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अखिल भारतीय बकरी सुधार समन्वयक शोध परियोजना

All India Coordinated Research Project on Goat Improvement



PROJECT COORDINATOR'S REPORT



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**अखिल भारतीय बकरी सुधार
समन्वित शोध परियोजना**



**All India Coordinated Research
Project on Goat Improvement**

***Project Coordinator's Report
(2015-2016)***

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CONTENTS

Particulars	Page No.
A. Research findings for the year 2015-16	1
✚ Objectives and activities during XII plan	3
✚ Action taken report	5
✚ Salient research achievement	8
✚ Abstract	
1. Andaman Goat Field Unit	12
2. Assam Hill Goat Field Unit	12
3. Barbari Goat Farm Unit	13
4. Bengal Goat Field Unit	14
5. Black Bengal Goat Field Unit	15
6. Changthangi Goat Field Unit	16
7. Gaddi Goat Field Unit	17
8. Ganjam Goat Field Unit	18
9. Himalayan Local Goat Field Unit	18
10. Jamunapari Goat Farm Unit	19
11. Malabari Goat Field Unit	20
12. Marwari Goat Field Unit	21
13. Osmanabadi Goat Field Unit	22
14. Sangamneri Goat Field Unit	23
15. Sirohi Goat Farm Unit	24
16. Sirohi Goat Field Unit	24
17. Surti Goat Field Unit	25
18. Uttrakhand Local Goat Field Unit	26
B. Research Evaluation	28-52
C. Financial/administrative Performance	53-59
D. Success Stories	60-65

(A) RESEARCH FINDINGS FOR THE YEAR 2015-16

All India Coordinated Research Project (AICRP) on Goat Improvement is designed to enhance the productivity of the goat genetic resources in their natural habitat. The major aim is running a sustainable genetic improvement programme in the natural habitat of genetic resources with farmer's support. The project will enhance the genetic potential of the animal as well as conservation of the germplasm in their natural habitat. Presently AICRP on goat improvement is working with 13 registered goat breeds and three local genotypes. AICRP on goat improvement is also working in three breeds namely Barbari, Jamunapari, and Sirohi in semi-intensive system of rearing as farm units. Both farm and field based units are following different technical programs to achieve the desired objective.

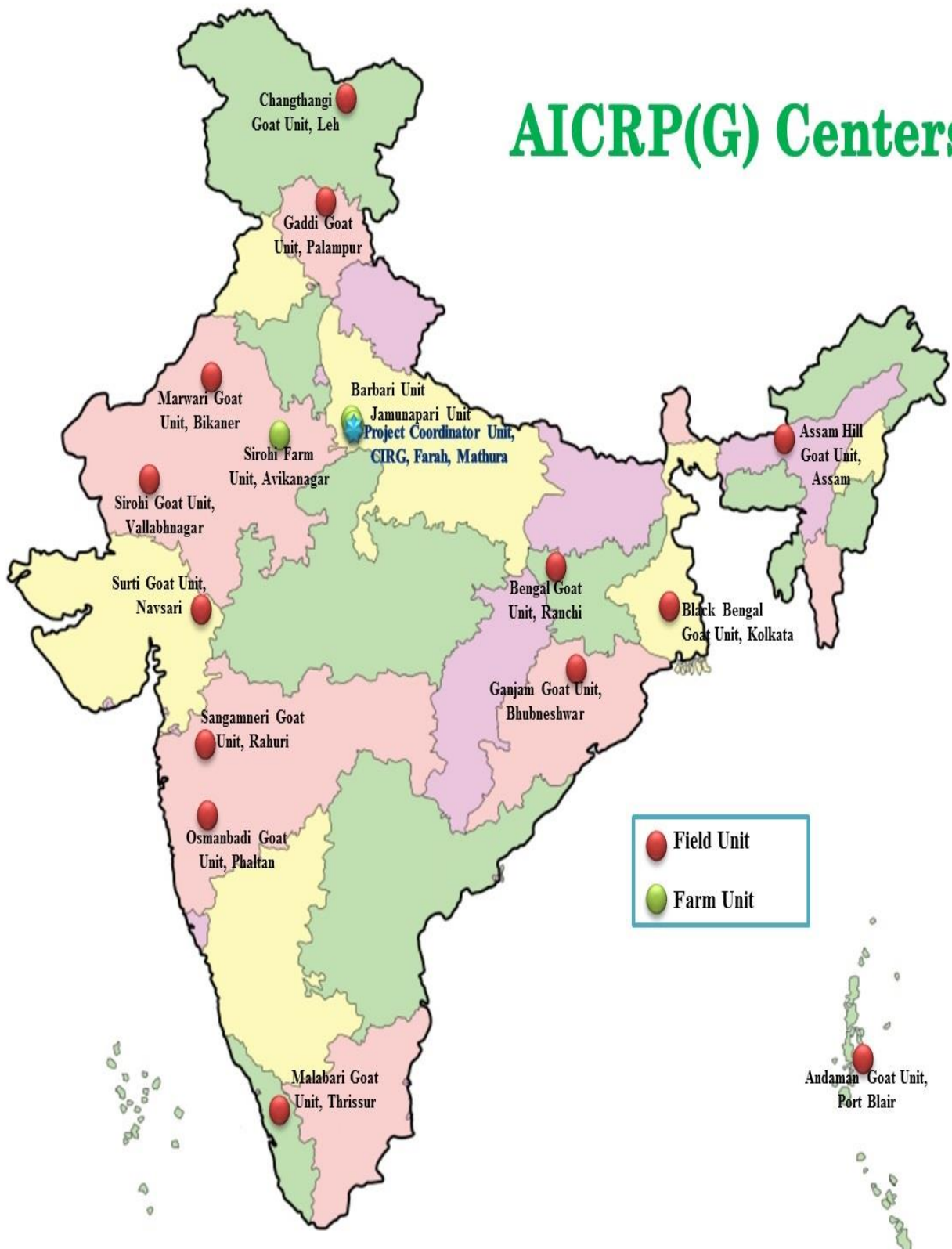
The details of Coordinating Centre of AICRP on Goat Improvement are described below.

Table 1: Coordinating Centres of AICRP on Goat Improvement

S.N.	Centre	Location	Purpose
1.	Andaman Goat Field Unit	ICAR- CIARI,Port Blair, A & N Island	Meat
2.	Assam Hill Goat Field Unit	AAU, Khanpara, Guwahati, Assam	Meat
3.	Barbari Goat Farm Unit	ICAR-CIRG, Makhdoom, Uttar Pradesh	Milk & Meat
4.	Bengal Goat Field Unit	BAU, Kanke, Ranchi, Jharkhand	Meat
5.	Black Bengal Goat Field Unit	WBUV and FS, Kolkata, West Bengal	Meat
6.	Changthangi Goat Field Unit	SKUAST,Kashmir, Leh-Ladakh, J&K	Fibre & Meat
7.	Gaddi Goat Field Unit	HPKVV, Palampur, Himachal Pradesh	Meat & Fibre
8.	Ganjam Goat Field Unit	OUAT, Bhubaneswar, Orissa	Meat
9.	Himalayan Local Goat Field Unit	ICAR-IVRI Campus, Mukteshwar, Uttarakhand	Meat
10.	Jamunapari Goat Farm Unit	ICAR-CIRG, Makhdoom, Uttar Pradesh	Milk & Meat
11.	Malabari Goat Field Unit	KV&ASU Mannuthy, Thrissur, Kerala	Meat & Milk
12.	Marwari Goat Field Unit	RAJUVAS, Bikaner, Rajasthan	Meat
13.	Osmanabadi Goat Field Unit	NARI, Phaltan, Maharashtra,	Meat & Milk
14.	Sangamneri Goat Field Unit	MPKV, Rahuri , Maharashtra	Meat & Milk
15.	Sirohi Goat Farm Unit	ICAR-CSWRI, Avikanagar, Rajasthan	Milk & Meat
16.	Sirohi Goat Field Unit	RAJUVAS, College of veterinary sciences & AH Vallabhnagar , Rajasthan	Meat
17.	Surti Goat Field Unit	N.A.U., Navsari, Gujarat	Milk & Meat
18.	Uttarakhand Local Goat Field Unit	GBPUA&T, Pantnagar, Uttarakhand	Meat

Four units were persuaded to expand their area of coverage in Tribal areas under Tribal sub plan fund of the project. Assam hill goat unit is also operational in NEH region. In the XII plan from year 2014-15 Changthangi goat breed from Laddakh region of J&K was added for conducting research on goats producing Pashmina in cold desert climate. The major thrust of the project is to build up long term capacities of goat keepers through introduction of superior breeder goats, technology transfer, creation of knowledge base, application of health management practices for enhancing production potentials on sustainable basis.

