



RFD

(RESULTS-FRAME WORK DOCUMENT)

For 2011 – 2012



PROJECT DIRECTORATE ON POULTRY
Indian Council of Agricultural Research
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SECTION 1

VISION, MISSION, OBJECTIVES AND FUNCTIONS

Vision

To enhance productivity of chicken for household nutritional security, income and employment generation.

Mission

To develop and propagate improved varieties of chicken for sustainable production under intensive and extensive systems.

Objectives

- 1) To coordinate and monitor ICAR-sponsored network research programmes
- 2) To undertake applied research on genetics and breeding, and conservation of improved chicken germplasm with supportive research on nutrition, disease control and management
- 3) To lay special emphasis to development of chicken varieties for meeting the needs of rural/tribal and other under-privileged sections of the society

Functions

- 1) Improvement of layer and broiler chicken strains for commercial poultry
- 2) Development of germplasm for rural poultry farming
- 3) Supportive research in nutrition, health and molecular genetics
- 4) Production and supply of improved backyard poultry germplasm

SECTION 2
INTER SE PRIORITIES AMONG KEY OBJECTIVES, SUCCESS INDICATORS AND TARGETS

Objectives	Weight , %	Actions	Success Indicators	Unit	Weight	Targets / Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
Improvement of layer and broiler chicken strains for commercial poultry	27	Evaluation of layer pure lines	Evaluation of production traits in IWH, IWI, IWK, layer control etc.	Number of birds	8	12800	12000	11000	10000	9000
		Evaluation of broiler pure lines	Evaluation of juvenile traits in PB-2	Number of birds	2	3600	3200	2800	2400	2000
			Evaluation of production traits in broiler lines	Number of birds	5	5000	4500	4000	3500	3000
		Regeneration of pure lines	Regeneration of broiler lines	Number of chicks	10	39000	37000	35000	33000	30000
		Maintenance of resource populations	Maintenance of naked neck and dwarf lines	Number of birds	2	300	275	250	225	200
Development of germplasm for rural poultry farming	26	Evaluation of rural pure lines & crosses	Juvenile growth in male line, PD-4 & PD-5	Number of birds	5	3000	2800	2600	2400	2200
			Production performance in male line, PD-2, PD-3, native germplasm &	Number of birds	12	2900	2700	2500	2300	2000

			crosses							
		Regeneration of pure lines	Regeneration of rural poultry lines (2male lines, PD-2, PD-3, PD-4, PD-5 & native)	Number of chicks	9	15000	13000	11000	9000	7000
Supportive research in nutrition, health and molecular genetics	20	Candidate gene analysis for growth and production traits	Analysis of exon 2, 3 & 4 of GnRH1 & myostatin promoter in layer & broiler lines	Number of birds	5	600	500	400	300	200
		Requirements of nutrients for PDP germplasm	Herbal feed supplements for rural poultry	Number of herbal agents	5	4	3	2	1	0
			Optimum dietary Zn level for broiler breeders	Date	5	31-1-2012	20-2-2012	28-2-2012	10-3-2012	20-3-2012
		Disease management in PDP germplasm	Screening of breeders for ALV	Number of breeders	5	3000	2800	2600	2400	2200
Production and supply of improved backyard poultry germplasm	16	Supply of improved chicken germplasm	Distribution of poultry seed	Number	7	4,90,000	4,60,000	4,40,000	4,20,000	4,00,000
		Supply of parent line	Supply to various stake	Number	9	54,000	50,000	46,000	42,000	38,000

		chicks	holders							
Efficient functioning of RFD system	11	Submission of draft proposal	Timely submission	Date	5	10-06-2011	15-06-2011	20-06-2011	25-06-2011	30-06-2011
		Submission of results	Timely submission	Date	6	01-05-2012	10-05-2012	20-05-2012	30-05-2012	10-06-2012

SECTION 3
TREND VALUES OF THE SUCCESS INDICATORS

Objectives	Actions	Success indicators	Unit	Actual value for FY 09/10	Actual value for FY 10/11	Targeted value for FY 11/12	Projected value for FY 12/13	Projected value for FY 13/14
Improvement of layer and broiler chicken strains for commercial poultry	Evaluation of layer pure lines	Evaluation of production traits in IWH, IWI, IWK & Layer control	Number of birds	14000	12800	12000	12800	12800
	Evaluation of broiler pure lines	Evaluation of juvenile traits in PB-2	Number of birds	3750	3600	3200	3600	3600
		Evaluation of production traits in broiler lines	Number of birds	5200	5060	4500	5200	5200
	Regeneration of pure lines	Regeneration of commercial broiler lines	Number of chicks	40536	36319	37000	34900	34700
	Maintenance of resource populations	Maintenance of naked neck and dwarf lines	Number	300	300	275	300	300
Development of germplasm for rural poultry farming	Evaluation of rural pure lines & crosses	Juvenile growth in male line, PD-4 & PD-5	Number of birds	1525	3125	2800	3750	3825
		Production performance in male line, PD-2, PD-3, native germplasm & crosses	Number of birds	831	1089	2700	2250	2250
	Regeneration of pure lines	Regeneration of rural poultry lines (2male lines, PD-2, PD-3, PD-4, PD-5 & native)	Number of chicks	7018	10142	13000	18675	18750
Supportive research in	Candidate gene	Analysis of exon 2, 3	Number	-	425	500	1200	-

