostics/biologicals for major equine diseases	Development of recombinant antigen and monoclonal antibody based diagnostic assays for <i>Trypanosoma evansi</i>	Development of diagnostic recombinant antigen(s) and monoclonal antibody	Number	-	-	15/03/2015	-	-
2	Diagnosis, surveillance and monitoring of equine diseases	Surveillance, monitoring and control of common equine diseases	Testing of biological samples for equine diseases	Number	1482	1442	1300	1450	1500
3	Maintenance of National repository of microorganisms of animal origin	Identification, characterization and reposition of animal microbes	Reposition and maintenance of microbial strains/isolates plasmids, genomic DNA clones etc	Number	208	309	300	340	360
4	Conservation & enhancing productivity of equines	Cryopreservation of equid semen	Semen doses cryopreserved	Number	509	356	350	400	425
		Artificial insemination in mares and jennies	Artificial inseminations performed	Number	32	43	45	55	60
5	Providing diagnostic, advisory and consultancy services	Testing of bio-samples for EIA, CEM & Glanders	Samples tested	Number	10093	9597	7000	8000	8500

		Organization of equine health camps	Health camps organized	Number	14	12	12	16	18
	Publication/ Documentation	Publication of the research articles in the journals having the NAAS rating of 6.0 and above	Research articles published	No.	19	30	18	22	24
*	Publication/ Documentation Fiscal resource management	Timely publication of the Institute Annual Report (2013-2014)	Annual Report published	Date	25/06/2013	21/06/2014	02/07/2014	02/07/2015	02/07/2016
		Utilization of released plan fund	Plan fund utilized	%	100	99.24	96	98	98
*	Efficient Functioning of the RFD System	Timely submission of Draft RFD for 2014-2015 for Approval	On-time submission	Date	-	-	16/05/2014	-	-
*	Enhanced Transparency / Improved Service delivery of Ministry/Department	Timely submission of Results for 2013-2014	On-time submission	Date	-	-	2/05/2014	-	-
		Rating from Independent Audit of implementation of Citizens' / Clients' Charter (CCC)	Degree of implementation of commitments in CCC	%	-	-	95	-	-
		Independent Audit of implementation of Grievance	Degree of success in	%	-	-	95	-	-

		Redress Management (GRM) system	implementing GRM						
		Update organizational strategy to align with revised priorities	Date	Date	-	-	2/11/2014	-	-
*	Administrative Reforms	Implementation of agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC).	% of Implementation	%	-	-	90	-	-
		Implementation of agreed milestones for ISO 9001	% of implementation	%	-	-	95	-	-
		Implementation of milestones of approved Innovation Action Plans (IAPs).	% of implementation	%	-	-	90	-	-



**Section 4 (a): Acronyms**

<b>S. No.</b>	<b>Acronym</b>	<b>Description</b>
1	AH	Animal Husbandry
2	NGOs	Non-Governmental Organizations
3	SAUs	State Agricultural Universities
4	SVUs	State Veterinary Universities
5	DNA	Deoxyribonucleic Acid
6	EIA	Equine Infectious Anemia
7	CEM	Contagious Equine Metritis
8	AI	Artificial Insemination
9	VTCC	Veterinary Type Culture Collection
10	AnGR	Animal Genetic Resource
11	NRCE	National Research Centre on Equines
12	ICAR	Indian Council of Agricultural Research
13	DAHDF	Department of Animal Husbandry Dairying and Fisheries
14	ELISA	Enzyme Linked Imuno-Sorbent Assay
15	R&D	Research and Development