AICRP(G) Centers



OBJECTIVES AND ACTIVITIES OF THE AICRP ON GOAT IMPROVEMENT DURING XII PLAN

The improvement and conservation of animal genetic resources is a long term and continuous activity . The genetic improvement programme should be undertaken through structured and systematic manner specific to the area of evolution of the genetic resource/group through a national policy. The objectives are given below:

Objectives

- 1) To enhance productivity of goat genetic resources of the country in their habitat.
- 2) To develop germplasm resource centres for goat breeds
- 3) To validate and implement breeding, feeding, and health control technologies in the field for improved goat production and health.
- 4) Capacity building of stakeholders and goat keepers for sustainable and profitable goat husbandry.
- 5) To determine the role of goat husbandry in livelihood and food security of goat keepers.

Major Activities for the XII Plan (2012-2017)

- 1) Identify niches having valuable goat genetic resources.
- 2) Identify areas, select and register farmers and goats for pedigree and performance recording, technology validation and interventions.
- 3) Implementation of animal identification system at farmers flock and systematic and planned performance recording on adequate number of goats (min. 1000 breedable does and their followers) for genetic evaluation purposes.
- 4) Creation of goat evaluation facility for Genetic Evaluation.
- 5) Identification of area-wise centres to preserve and conserve goat germplasm
- 6) Diagnose causes of morbidity and mortality and formulate area wise preventive health control policy.
- 7) Identify regional centers to impart training and capacity building of stakeholders including farmers in goat production, health control, forage production, product processing and marketing.
- 8) Exploit the genetic potential available in native tract of goat breeds through selection of superior goats and distribute them in field for overall improvement.
- 9) To establish a data bank on goat production, health and nutrient requirements, region-wise with respect to indigenous goat genetic resources.

Table 2 Targets for each unit covered under the project (2012-2017)

Objectives	Measurable Activities	Monitorable target (Success Indicators)	Base value per year	Target per year	Target for project period
Enhance production potential of goat genetic resources of the country in their habitat	Selection of Goat Genetic Resources for base population	12 known and 4 lesser known goat genetic resources	12		16
To develop germ plasm centres for goat breeds	Registration of Clusters and farmers	Selection of 4 village clusters based on availability of goats in habitat of the goat breed	500 adult does	500 adult does	1000 adult does in 4 clusters
	Animal Identification, pedigree and performance recording	Pedigree and production records to evaluate the improvement trend	All adult goats with followers	1000	5000
	Selection of male growers kids on the basis of performance and rear them for buck purpose	Each year approx. 20 bucks will be distributed from project cost	20	10	50
To validate and implement breeding, feeding, health control and product processing technologies in field for improved health and production	Breeding of doe in farmers field	Each year minimum of 70% adult does be serviced	700	700	3500
	Health Coverage with vaccination and deworming etc.	Each year minimum 2000 goat should be vaccinated for major goat diseases of the area	2000	2000	10000
Capacity building of stakeholders and goat keepers for sustainable goat husbandry	Capacity building of goat keepers and stake holders	All adopted got keepers for one week training in a scientific organization	-	50 per unit	250
To determine role of goat husbandry in livelihood and food and food security	Livelihood and food security	Income per family			30%

**ACTION TAKEN REPORT ON
MAJOR RECOMMENDATIONS OF THE XV ANNUAL REVIEW MEET OF AICRP ON GOAT
IMPROVEMENT HELD AT CIRG, MAKHDOOM, FARAH, MATHURA ON SEPT 7-8, 2015**

S.No	Major Recommendations	Action Taken
1	PC unit should provide proforma for identification and characterisation of the breed especially for new centres. Format for identification & characterization developed by NGABR for goat will be used and will be circulated to all the PI of each unit in October 2015.	The proforma has been developed and circulated to all the units via e-mail and same will be followed by all the units.
2	PC unit should provide proforma for the socioeconomics survey to all the units and all units should carry the socioeconomic survey and impact assessment. The proforma for base line data collection, socio-economic analysis, economics of goat rearing will be circulated by November, 2015	The proforma has been developed and circulated to all the units via e-mail. The same will be followed by all the units.
3	There should be uniform proforma for the Annual report as well as power point presentation. Format for Annual Report & power point presentation have been circulated earlier; however the same will be circulated by end of November,2015	The proforma has been developed and circulated to all the units via e-mail. The same will be followed by all the units.
4	All the units will carry out proper data analysis, interpretation, and genetic progress.	The same has been communicated to all the units to follow the guidelines.
5	All the units should submit the annual report by end of April and AUC by 31 July	The same has been communicated to all units to submit the annual report and AUC by due date.
6	All units should develop at least 3 monographs/ leaflets/ year in local language and distribute them to the farmers.	This has been communicated to all the units so that publications can be released during the annual review meeting.
7	All units should submit the budget utilization and fund position quarterly.	The same has been communicated to all the units to follow the guidelines.
8	Action Taken Report (ATR) should be presented in tabular format.	The ATR will be presented in tabular format during Annual review meet.
9	The status paper on each breed by each unit by 31 March 2016.	The proforma has been developed and circulated to all the units via e-mail. The same will be followed by all the units.
10	The PC unit should distribute the fund within a stipulated time-frame.	The fund has been released within 3-5 days after getting the approval from council.
11	Semen preservation of improved buck should be initiated by all the units and the same can be simultaneously store at NBAGR.	The same has been communicated to all units to follow the guidelines. Three units have communicated that they have already submitted semen doses to NBAGR.
12	PC unit should organise trainings to the project workers (RA, SRF, Technical Officers, Data enumerators, Veterinary Officer etc.) at CIRG on different aspects of Scientific Goat Rearing.	A training programme on “Data Recording, Recording Keeping and Analysis of Goat production System” was organised at CIRG, from March 01-05, 2016 for technical/RA/SRF/Data Enumerators.
13	Information on anthelmintic resistance and	The proforma has been developed and

	physiological response needs to be collected for each region	circulated to all the units via e-mail. The same will be followed by all the units. For anthelmintic resistance PC units will initiate the work.
14	The letter may be written to VC's of respective universities regarding poor performance of Marwari Field Unit, Bikaner and Ganjam field Unit, Bhubaneswar under intimation to ICAR HQRs.	The letter to VC has been communicated on Nov. 24, 2015. Moreover field evaluation has been carried out during March 05-09, 2016 and April 26-29, 2016.
15	A 30-minute film on AICRP on Goat Improvement may be shot and completed by 2016.	Short-term tender has been floated and will be finalised soon.

Major Recommendations by RAC (2015-2016)

S.No	Major recommendation by RAC	Director's comments	ICAR's comments
i)	To develop economic models of goat farming in collaboration with different AICRP units for different regions of the country.	The work will be carried out after discussing the same in AICRP workshop.	Agreed
ii)	Research on anthelmintic resistance and selective treatment should be taken up.	PC unit will carry out the work in collaboration with AICRP units.	Agreed

QRT Recommendations: (2009 – 14)

1. Creation of the post a project coordinator of the AICRP

The Post of project coordinator of the AICRP should be revived and filled up on priority and this position should be independent of the institute with all financial and functional powers.

2. Creation of new AICRP field units

S.No	QRT Recommendations	PC's Comment
1.	The important states of Tamil Nadu, Punjab, Andhra Pradesh and Karnataka which serve as a habitat for many promising goat breeds, do not find a place in the AICRP and there is a good justification to consider creation of additional field units of this coordinated project	To be decided at council level
2.	Jakhrana is one of the important breeds and since CIRG is having a limited institutional flock, a field unit should be opened at Alwar District, Rajasthan with sufficient infrastructure, manpower and transport facility to promote this breed	To be decided at council level

3. AICRP on Goat Improvement

S.No	QRT Recommendations	PC's Comment
i)	The focus of the technical programme of the AICRP project on goat improvement should be holistic involving the participation of scientists from other	This is being followed by most of the AICRP units; however this will be implemented in more holistic

	disciplines in the research agenda of the center.	manner to address the problem.
ii)	The performance of Black Bengal Unit Kolkata was needs to relook and reallocation of this center should be explored for speedy implementation of the technical programme.	Performance was also not satisfactory during Annual review meeting 2014-15. This can be relocated to any other institute.
iii)	The Sirohi Farm Unit at CSWRI and the Field Unit at RAJUVAS, Vallabh Nagar are conducting research on Sirohi breed. Therefore, they need to strengthen the technical collaboration for exchange of superior genetic resources.	The necessary instructions had been provided to PIs for implementation of technical programme.
iv)	Necessary action may be taken to improve the functional efficiency of the unit for proper implementation of the technical programme.	To improve the functional efficiency of the unit, we have implemented six monthly target and achievement, progressive expenditure. Different registers have been developed for uniform data recording and implementation of technical programme. Moreover, digitization data recording can be carried out in Goat production management information database (http://pcgoatcirg.icar.gov.in)
v)	AICRP units should study the meat, milk and skin quality traits	For skin quality traits, we need to identify units and design technical programme during next plan.
vi)	Studies should be conducted to survey the landscape of the habitat of breeds to know the feed and fodder resources available in the breeding tract.	We have already initiated production system characterization by all the units Formats have been circulated to all the units.