nutrition, health and molecular genetics	analysis for growth and production traits	& 4 of GnRH1 & myostatin promoter in layer & broiler lines	of birds					
	Requirements of nutrients for PDP germplasm	Herbal feed supplements for rural poultry	Number of herbal agents*	-	2	3	1	-
		Optimum dietary Zn level for broiler breeders	Date*	-	-	20-02-2012	-	-
	Disease management in PDP germplasm	Screening of breeders for ALV	Number of breeders	460	2844	2800	3000	3000
Production and supply of improved backyard poultry germplasm	Supply of improved chicken germplasm	Distribution of poultry seed	Number	4,19,144	4,64,464	4,60,000	5,10,000	5,30,000
	Supply of parent line chicks	Supply to various stake holders	Number	41,727	52,493	50,000	56,000	58,000
Efficient functioning of RFD system	Submission of draft proposal	Timely submission	Date	-	12-3-2011	15-06-2011	15-06-2012	15-06-2013
	Submission of results	Timely submission	Date	-	25-3-2011	10-05-2012	10-05-2013	10-05-2014

* initiated only during 2011-12

SECTION 4

Description and Definition of Success Indicators and Proposed Measurement Methodology

Objective 1

Different pureline chicken populations will be evaluated for the selection traits, viz. body weight during juvenile period in broiler dam line (PB-2), production traits in layer and broiler lines as per the standard procedure. Coloured broiler pure lines will be regenerated after selection for traits of importance with the optimum number of chicks from dams selected based on 5 week body weight (broiler male lines) and two-stage selection for 5 week body weight and egg production (broiler female lines). Besides, the naked neck and dwarf gene lines will be maintained as resource populations with minimum number of birds.

Objective 2

At PDP, the pureline chicken populations will be evaluated for various selection traits, viz. body weight/shank length in male line for egg type germplasm, PD-4 and PD-5 as per the standard procedure. Production performance in various purelines and test crosses will be evaluated under intensive system of rearing. Different lines (2 male lines, PD-2, PD-3, PD-4 & PD-5) will be regenerated after selection for traits of importance. Under AICRP, 1000 chicks will be produced in local native birds through random mating at each centre. At the time of housing, 500 pullets and 150 males will be kept for recording data. Field evaluation of test crosses (about 250 birds) will be undertaken in backyard/free range.

Objective 3

Candidate genes like GnRH 1 and myostatin promoter associated with egg production and growth traits, respectively will be analysed by SSCP followed by sequencing. Genotypes will be established. The frequency of the genotypes and alleles for the gene will be estimated in chicken population. The response of rural poultry germplasm to herbal feed supplements and PB-2 line to dietary Zn will be studied under CRD. The incidence of vertically transmitted disease (ALV) will be assessed in breeders before regeneration using standard ELISA.

Objective 4

The improved chicken germplasm developed by the Directorate (Vanaraja, Gramapriya, Krishibro etc.) are popularised through print and electronic media, participation in exhibitions etc. The Directorate is maintaining good liaison with the developmental organizations of state and central governmental agencies, NGOs, KVKs etc. The germplasm is supplied in the form of day old chicks, fertile eggs and parents to the farmers and other stake holders.

SECTION 5

Specific Performance Requirements from other Departments

- 1) Environmental (adverse climate), managerial (feed quality, housing density etc.) and disease out breaks may affect the performance indicators.
- 2) Timely availability of funds and inputs (research consumables) is crucial for carrying out the targeted action points during the period.
- 3) Poultry seed supply is largely influenced by demand from the stakeholders and Govt. agencies, which are in turn governed by factors like season of the year, Govt. policies etc. Creation of additional housing space at PDP will enable meeting the demand for improved germplasm from different parts of the country.

SECTION 6 : OUTCOME/IMPACT OF ACTIVITIES OF ORGANISATION/MINISTRY

Sl. no.	Outcome/impact of organisation/RCS	Jointly responsible for influencing this outcome/impact with the following organisation (s)/departments/ministry (ies)	Success indicators	Unit	2009-10	2010-11	2011-12	2012-13	2013-14
1	Improvement of layer and broiler chicken strains for commercial poultry	State Agri./Vety. Universities Other ICAR Institutes	Percent improvement in productivity	Percent	-	-	0.2	0.2	0.2
2	Development of germplasm for rural poultry farming	State Agri./Vety. Universities Other ICAR Institutes	Percent improvement in productivity	Percent	-	-	5.0	8.0	10.00
3	Supportive research in nutrition, health and molecular genetics	Breeding programmes Other Institutes/SAUs Pvt. industry	No. of technologies/ processes etc.	No.	3.0	3.0	3.0	4.0	4.0