

## Annual Performance Evaluation Report of RSCs i.e. Institutions for the year 2011-2012

**Name of the Division : Animal Science**

**Name of the Institute: National Institute of Animal Nutrition & Physiology, Adugodi, Bangalore-560030**

**RFD Nodal Officer: Dr. S. C. Roy, Senior Scientist**

Objectives	Weight (%)	Actions	Success Indicators	Unit	Weight (%)	Target /Criteria Value					Achievements	Performance	
						Excellent	Very Good	Good	Fair	Poor		Raw Score (%)	Weighted raw Score (%)
						100%	90%	80%	70%	60%			
1. Improving nutrient availability and utilization in livestock by enhancing lingo-cellulose complex degradation and reducing rumen methane production	22	Cloning of feruloyl esterase enzyme gene	Developing recombinant clones for feruloyl esterase	Date	2	30.9.11	30.11.11	31.12.11	01.02.12	25.3.12	30.9.11	100	2
		Enhancing lignin degradation using lignolytic enzymes from aerobic fungi	Optimization of quantity of enzymes required for spray treating of straw to obtain lignin breakdown	Date	3	30.11.11	30.12.11	30.1.12	28.2.12	30.3.12	30.11.11	100	3
		Studies on expansin for improving degradability of lignocellular biomass	Preparing gene construct for cloning and standardization of expression of expansin from tomato and cucumber	Date	2	1.3.12	7.3.12	14.3.12	21.3.12	31.3.12	14.3.12	80	1.6
		Identification genes with lignin/polyphenol degradaion activity through preparation and screening of metagenomic libraries	Number of genes identified to be having lignin /polyphenol degradaion activity	Number	3	5	4	3	2	1	5	100	3
		Estimation of methane production/suppre	Number of plants / feed samples	Number	3	25	20	15	10	5	25	100	3

		ssion potential of plants /ruminants feeds	screened										
		Identification of methanogenic archaea	Number of characterized, viable archaea	Number	3	5	4	3	2	1	5	100	3
		Determining mineral release from TMR	Completion of evaluation of mineral release with TMR feeds	Date	3	30.11.11	31.12.11	31.01.12	29.2.12	31.3.12	30.11.11	100	3
		Developing markers for assessing copper status	Identification of copper related genes	Date	3	31.12.11	31.1.12	29.2.12	15.3.12	31.3.12	31.12.11	100	3
2. Enhancing animal feed safety for improved animal health and production	10	Reducing aflatoxin toxicity by use of plant products	Screening of plants for growth inhibition of aspergillus fungi	Number	2	40	30	20	10	5	40	100	2
		Standardization and evaluation of feed for contaminants through microscopy protocols	Evaluation of Indian fed samples by microscopy	Number	2	20	18	16	14	12	20	100	2
		Investigating the use of detoxified neem cake in growing lambs	Evaluation of nutrient utilization, immune status, biochemical profile growth rate and carcass characteristic	Date	2	29.2.12	15.3.12	20.3.12	25.3.12	31.3.12	29.2.12	100	2
		Monitoring of heavy metals in soil, water, and feed collected near highways	Data on heavy metals contents in soil, water, and feed collected near highways	Date	2	1.3.12	7.3.12	14.3.12	21.3.12	28.3.12	1.3.12	100	2
		Amelioration of fluorosis toxicity using boron as a	Evaluation of effectiveness of boron in	Date	2	01.3.12	07.3.12	14.03.12	21.03.12	31.03.12	01.3.12	100	2

		supplement	amelioration of fluorosis in rat model										
3. Enhancing productive and reproductive efficiency in livestock through physiological, , biotechnological and nutritional approaches	25	Evaluation of sperm and semen characteristics to relate to bull's fertility status	Drawing relationship between semen/sperm characteristics and fertility	Date	3	1.3.12	7.3.12	14.3.12	21.3.12	28.3.12	1.3.12	100	3
		Modulation of corpus luteum PGF2 $\alpha$ production by use of modulators to enhance function	Number of modulators tested <i>in vitro</i>	Number	2	3	2	1	0	0	3	100	2
		Understanding the regulation of CL by studying expression of genes associated with CL function	Number of genes studied for expression	Number	3	5	4	3	2	1	4	90	2.7
		Elucidating mechanism of growth dynamics of ovarian follicles in the buffalo	Identification of factors involved and markers of growth and apoptosis	Date	3	1.3.12	7.3.12	14.3.12	21.3.12	28.3.12	1.3.12	100	3
		Supplementation of energy for augmenting attainment of puberty in the buffalo	Evaluation of usefulness of energy supplement in augmenting attainment of puberty	Date	2	30.6.11	30.7.11	30.8.11	30.9.11	30.10.11	30.6.11	100	2
		Study the effect of dietary energy on endocrine, immune and reproductive response in sheep	Standardization of expression analysis of genes involved	Date	2	31.1.12	15.2.12	28.2.12	15.3.12	31.3.12	15.3.12	70	1.4
		Investigating the effects of azolla supplementation on reproductive	Data acquisition, on ovarian follicle activity, estrus	Date	2	30.11.11	10.12.11	15.12.11	20.12.11	25.12.11	30.11.11	100	2