SALIENT RESEARCH ACHIEVEMENT

Goat production is facing diverse challenges in different agro climatic condition and it is necessary to carry out research and development activity to increase farmer's income for better livelihood. The project is covering 13 registered breeds and 3 local genotypes (lesser-known goats). The project has contributed in increasing population growth, milk production and body growth. Preventive health care measures with farmer's support have reduced morbidity and mortality in field flock. There is significant increase in income of goat farmers and enhanced food security of all stakeholders.

- i. AICRP on Goat Improvement is operational at 461 villages covering 3840 farmers. The performance recording was carried out in 25622 animals during the year.
- ii. Goat Production Management Information System (GMIS) is a database for an efficient and effective data recording, data analysis, monitoring & evaluation. The website is hosted and currently running with URL "<http://pcgoatcirg.icar.gov.in/>". GMIS includes 13 basic module i.e. inventory, Growth, Milk yield, Reproduction, Health management, Buck distribution, Finance, Staff, GIS, Capacity building, Upload & View data with various sub-modules. The unit incharges can regularly update their status as per the feedback received from 18 coordinating units of AICRP on Goat Improvement.
- iii. The increase in body weight at 12-month age over the units varied from 0.38% to 32.12%. Similarly, the increase in milk yield at 90 days varied from 3.35 to 48.85% over the units.
- iv. The average pashmina production of Changthangi goats was 269.66 gram.
- v. The farm based units namely Jamunapari, Barbari and Sirohi are working as best model for *in-situ* conservation in the natural home tract of the breed.
- vi. Preventive health care was provided to 48716 animals. The health care is being taken up sincerely in farmer's flock indicating that the mortality rate varied from 3.8 to 7.9%. This has not only contributed for increasing population growth but also improving the farmer's income by 22% to 35%. A higher population growth amongst breeds resulted into increased selection intensity, thus realized genetic gains could be high.
- vii. Farm unit have significantly produced and distributed more than 534 improved animals to different agencies for breed improvement as well as up-gradation of local germplasm.
- viii. The field units also distributed 265 improved bucks to adopted farmers for genetic improvement.
- ix. AICRP units conducted 101 training programme for skill development of goat farmers and about 4226 farmers participated in various training programmes.
- x. Producing technical literature & seasonal advisory for goat farmers to impart better known- how to manage their flocks during the year.
- xi. Identification of elite doe producing more than 200 litre of milk in 140 days in different units.
- xii. Different units have produced 40 technical leaflets/booklets on different managerial practices.
- xiii. Twenty two success stories have been recorded during the period.
- xiv. Nine technologies have been developed by different AICRP Units namely body weight measuring tap (Malabari field Unit), AI in frozen semen (Osmanabadi Unit), Milk product development (Malabari & CIRG), Low cost model for goat housing (Black Bengal, Kolkata), silage making in bags (Sirohi field Unit, Vallabh Nagar), different model of feeder & waterer (Surti field Unit & CIRG).
- xv. AICRP on Goat Improvement has bagged Breed survivor recognition for Malabari, Jamunapari and Surti.

- xvi. Working in 13 tribal villages and contributing for a better livelihood in the tribal region. Goats as major source of income generation to poor people in Tribal areas and NEH region. The technical inputs have contributed in different aspect of goat production and increasing the income of goat farmers.
- xvii. Technological interventions under the project have benefited more than 3800 goat rearing families in different units over thirteen states of the country. It has provided average employment ranging from 80 to 140 man days and has improved income of farmers significantly in different units.

AICRP ON GOAT IMPROVEMENT

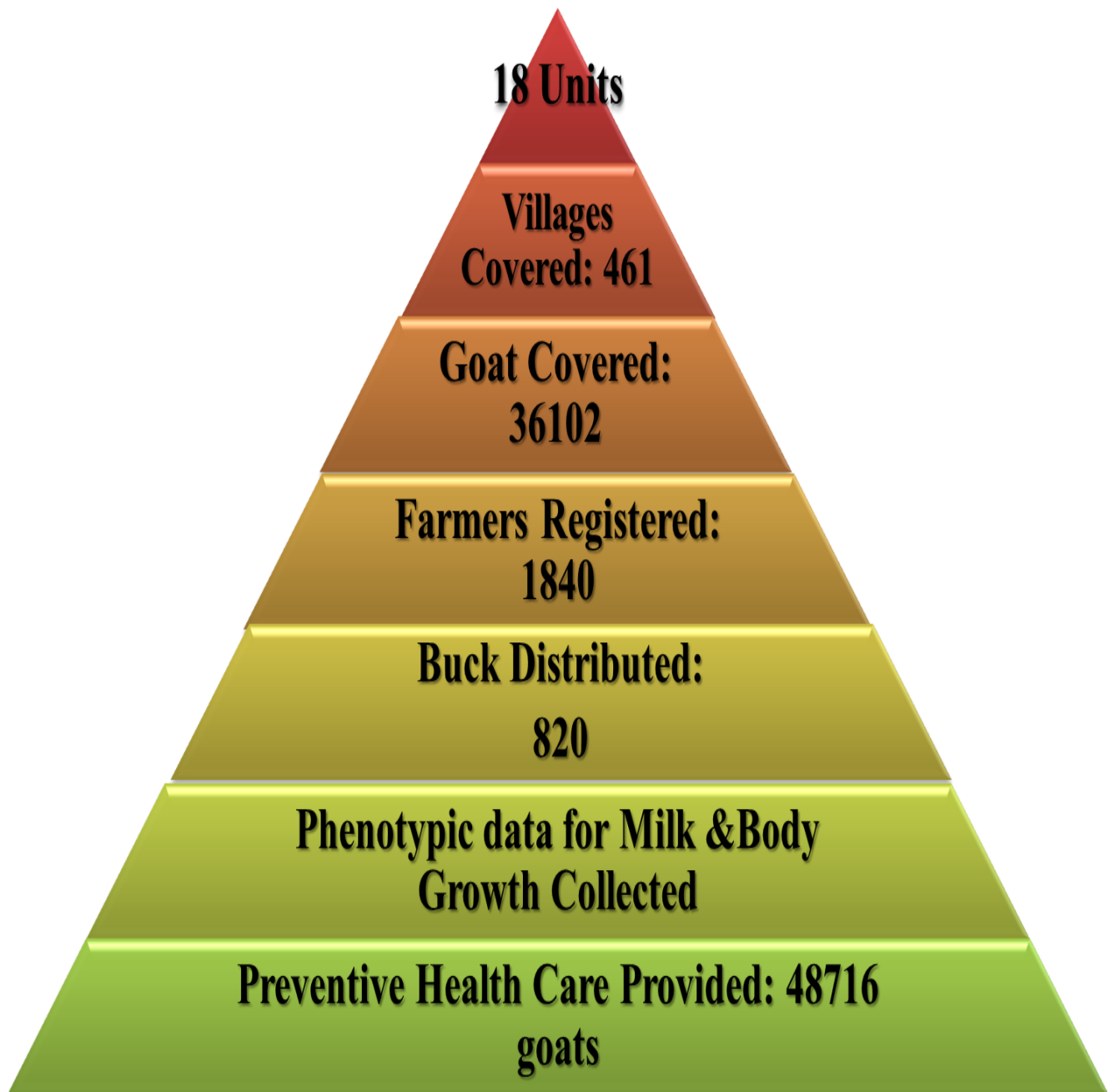


Table 3: Details of activities by different field units

S. No.	Name of Unit	Buck Distributed	Literature	Economics	Technologies	Trainings
1	Andaman Goat Field Unit	7	Leaflet -2 Success story-1		herbal solution kit	6 (176)
2	Assam Hill Goat Field Unit	11			Annual Income increases from 3462 to 3790	1 (40)
3	Barbari Goat Farm Unit	85	Leaflet -2 Success story-2		8 multiplier flocks	
4	Bengal Goat Field Unit	27	Success story-1	increases in income 5% p.a		16 (901)
5	Black Bengal Goat Field Unit	12	Leaflet -12 Booklet-1 Success story-2		low cost model goat house	6 (587)
6	Gaddi Goat Field Unit	26	Leaflet -2 Success story-1			
7	Malabari Goat Field Unit	24	Training Manual -1 Success story-5	Breed Saviour Award	Measuring tape, goat milk products	25(585)
8	Marwari Goat Field Unit	15	Leaflet -2 Success story-2			5 (242)
9	Osmanabadi Goat Field Unit	12	Leaflet -8 Success story-2		AI	6 (542)
10	Sangamneri Goat Field Unit	54	Success story-2		3 Goat Associations	14
11	Sirohi Goat Farm Unit	177	Leaflet -1 Success story-1			
12	Sirohi Goat Field Unit	35	Leaflet-2		silage making bags	4
13	Surti Goat Field Unit	16	Success story-1 Leaflet -1		dual system of door and paddock of goat shed	9 (313)
14	Uttrakhand Local Goat Field Unit	21	Leaflet-2			