#### Section 4 (b): Description and definition of success indicators and proposed measurement methodology

Sl.No.	Success indicator	Description	Definition	Measurement	General Comments
1	Development of diagnostic recombinant antigen(s) and monoclonal antibody	The development of diagnostic recombinant antigen(s) and monoclonal antibody would involve delineation of process for detection of <i>Trypanosoma evansi</i> in equines and hereby denoting a specific number for field testing/validation through various institutes, State AH departments, NGOs, private production houses/industry	To develop sensitive test for detection of causative agent for specific equine disease ( <i>Trypanosoma evansi</i> )	Number	Development of new diagnostics will be need based depending on the occurrence/emergence/prevalence of the disease likely to result in high economic loss
2	Testing of biological samples for equine diseases	In a way of sero-surveillance and sero-monitoring of major equine disease, so as to make control strategies in any exigency	The different geographical zones of the country will be sampled and tested for different equine diseases as per facilities available at NRCE	Number	Different zones will be mapped vis-à-vis endemicity and prevalence of different equine diseases
3	Reposition & maintenance of microbial strains/isolates plasmids, genomic DNA clones etc	Reposition & maintenance of microbial strains/isolates plasmids, genomic DNA clones will involve the collection, authentication and preservation of microbes of animal origin from different geographical regions of the country	To act as a National repository of microbes (Bacteria/Virus/Fungus etc) of animal origin	Number	Reposition of microbial strains/isolates plasmids, genomic DNA clones will be an asset for the country in terms of development of diagnostics & vaccines as well as in conserving biological diversity
4	Semen doses cryopreserved	The ex-situ conservation will be in the form of cryopreservation of semen	Cryopreservation of semen is an ex situ method of conserving the breed for either posterity or/ and their use for multiplication of germ plasm	Number	This is the methodology used for conservation/improvement/faster multiplication of breeds/strains outside their natural habitats depending on the need in view of their available numbers or uniqueness of character(s)
5	Artificial inseminations performed	Improving reproductive efficiency will involve artificial insemination	Artificial Insemination (AI) is a technique used for faster multiplication of germplasm both under farm and field conditions	Number	AI technique will be beneficial in faster multiplication of quality germplasm as well as improvement of the germplasm at farmer's door
6	Samples tested	Testing of biological samples for the three equine diseases viz EIA, CEM & Glanders is undertaken at the request of equine owners/private breeders/industry personal for certification etc.	Contractual testing of serum samples for EIA, CEM and Glanders is carried out for reporting and elimination of any positive cases in the country	Number	Contractual testing of biological samples of equines from the country will be useful in identifying any positive case of the two diseases, thereby leading to eradication of the two dreaded diseases.
7	Health camps organized	State-wise equine health camps will be organized with a aim of welfare activity	With the help of state animal husbandry infrastructure, health camps will be organized in equine populated villages and free consultation, medication etc will be imparted	Number	Spread of welfare activities to the maximum equine owners will be sole aim of this activity and educate them about standard equine health and production practices.

**Section 5: Specific performance requirements from other departments that are critical for delivering agreed results**

Location Type	State	Organization Type	Organization Name	Relevant Success Indicator	What is your requirement from this organization	Justification for this requirement	Please quantify your requirement from this Organization	What happens if your requirement is not met.
State	All states of India	State AH departments, Pvt. Industry	State AH departments, Pvt. Industry	Development of diagnostic recombinant antigen(s) and monoclonal antibody	For up-scaling and monitoring support for development of diagnostic and their validation under field conditions	Monitoring and surveillance of livestock and poultry disease	Cannot be quantified	Development of new diagnostic will be need based dependent on occurrence/emergence/prevalence/severity of a disease likely to result in high economic loss.
State	All states of India	State animal husbandry departments/equine societies	State animal husbandry departments/equine societies	Testing of biological samples for equine diseases	As a welfare activity so as to educate the equine owners about standard equine health and production practices	To disseminate the knowledge to the end users so that equine husbandry can develop in a better way	Number of farmers contacted	We may need to further expand our visibility and linkages
State	All states of India	ICAR Institutions/ SAUs/SVUs/VTCC Network units	ICAR Institutions/ SAUs/SVUs/VTCC Network units	Reposition & maintenance of microbial strains/isolates plasmids, genomic DNA clones etc	For deposition of microbial isolates/samples from institutions/accredited labs/field cases etc	The depositing institutions/individuals are located in different parts of the country	Cannot be quantified at this stage and will depend on depositors/occurrence of field outbreaks etc	There may be a shortfall in the target value proposed to be achieved
State	All states of India	ICAR Institutions/ SAUs/State departments of AH and NGOs	ICAR Institutions/ SAUs/State departments of AH and NGOs	Semen doses cryopreserved	Collaboration for collection of semen doses cryopreserved	Since the AnGR is located in different states and Institutions of the country	Cannot be quantified at this stage and will depend on case to case basis	The target value may not be achieved
State	All states of India	State animal husbandry departments/equine societies	State animal husbandry departments/equine societies	Artificial inseminations performed	Collaboration for conducting artificial inseminations in different breeds of equines from different regions	Since the equine population is located in different parts of the country	Cannot be quantified at this stage and will depend on stake holder requirements	We may need to further expand our visibility and linkages

**Section 6: Outcome/Impact of activities of Department/Ministry**

Sl. No.	Out Come / Impact	Jointly responsible for influencing this outcome / impact with the following department (s) / ministry(ies)	Success Indicator(s)	Unit	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
1	The timely diagnosis with surveillance of equine diseases helped in disease containment (Equine Influenza and Glanders) in the country	State Animal Husbandry Departments	Surveillance of serum samples for implementing control measures for disease	Number	1304	1350	1400	1450	1500
2	The low cost recombinant antigen based equine piroplasmosis ELISA kit developed helped in identifying the <i>T. equi</i> endemic areas facilitating its control strategies.	State Animal Husbandry Departments	Surveillance of serum samples for implementing control measures	Number	1200	1250	1300	1350	1400
3	The National Repository of Animal microbes (VTCC) established for conservation of microbial cultures for R&D activities & teaching,	State Veterinary & Animal Science Universities	Number of microbial cultures repositied	Number	198	309	320	340	360