			farmer										
		Elucidation of mechanism of biophysical translation of calcium to enable its modulation to improve egg shell quality	Establishment of relationship between calcium uptake, carbonic anhydrase activity, shell quality and role of shell proteins during production, post molt production periods and formation of egg shell	Date	2	30.11.11	31.12.11	31.1.12	29.2.12	31.3.12	31.12.11	90	1.8
5. Feed resources, feed supplements / feed additives for improving nutritional status of animals	6	Study the influence of prebiotic feeding on rumen fermentation	Evaluate rumen metabolic and microbial profiles	Date	2	30.9.11	31.10.11	30.11.11	31.12.11	31.1.12	30.9.11	100	2
		Preparation of chromium enriched yeast for feeding in livestock and poultry as supplement	Method for production of chromium enriched yeast	Date	2	31.10.11	30.11.11	31.12.11	31.1.12	29.2.12	31.10.11	100	2
		Feeding azolla as a green feed supplement for dairy animals	Evaluation of effect on milk production	Date	2	31.8.11	30.9.11	31.10.11	30.11.11	31.12.11	31.8.11	100	2
6. Amelioration of stress in animals for better production and reproduction	6	Exploring mechanism of compromised maternal recognition of pregnancy in sheep under stress	Screening of sheep for prostaglandin under heat and nutritional stress	Number	2	50	40	30	20	10	50	100	2
		Reducing stress to increase egg production	Establishing antioxidant status during	Date	2	31.8.11	30.9.11	31.10.11	30.11.11	31.12.11	31.8.11	100	2

		beyond 72 weeks of age in birds	the ovulatory cycle										
		Amelioration of heat stress in animals	Identification, assay and validation of stress indicators	Date	2	30.10.11	15.11.11	30.11.11	15.12.11	30.12.11	30.10.11	100	2
7.	7	Developing Indian livestock feed portal	Amount of information on feed resources/ feeding generated	Number	2	100	75	60	50	40	100	100	2
		Developing feed balance sheet for livestock	Development of district level dynamic information for states of south and western India	Number of states	1	7	6	5	4	3	7	100	1
		Estimation of crop residues production with remote sensing technique	Precision of estimation	%	2	80	75	65	55	45	80	100	2
		Village workshop on nutritional, productive and reproductive management of livestock	Number of workshops conducted	Number	1	8	6	4	2	0	8	100	1
		Training professionals in research methodology, data management and biostatistics	Developing effective training modules and conducting training	Date	1	15.11.11	30.11.11	10.12.11	15. 1.12	25.1.12	15.11.11	100	1
8.	6	Compiling and editing of annual report	Printing and publishing of annual report of the institute for the period 2010-2011	Date	1	30.6.11	7.7.11	14.7.11	21.7.11	28.7.11	30.6.11	100	1
		Publication of research articles	Number of research papers submitted for publication	Number	2	37	30	25	20	10	39	100	2

		Preparation of brochures/ folders etc. as extension literature	Number of extension literature brought out	Number	1	5	4	3	2	1	19	100	1
		Participation in scientific meets and presentation of research findings	Number scientific meets participated and presentations made	Number	2	50	40	30	20	10	56	100	2
9. Building infrastructure for effective conducting of research activities	1	Construction of new laboratory block, boundary wall for security, guesthouse expansion, storm water drainage, rain water harvesting etc	Number of works completed	Number	1	4	3	2	1	0	3	90	0.9
10. Efficient functioning of the RFD system	11	Timely submission of RFD for 2011-12	Target date	Date	2	10.6.11	14.6.11	16.6.11	20.6.11	22.6.11	30.03.11	100	2
		Timely submission of results for 2011-12 RFD	Target date	Date	1	01.05.12	3.5.12	4.5.12	5.5.12	6.5.12	17.04.12	100	1
		Finalize a strategic plan for next five year plan	Target date	Date	2	10.12.11	15.12.11	20.12.11	24.12.11	31.12.11	17.9.11	100	2
		Identify potential areas of corruption related to organization activity and develop an action plan to mitigate them	Target date	Date	2	10.12.11	15.12.11	20.12.11	24.12.11	31.12.11	10.12.11	100	2

		Create a Sevottam compliant system to implement, monitor and review citizen's charter	Target date	Date	2	10.12.11	15.12.11	20.12.11	24.12.11	31.12.11	10.12.11	100	2
		Create a Sevottam compliant system to redress and monitor public grievances	Target date	Date	2	10.12.11	15.12.11	20.12.11	24.12.11	31.12.11	10.12.11	100	2

**Total Composite Score: 98.20%**