Table 4: Production performance of AICRP (G) Units

S. No	Name of Unit	Body Weight				Performance Recording
		Months	Min	Max	% increased	
1	Assam Hill Goat Field Unit	9 M	10.21	10.55	3.33	1600
		12 M	12.85	13.01	1.16	
2	Bengal Goat Field Unit	9 M	8.84	11.68	32.12	1115
		12 M	12.57	13.65	8.59	
3	Black Bengal Goat Field Unit	9 M	9.81	10.15	3.46	1358
		12 M	12.81	12.92	0.38	
4	Gaddi Goat Field Unit	9 M	21.16	24.21	14.41	778
		12 M	26.21	27.55	5.11	
5	Ganjam Goat Field Unit	9 M	13.93	14.44	3.66	2049
		12 M	17.85	18.33	2.66	
6	Malabari Goat Field Unit	9 M	18.22	19.76	8.45	1245
		12 M	21.43	21.87	2.05	
7	Marwari Goat Field Unit	9 M	17.56	17.82	1.48	3048
		12 M	22.14	22.64	2.25	
8	Sangamneri Goat Field Unit	9 M	16.68	18.42	10.43	2308
		12 M	19.71	23.3	18.21	
9	Sirohi Goat Farm Unit	9 M	24.71	27.86	12.74	392
		12 M	27.7	31.8	14.8	

ABSTRACT

1. Andaman Goat Field Unit, ICAR-CIARI, Port Blair, Andaman & Nicobar Island

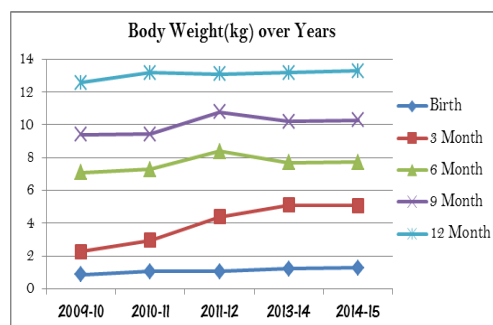
The unit is operational at ICAR-Central Island Agricultural Research Institute, Port Blair, A & N Islands. The project was implemented i.e. April 2014 with the main objective to bring about the improvement of Andaman Local Goat in the farmers flock. As per the technical programme of the project, clusters were established and base line information on production and reproduction traits, managemental practices and disease pattern of Andaman local goats and socioeconomic status of goat keepers were recorded. This activity will continue and baseline data on production performance, managemental practices and socio- economic condition of farmers will be established. Identification & registration of animals were carried out in the project area.

The opening balance of Cluster 1 (Port Blair) as on 01.04.15 was 1002 males and 1679 females (total = 2681goats). During the period a total of 605 kids were born. The reductions were due to deaths of 330 goats including 97 males and 233 females and sale of 1374, including 559 males and 815 females. The closing balance as on 31.03.16 was 833 males and 1188 females (total = 2021goats). A new cluster at Baratang Tehsil under North & Middle Andaman district was also established and till date a total 316 goats, 112 males and 204 female goats were registered. The overall least square means of body weights (kg) at birth, 3, 6, 9 and 12 months of age are 1.39 ± 0.01 , 5.52 ± 0.11 , 9.62 ± 0.22 , 13.35 ± 0.21 and 16.06 ± 0.04 , respectively. Age at first mating, weight at first mating, age at first kidding, weight at first kidding, kidding interval, service period and gestation period was 249 ± 7.04 days, 11.05 ± 0.23 kg, 397.28 ± 5.05 days, 15.85 ± 0.13 kg, 285 ± 22.0 days, 95 ± 15.43 days and 146.67 ± 0.19 days respectively. The kidding percentage was 145.43 percent on the basis of does kidded and the kidding rate was 1.45 in the present flock of Andaman local goats. The percentage of singles, twins, triplets and quadruples were 40.00, 53.55, 4.46 and 1.98 respectively in the population under study during the period. A total of six superior breeding bucks were distributed in different villages for upgradation of the Andaman local goats in the adopted villages. Breed descriptor characterization of has been done as per the format of the NBAGR and breed status paper prepared. Blood biochemical and other physiological parameters were also carried out for male and female Andaman local goats. During the year a total of six awareness programme on scientific goat rearing were also conducted and in which 176 farmers were imparted training from different villages of both the clusters. Two extension leaflets on scientific goat rearing in Hindi and in English were prepared for distribution to the farmers.

2. Assam Hill Goat Field Unit, AAU, Khanpara, Guwahati, Assam

The Unit is operational at AAU Khanpara, Guwahati. As per the technical programme four field units, viz., 1) Batabari, Mongoldoi, 2) Tetelia Gandhinagar, Kamrup (M) 3) Nahira, Kamrup (R) and 4) Tepesia, Kamrup (M) has been established. The total number of goats in the opening balance for the year 2015-16 in the field units was 1980 and the total number of goats in the closing balance is 2255. During the period 2015-16, a population growth of 101.97% was recorded in the adopted field units where 711 adult does have given birth to 816 kids. A significant population growth as compared to the initial growth rate of 14.22% in the year 2009-10 was observed in the year under report. The rate of mortality is restricted to 6.45%. A total of 563 goats (18.46%) were sold by the registered beneficiaries, out of which 333 were male and 230 were females. The carcass study on Assam hill goats have been carried out. The least squares means of the body weight at birth, 3, 6, 9 & 12 months were

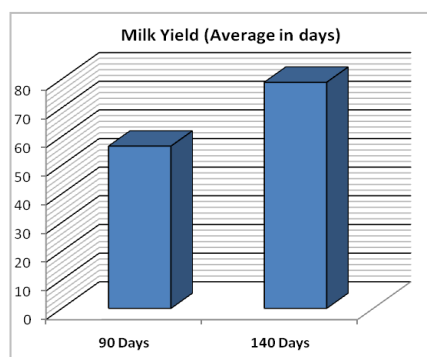
1.21 ±0.19, 5.17±0.23, 7.72±0.89, 10.55±0.99, 13.01±1.01 respectively. Considering an average litter size of two, a kidding interval of 8 months and 6.45% mortality, the minimum gross income of a Goat keeper per year is calculated to be Rs. 3790.89. Eleven selected bucks of superior quality, true to the breed have been distributed to the field units. One Goat rally cum judging competition has been organized at Batabari field unit and 74 registered farmers took part in the rally. Around 3115 animals were dewormed and 3495 animals were vaccinated against PPR & ET. An exposure visit of 13 beneficiaries from Guwahati centre to the CIRG, Makhdoom during the month of December 2015. An Exposure visit of 60 beneficiaries of the Batabari field unit was organised in the month of February 2016 to Sheep and Goat breeding farm, Govt. of Assam, Karbi Anglong, Assam. An Exposure visit of 40 beneficiaries of the Nahira field unit was organised in the month of March 2016 to Sheep and Goat breeding farm, Govt. of Assam, Panbari, Dhubri, Assam. The AICRP on Goat Improvement was successful enough to create awareness among the goat farmers through organization of several treatments cum vaccination camps. Extension activities like meeting, interactive sessions, training etc. were carried out covering the aspects viz Scientific management of goat rearing, Care and management of pregnant doe and newborn kids, Importance of improved feeding, Advantages of vaccination and deworming, Primary health care of goats, Selective breeding of goats, Production of wholesome chevon. **This unit has formed SHG in the field.**



The unit is operational at CIRG, Makhdoom, Farah, Mathura. High reproductive efficiency also sustained in current year i.e breeding efficiency (80.6% and 92.4% on the basis of does available and does tugged), kidding % was 120.5 and 138% on the basis of does available and does tugged, kidding rate was 1.49% and population growth was 149%. The body weight of kids born at Nucleus Farm at birth, 3, 6, 9 and 12 months of age was 1.80±0.22, 8.14±0.09, 12.07±0.16, 16.02±0.30 and 20.14±0.37 kg, respectively which was similar to body weights obtained in previous year. Body weights at different ages were significantly ($P < 0.01$) affected by year, season, sex of birth, type of birth. The estimates of heritability (h^2) for body weight of kids at birth, 3, 6, 9, and 12 month of ages were 0.174±0.04, 0.314±0.058, 0.425±0.068, 0.264±0.04 and 0.363±0.06 indicating moderate to high level of additive genetic variance for growth traits in this flock. The overall mean for 90 days milk yield, 140 days milk, total lactation yield, average daily milk yield and lactation length for the does kidded in 2015 were 47.56±1.09, 65.36±2.13, 57.02 ±1.53 liters and 126±0.86 days, respectively. The performance of different lactation traits declined from 15- 20% and attributed mainly to large proportion (about 37% females of total does) were kidded first time at very young age (below 385 days), very low biomass in grazing area on account of very low rainfall in rainy season in 2015, beside delay (about 2 months) in concentrate supply. During the year about 270 animals were made available for distribution to farmers out of which 152 superior goats (85 male and 67 female) were supplied for breed improvement to farmers and various goat development agencies. Constant and significant decline in mortality and culling rate of the flock over the years was obtained.

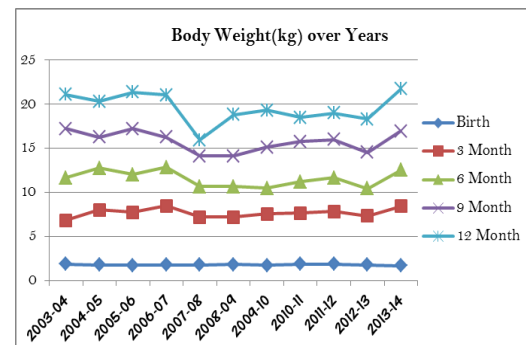
3. Barbari Goat Farm Unit, ICAR-CIRG, Makhdoom, Uttar Pradesh

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The overall mortality and culling of the flock was 3.02% and 4.58%. The data on 10450 goats born during 1985 to 2014 belonging to 18 generations were used for pedigree analysis. The average inbreeding coefficient (fi) for the whole analyzed pedigree and for inbred animals was 2.27% and 4.4%, respectively. Genetic trend of growth traits was estimated. Evaluation of flock health by employing Body Condition Scoring (BCS) Method. Majority of the animals (> 87%) were in good nutrition and health status reflecting better management practices. Developed one hectare area for establishment of horti-pasture at Barbari Nucleus Unit. Eight multiplier flocks of Barbari goats were established for popularization of scientific goat farming, small scale entrepreneurship development in farmers and educated unemployed youth, promoting public private partnership, development of goat based livelihood models besides improvement and conservation of Barbari breed. Each multiplier flock was provided with 6 adult female, 5 male and 5 female kids (3-6 month old) and a breeding buck. These multiplier units were set up at Salempur (Mathura), Farah (Mathura), Vrandavan (Mathura), Rajakheda (Dholpur), Kagrol (Agra), Balrai (Etawah) Mohamadpur (Barabanki) and Lucknow. Data obtained from Rajakheda, Dholpur, Rajasthan multiplier flock indicated 1.3 kg body weight at birth, 6.7 kg at 3 month of age, 14 kg at 6 month, 17 kg at 9 months age and 26 kg at 12 month of age. Average lactation length was 105 days with an average 86 lit of milk. In first year annual net income was Rs. 49965 and net income per goat was Rs. 6246. Major source of earning is selling of breeding animals at premium price. Overall survivability at multiplier flocks was >95%, ranged from 87 to 98%. Development, Transfer and Popularization of improved package of goat production practices to the goat keepers through establishment of multiplier flocks of Barbari goats, trainings, popular/technical articles and demonstrations.



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4. Bengal Goat Field Unit, BAU, Kanke, Ranchi, Jharkhand

The unit is operational at collage of vety science, BAU, Ranchi. As per the technical programme, four clusters have been established in different zones of Jharkhand. The clusters are at Beko in East Singhbhum district, Palajori in Deoghar district, Chamguru in Ranchi district and Kuru in Lohardaga district. All the centers are functional and cover only Black Bengal goats reared by farmers. The production performance in four clusters has been analyzed. A total of 27 buck (on the basis if growth and multiple birth) were selected and purchased from four different clusters and distributed to the farmers for breed improvement purposes. The selected bucks have been exchanged from one centre to others to avoid inbreeding. Selection differential of male at 9-month of age was 3.39 kg. The overall means of body weights at birth, 3, 6, 9 and 12 month of age were 1.29 ± 0.27 , 6.17 ± 0.29 , 8.72 ± 0.29 , 11.61 ± 0.40 and 13.67 ± 0.47 kg, respectively. The overall reproductive parameters of Black Bengal goats viz. age at first mating, body weight at first mating, age at first kidding, weight at first kidding, service period, kidding interval and gestation period were 270.72 ± 1.81 days, 11.63 ± 0.55 kg, 419.42 ± 1.98 days, 12.09 ± 0.38 kg, 68.51 ± 2.64 days, 219.7 ± 1.85 days and 147.91 ± 2.26 days, respectively. Kidding rate of Black Bengal goat was 1.86. Pro-poor technologies has been developed by the Ranchi Veterinary College, BAU are being used by the farmers extensively such as dipping with Malathion (0.25%) and castration of kids at the age of 2 months. All the goats in coverage areas were vaccinated with PPR (2650 goats). Dipping of 2550 goats and deworming of 2819 goats have been carried out. A three days Training on 'Scientific Goat Rearing' was organized at Small Ruminant Instructional

Farm, R.V.C Kanke from 11.03.2016 to 13.03.2016 in which 20 farmers from different centres participated. Eight farmers given exposure visit to Deoghar. Dr.Thanesh Oraon, SRF along with two selected farmers from different clusters (one each from Chamguru and Tiko centers) had attended 'Farmer's Innovator Day' at CIRG, Mathura on 10th September, 2015. Dr.Thanesh Oraon, SRF had participated A five day training programme on "Data recording, Record keeping and Analysis of Goat Production System" from 01.03.2016 to 05.03.2016 organized by CIRG, Mathura. Technical literature was provided.

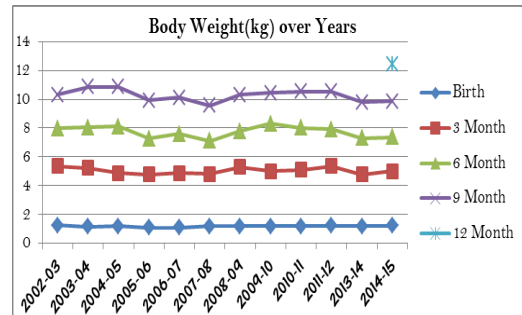
5. Black Bengal Goat Field Unit, WBUV and FS, Kolkata, West Bengal

The unit is operational at collage of Vety. Science, West Bengal University of Animal & Fishery Sciences, Kolkata with the main objective to conserve and to improve the Black Bengal Goat in the farmer's flock. As per the technical programme the baseline information on production, reproduction, growth traits, population trend, managerial practices, feeding pattern, disease prevalence and socio-economics in goat production system were recorded. The registration of animals at farmer's flock with proper identification was carried out in village units. To fulfil the objectives, four village units i.e. Ayeshpur, Ganguria and Doluipur (in Nadia district), and Jatirampur (in South 24 Parganas district) were established under the project up to 2013. But Doluipur village unit was discontinued on March 2013 due to non-cooperation from goat keepers and unsatisfactory performance. Later on during 2014-15 a new cluster at Bamunia and Beliapukur village in Murshidabad district has been adopted in collaboration with Digha KVK under this University. But Sundarban cluster and Murshidabad cluster have been further extended in 2015-16. Further a new cluster at Lodhasuli (Dhangri, Ranidihi, Manapara and Malapada village) in Jhargram Block of West Midnapur District has been adopted in March 2015. Thus the unit is now working in four clusters i.e. Ayeshpur and Ganguria (Nadia cluster); Jatirampur and Rangabelia (Sundarban cluster); Bamunia and Beliapukur (Murshidabad cluster); Lodhasuli (Jhargram cluster).

A total of 751 registered doe (133,121,163, 62,30,78 and 75 does in Ayeshpur, Ganguria, Jatirampur, Rangabelia, Bamunia, Beliapukur and Lodhasuli units respectively) from which 1358 kids were born from 1st April 2015 to 31st March 2016. Eighteen Bucks were selected based on their 6 months body weight and prolificacy status of their dams. Out of these twelve bucks were distributed in the village units in addition to previous males for selective breeding. Remaining bucks are maintaining at buck raising centre under the project. With the opening flock of 3217 in 2015-16, after breeding with selective males the closing flock has been reached to 4403. As per the initial doe the population growth rate of Black Bengal for 2015-16 is 254.46 % . The average flock strength of the farmers has recorded as 5.65 ± 0.21 in 2015-16 which was 5.94 in 2014-15. Majority of farmers have the flock size of 1 to 4 goats (48.05 %) followed by 5 to 8 (38.27 %), 9 to 12 (10.55%) and then by above 12 (3.13 %). It is an indicator for popularity of goat rearing among the farmers with flock size 1 to 4.

Improvement in body growth has also been observed in 2015-16 over the previous year. The average body weight at birth, 3 month, 6 month, 9 month and 12 month were 1.271 ± 0.012 kg, 5.230 ± 0.217 kg, 7.508 ± 0.053 kg, 10.152 ± 0.075 kg and 12.922 ± 0.108 kg respectively in 2015-16. The mean body length, height at wither and heart girth were 20.41 ± 0.02 cm, 21.68 ± 0.04 cm and 23.80 ± 0.07 cm at birth; 33.49 ± 0.05 cm, 34.63 ± 0.05 cm and 38.60 ± 0.01 cm at 3 months; 37.62 ± 0.14 cm, 38.87 ± 0.56 cm and 43.86 ± 0.24 cm at 6 months; 40.77 ± 0.08 cm, 42.57 ± 0.23 cm and 48.69 ± 0.08 cm at 9 months; 43.70 ± 0.13 cm, 45.40 ± 0.16 cm and 53.54 ± 0.19 cm at 12 months of age. Male kids are higher than female kids at all ages. Improvement in reproductive performances from previous year has also been noticed. During 2015-16 the average age at first mating/service and 1st

kidding were recorded as 228.14 ± 12.28 days and 375.88 ± 11.89 days respectively which were 237.54 ± 5.07 days and 383.24 ± 5.31 days in 2014-15. The average service period, gestation period and kidding interval was 74.74 ± 6.82 days, 146.69 ± 0.09 days and 223.25 ± 6.61 days during 2015-16. The kidding rate (litter size) was 1.78 %. Twin born kidding was 54.53 % followed by singlet kidding (34.03 %), triplet kidding (10.51 %), quadruplet kidding (0.79 %) and quintuplet kidding (0.13%) during 2015-16. With the intervention of health care and prevention the kid mortality (up to 12 month) has been reduced to 3.80 % in 2015-16 and the overall mortality in the total flock was only 4.77 %. In landless, marginal (upto 20 katha land), small (20 - 40 katha land) and medium (above 40 katha land) farmers, the annual income was Rs 3035.00± 1296.20, Rs 6485.74± 344.54, Rs 4085.89 ± 480.651 and Rs 7985.05 ± 487.97 respectively. In illiterate, partially literate (Class-I to IV) and moderately literate (Class-V to XII) farmers, the annual income was around Rs 6645.83 ± 1083.25, Rs 6795.02 ± 410.14 and Rs 5620.75± 308.16. Animals sold by the farmers has been increased in 2015-16 (22.65 %) than the previous year (17.39%).



The average annual income from goat rearing per farmer also has been increased from previous year i.e. Rs. 6073.47 in 2015-16, although the income per doe is Rs. 2748.00 which is almost similar that of previous year (Rs 2790.00 in 2014-15). The AICRP on Goat Improvement was successful enough to create awareness among the goat farmers about identification and record keeping, disadvantages of early breeding of young does; regular vaccination and deworming; importance of giving supplementary feeding to does, bucks and kids; optimum age and weight of kids for sale with expected market rate; first aid treatment etc through organization of several treatments cum vaccination camps along with other extension activities like meeting, interactive sessions, training etc.

6. Changthangi Goat Field Unit, SKUAST, Kashmir, Leh-Ladakh, Jammu & Kashmir

The unit is operational at SKUAST-K, Leh. The field unit of Changthangi goat unit for pashmina fibre and meat production was started on 01-04-2014 at SKUAST-K Leh station. Considering the presence of large flocks with the breeders of Changthang area (home tract of Changthangi goat) the whole traditional pashmina goat rearing area was divided into four zones having 3-4 clusters/ villages in each zones. The initial set up include Zone I with three major clusters/villages viz, Kharnak, Samad and Korzok. These three villages are known for the production of best pashmina fiber i.e. 'A' grade in the whole of Ladakh. From Korzok and Samad cluster 20 farmers each with breedable does of more than 60 were selected with the cooperation of village head. The overall total registered goat population was more than 10000 goat population with a total of 2750 breedable does and 72 breeding bucks in 2014. This year (2015) the overall goat population (closing balance) in all the three clusters Kharnak, Samad and Korzok is 10032 with a total of 3285 breedable does and 89 breeding bucks. The overall population growth was 62.96% for this year compare to last year 37.75%. This year 22 improved bucks were distributed among the adopted breeders of Kharnak, Samad and Korzok Clusters. The health management which includes general treatment, vaccination, dosing and dipping was done in approximately 11000 goat population from time to time. During report year (2015) the body weight growth at birth, 3, 6, 9 & 12 month were 2.47 ± 0.18 Kg, 6.47 ± 0.21 Kg, 9.54 ± 0.16 kg, 12.91 ± 0.24 kg and 16.12 ± 0.18 kg, respectively. The overall average pashmina productions of all the three clusters for the year 2014 were 262.66 ± 13.66 gm and for this year 2015 were recorded 269.66 ± 13.00 gm. The overall

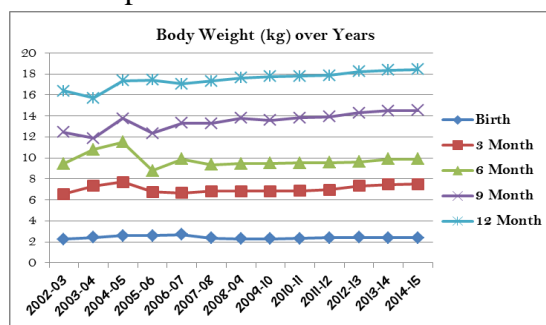
kidding percentage this year was high 66.8% as compared to last year i.e. 65.4% among the registered goat's in all the 3 clusters with an overall litter size of 1.003. The age at first mating (in days), weight at first mating (in Kgs), age at first kidding (in days) and weight at first kidding (in Kgs) was recorded as 547 ± 21.03 , 22.23 ± 0.27 , 701.23 ± 8.72 and 24.98 ± 0.21 , respectively for the current year (2015). The overall mortality rate irrespective of age groups was 5.5 percent. Further, the kid mortality for this year was recorded low 4.73% as compared to 55.3% last year; the reason for low kid mortality during the current year may be attributed for proper goat managerial practices adopted under the AICRP project. The managerial interventions include provision of kid shelter, timely vaccination, time to time health check up and monitoring. This year the unit has equipped all the 27 adopted breeders with Silpaulin/Feeder (Large size 300 GSM), Silpaulin/Kid shelter (Small Size), gumboots, solar lamps and Burdizzo castrator for better management of livestock under extensive system of rearing. The unit has also developed silage for feeding livestock during scarcity season using locally available ingredients. The polymorphism and Characterization of KAP 8.1 and 8.2 genes in Changthangi goats were also done.

7. Gaddi Goat Field Unit, HPKVV, Palampur, Himachal Pradesh

The unit is operational at College of Veterinary & Animal Sciences, Department of Animal Genetics & Breeding, Palampur (H.P.). The All India Co-ordinated Research Project on Goat Improvement (Gaddi Field Unit) was sanctioned to this center on 17th February 2009. During the period under report (April 2015 to March, 2016), the performance of already established four clusters belonging to different migratory routes were monitored. The opening balance as on 01.04.2014 was 1164 goats including 760 breedable does. During the year, a total of 570 young kids were added in selected flocks by birth, 130 animals of different age groups died and 481 animals pertaining to different age groups were sold by the owners. The closing balance as on 31.03.2015 was 1123 animals in different age groups. The least squares means of body weights at birth, 3 month, 6 month, 9 month and 12 months of age were 3.03 ± 0.03 , 15.02 ± 0.20 , 19.51 ± 0.21 , 24.21 ± 0.17 and 27.55 ± 0.24 Kg., respectively. The significant effects of sex of kid and years on body weight were observed. The overall body length, body height and body girth at birth were 31.98, 33.08 and 35.75 cm, respectively. The corresponding figures at six months were 62.73, 62.02 and 65.56 cm and at twelve months 66.11, 62.90 and 74.45 cm, respectively. For breeding inputs, a total of 39 male kids of 4-6 months age group were purchased from farmer's flocks after primary selection on the basis of morphological characteristics and higher growth rates. These male kids were then transferred to Palampur center for subsequent rearing up to the age of sexual maturity, following all standard management practices. After final selection, a total of 26 males were finally distributed to 26 different farmers as a breeding input. In addition, 47 male kids were also purchased during March, 2016 and are being reared at Palampur center for further distribution as breeding buck to the farmers during next financial year 2016-17. All selected animals were provided health coverage under migratory field conditions viz. vaccination against PPR (1255 doses), de-worming against endo-parasites after faecal sample analysis (1205 animals), (periodic health check-ups etc). Strategic supplementary feeding was also provided in the form of mineral mixture (220 Kg) and concentrate feed (28 qtls.). Collaboration with state Animal Husbandry Department was ensured while providing health coverage and other related activities. The overall population growth was observed to be 107.59%. The overall mortality incidence was found to be 7.49%. The twin birth was 20.25%. The overall abortion incidence in the flocks was observed to be 12.24%. The kidding percent of the flocks were observed to be 62.36. Maximum kidding was recorded in the month of November (152 kids) followed by December (137 kids).

8. Ganjam Goat Field Unit, OUAT, Bhubaneswar, Orissa

The unit is operational at college of vety. Science and Animal Husbandry, OUAT, Bhubaneshwar. The All India Coordinated Research Project on Ganjam goats implemented in July 2001 was operating in four clusters of Ganjam district, the native tract of Ganjam breed of goat, namely Chhatrapur, Rambha and Khallikote with a total of 62 registered farmers and a new cluster i.e. Bhanjanagar has been added this year where a total of 19 farmers have been registered taking the total number of the farmers to 81. The objective of the project is to improve the production performance of Ganjam goats in its native tract in the farmers' flocks. The project is operating as per the technical programme outlined for the XII plan. Baseline information on distribution, prevailing management practices, production, reproduction and socio-economic profile of the farmers have been collected, analyzed. The least squares mean of body weights of goats were 2.43 ± 0.01 , 7.38 ± 0.03 , 9.77 ± 0.03 , 14.35 ± 0.03 and 18.28 ± 0.04 at birth, 3 month, 6 month, 9 month and 12 month of age, respectively. The improvement in body weights at 9 month age and one year age has been 2.56 kg and 5.9 kg, respectively. The number of kids born were 1681 from 2230 breedable does from all the three centres of Chhatrapur, Rambha and Khallikote. The kidding percentage increased from 60.2% to 75.38% during the year. Kid mortality during the year was 7.30% only. A total of 8,500 vaccinations were done against PPR, Enterotoxaemia, goat pox and FMD and 10,232 deworming dosages were administered. A total of 1808 goats were treated and so were 171 other animals this year. The health coverage programme is routinely carried out. Pedigree recordings were being done for the 17 breeding bucks that were distributed last year and birth weights of 95 progenies and weight at three months of 63 progenies were recorded. Exhaustive base line survey is being undertaken in the new cluster covering the villages Jirabadi, Sisunda, Budurungu, Kumundi and Lepa. The farmers at the nearby villages who are interested were also sensitized about goat rearing and are encouraged to join the project. The small farmers are being chosen for the project so that pedigree recording could be possible facilitating genetic evaluation. Efforts are on to open a Goat farmers contact center at village Jeerabadi in the same line as the other three operating cluster. One exposure visit was conducted where two farmers from Rambha and Khallikote centers visited CIRG, Mathura (UP) on 10th September 2015. One training programme was attended by two of the data enumerators at CIRG, Makhdoom from 1st to 5th March 2016. Two page Bi-lingual pamphlets developed each for PPR, Goat pox and Foot Rot for distribution and education of farmers to the farmers and one vaccination schedule was developed for the goat diseases for farmers information. Efforts are being made to use electrical tattooing for animal identification. One training programme was conducted at Jeerabadi where fifty farmers were trained on scientific goat rearing practice on 29th March 2016 and they were sensitized about the modern healthcare practices of goats.



9. Himalayan Local Goat Field Unit, ICAR-IVRI Campus, Mukteswar, Uttarakhand,

The unit is operational at temperate livestock, IVRI, Mukteswar. Himalayan goat unit under All India Coordinated Research Project (AICRP) on Goat Improvement started in the year 2014 with the aim of improvement of local Himalayan goats (Chaugarkha) at Kumaon hills of Uttarakhand. Changthangi goats are mainly reared by small and marginal farmers for meat purpose. Two villages namely, Khola and Gandhak of Dhauladevi block in Almora district

have been adopted as one of the clusters after surveying its breeding tract and distribution. Chamdungra-Timta and Duni of Gangolighat block of Pithoragarh district have been identified as second cluster. A survey for third cluster has been completed in Lamgarha block of Almora district. Total eighty two farmers have been registered and 219 adult breedable does were tagged as well as 61 kids were also included in the cluster-I. The morphometric characters from these goats were measured. The average body weight, body length, body height and chest girth of adult male were 52.68 ± 3.93 cm, 59.07 ± 5.02 cm and 61.49 ± 4.38 cm, respectively. The average body length, body height and chest girth of adult female were 18.08 ± 3.57 kg, 50.26 ± 3.70 cm, 53.81 ± 3.44 cm and 58.00 ± 3.78 cm, respectively. The mean body weight of Chaugarkha goat at birth, third month, sixth month and ninth month were 1.55 ± 0.26 , 6.31 ± 1.12 , 10.42 ± 1.66 , 15.43 ± 2.95 and 20.44 ± 4.23 kg, respectively. As nutritional scarcity and parasitic infestations are predominant in this area, a comprehensive study has been made for controlling parasitic infection. A total of 166 faecal samples were collected and examined for parasitic infestation and anthelmintic resistance. The morphological studies revealed *Haemonchus contortus* and *Teladorsagia circumcincta* are predominant nematodes. Other notable parasites are coccidia, *Moniezia* spp and *Coenurus cerebralis* (Gid). Faecal egg count reduction test (FECRT) and Egg Hatch Test (EHT) revealed that strongly populations were highly susceptible to benzimidazoles, closantel and ivermectin. Allele specific PCR (AS-PCR) showed prevalence of benzimidazole resistance is less than 1% (<1%). The animal of the clusters are being monitored for regular health check-up, prophylaxis and treatment, as well as providing advisory services to the farmers. Socio-economic data were collected through personal interview/interactions and found that most of the farmers were small and marginal having 2 to 10 numbers of goats. The major problems are lack of knowledge on scientific goat farming, scarcity of feed and fodder, parasitic infestation and distress selling. Six animal health camps, three meetings and two awareness camps were organized. At institute farm, five breedable bucks and twenty seven does have been selected initially for breeding purpose on the basis of adult body weight and breed characteristics.

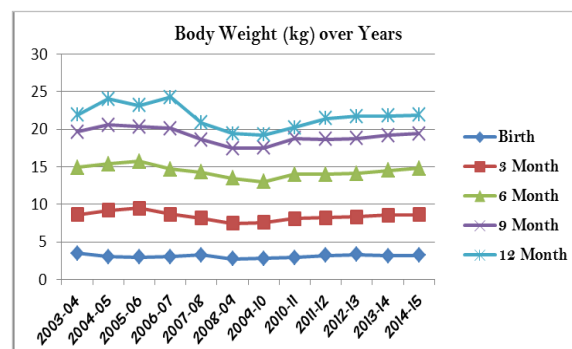
10. Jamunapari Goat Farm Unit , ICAR-CIRG, Makhdoom, Farah, Uttar Pradesh

Jamunapari goat is known for its milk production and selective breeding programme is carried out at CIRG to improve the production performance. The flock strength of nucleus herd of Jamunapari goats at CIRG for the year 2015-2016 was 747. During the period 294 kids were born, in which 147 were males and 147 were females. The population growth of the flocks was 91.6% during the year. The nucleus herd is maintaining about 300 breedable adult does. The overall mortality of the flock during the year 2015-16 was 6.05 % and annual culling rate was 5.18 %. The mean body weights of kids at birth, 3, 6, 9 and 12 months of age were 3.271kg, 12.076kg, 16.070kg, 21.450kg and 26.120kg, respectively during the year. Parity of dam had significant ($P < 0.01$) on kid's body weight up to 12 months of age. Sex had highly significant ($P < 0.01$) effect on all age group except on birth weight. Males had higher body weight than females at all the ages and the birth type also showed highly significant ($p < 0.01$) at all the ages. Season by sex interaction had significant ($P < 0.01$) effect on body weight at the age of 6 month, 9 month and 12 month. Sex by birth type interaction had significant ($P < 0.01$) effect on body weight at 6 and 9 month of age. The average daily weight gain (ADG) of the kids under intensive management was 72.02, 95.05, 99.70, 118.08 and 113.54 g/day, respectively during 3-6, 3-9, 3-12, 6-9, and 6-12 month age group. The highest average daily gain was observed 178g/d during 6-9 months of age. Similarly the average feed conversion ratio up to 12 month of age was 0.106 kg per kg DM consumption . The feed conversion ratio during 3-6 month, 6-9 month and 9-12 months of age was 136gm, 106gm

and 64 gm per kg of dry matter consumption. The effect of neonatal diarrhea on growth of kid up to 3 month of age indicate the average body weight of 13.85kg and the body weight varied from 10.3kg-20.2kg. It has been observed that 30% of kids had body weight more than 15.1kg. Least squares means of part lactation milk yield in 90 days and 140 days were 72.488 ± 1.811 and 101.408 ± 2.482 liters, respectively during the year 2015-16. Year of kidding had highly significant ($P < 0.01$) influence on both the milk yields. Parity had significant effect on milk yield over the years. The does, which had multiple births, produced more milk in comparison to does having single kid. During this year, a total of 213 does kidded 294 kids, out of which single, twin and triplet born kids were 133, 158 and 3 respectively. Reproductive performance of Jamunapari goats in terms of breeding efficiency and kidding percent on the basis of does selected for breeding were 95.22% and 127.83%, respectively. The kidding rate was 1.38. Genetic parameters for body weights at various stages of growth and milk production traits were estimated. The heritability estimates for body weights at birth, 3, 6, 9 and 12 month age were 0.361 ± 0.030 , 0.270 ± 0.028 , 0.268 ± 0.031 , 0.185 ± 0.030 and 0.160 ± 0.029 , respectively. The genetic trends for the body weight at birth, 3, 6, 9 and 12 month age were 0.12 ± 0.03 , 0.59 ± 0.12 , 1.58 ± 0.19 , and 2.66 ± 0.28 and 2.14 ± 0.36 kg, respectively. The heritability estimates for 90 day and 140 day milk yield were 0.285 ± 0.097 and 0.283 ± 0.097 , respectively. Improved animals were supplied to various developmental agencies, farmers and state governments, Non-Government Organizations and progressive breeders for genetic improvement in the field conditions. During year, 205 improved animals were distributed to goat breeders for breed improvement programme. Jamunapari unit will work with Green Global Farm (Intensive system goat rearing) and with Govt. breeding farm, Etawah, UP. Similarly we will also work to analyse the impact of superior males in collaboration with NGO (Hitaishi Sansthan) in the Bharatpur region of Rajasthan. In this direction we have supplied 65 bucks in collaboration with Govt. of Rajasthan.

11. Malabari Goat Field Unit, KV&ASU Mannuthy, Thrissur, Kerala

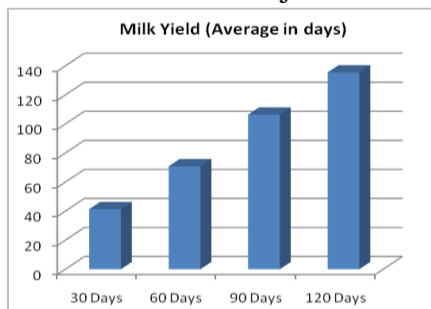
The unit is operational at College of Veterinary and Animal Sciences, Kerala Veterinary and Animal Sciences University, Mannuthy, Thrissur, Kerala. AICRP on goat improvement (Malabari field unit) is started functioning from April, 2001 with the main objective to bring improvement in the farmers flock in its home tract. The registration of farmer's flock was carried out in six field clusters. The elite germplasm centre was maintained at College of Veterinary and Animal Sciences, Mannuthy, Thrissur. The field centers are Thalassery, Thaliparambu, Badagara, Perambra, Thavanur and Tanur located in Kannur, Kozhikode and Malappuram districts of Kerala. Two organized farms with 100 goats under NGOs at Kottakkal, Malappuram district and Tirur, Thrissur district have also been included during the year 2012, 2015, respectively. Baseline information on production and reproduction traits, management practices and production trend were recorded and analyzed. Total of 108 bucks of Malabari breed was selected on the basis of body weight and distributed to various field centres. Farmers have been registered and adult females have been provided with insurance coverage under the project. The closing balance of the registered flock was 3066 including 2233 adult female goats. During the current year, 906 kids were born out of which 430 were females. Overall population growth recorded was 68.67%. The overall mean body weight



recorded at birth, three, six, nine and twelve months of age were 1.95 ± 0.07 , 8.66 ± 0.6 , 15.89 ± 0.6 , 18.72 ± 0.67 and 20.35 ± 0.70 kg, respectively. The overall mean average lactation yield was 72.80 ± 6.20 lit with lactation length of 82.59 ± 6.30 days. The overall mean of age at first service and age at first kidding were 250.10 ± 11.10 and 399.20 ± 12.30 days, respectively. The overall mean of gestation length and inter kidding interval were 149.10 ± 0.20 and 275.80 ± 12.60 days respectively. Average litter size was 1.66 during the 2015-16. The percentage of singles, twins, triplets and quadruplets were 44.30, 47.61, 7.53 and 0.55, respectively. The unit has developed one technology for estimation of body weight and filed one patent. The unit has conducted various trainings and distributed leaflet during the year.

12. Marwari Goat Field Unit, RAJUVAS, Bikaner, Rajasthan

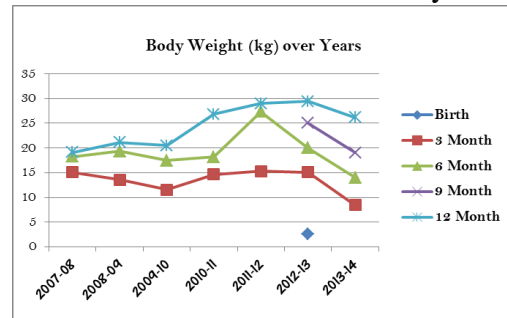
The unit is operational at college of Veterinary Science, RAJUV&AS, Bikaner, Rajasthan. The Marwari Field unit, as a part of the AICRP goat improvement project aims to improve the productivity of Marwari goats in the farmers' flock through selective breeding tract in the home. This field based unit was initiated in VIII five year plans to conduct survey for characterization of Marwari breed for their physical parameter. It is continued in the XII five year plan to enhance the productivity of Marwari goat breed by improving their genetic potential for meat & milk. At present this unit is functioning in the Bikaner, Jodhpur and Churu district of Rajasthan with six cluster at Deshnok, Daiya, Kalayansar, Raisar, Kan



Singh Ki Sird and Depalsar villages. In addition to this, the Buck Rearing Center is also functioning at Livestock Research Center, Kodemdesar (RAJUVAS, Bikaner) for rearing of elite breeding bucks for distribution to the farmers. As per the technical program, the performance of Marwari goats of registered breeders was recorded at different stages of growth. The elite bucks true to the breed and having higher body weight were selected amongst registered breeders and distributed to farmers.

Multiple births were preferred over single birth for selection. The goat breeders were provided preventive and curative health coverage. The population growth was 127.24% over all the clusters during the year. The overall body weights (2011-15) at different stages of growth were 2.55 ± 0.005 kg at birth, 8.93 ± 0.037 at 3 month, 13.82 ± 0.056 kg at 6 month, 17.69 ± 0.151 kg at 9 month, 22.39 ± 0.194 at 12 month of age. The biometrical parameters like body length, body height and chest girth were measured from birth to 12 months of age at three month interval. The lactation performance in term of the average milk yield was 38.55 ± 0.67 liters in 30 days, 61.56 ± 1.01 liters in 60 days, 74.72 ± 1.49 liters in 90 days, 80.55 ± 1.76 liters in 140 days and 101.28 ± 2.08 liters in full lactation length during 2012-2015. The average lactation length in Marwari goat was observed as 109.21 ± 1.182 days. The effect of year season of birth, type of birth and lactation order on lactational performance was also analysed.

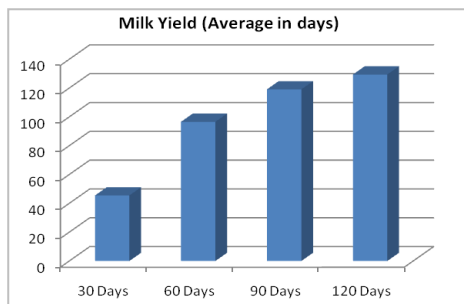
The kidding percentage and kidding rate was 113.76 and 1.15, respectively during the reporting period. The average age at first mating was 501.36 ± 12.725 days with body weight of 27.10 ± 0.31 kg. The average age at first kidding ranged from 428.61 ± 29.197 to 570.34 ± 14.37 days, weight at first kidding 30.10 ± 0.27 to 34.46 ± 0.16 kg, the first kidding interval from 209.43 ± 1.00 to 230.11 ± 6.32 days and service period 172.38 ± 6.32 days during 2011 to 2015. Incidence of abortions and stillbirths were 10.5 %



and twinning percent was 13.7 %. This may be due to adaptation of scientific managerial practice by the goat breeder and proper care of animals during the prevalent conditions. The overall mortality was 11.59 % for the reporting period (2015-16). Out of the total mortality, 38.37% were died from Colibacillosis, 26.74% from pneumonia, 15.69% from NAD/general weakness, 12.97% from Coccidiosis and 6.39% Toxaemia/ Acidosis. The total numbers of case covered under health coverage were 1,20,542 which included both prophylactic (47.43 %) and curative (52.57%). Out of total 57,174 prophylactic measures, 14,095 were for endo parasite, 14,643 for ecto-parasite, 5,803 for FMD vaccination, 6,939 for ET vaccination and 6,850 for PPR vaccination from 2012 to 2015. The digestive and reproductive system diseases accounted the highest morbidity (37.9%, 28.5%) followed by the nutritional deficiencies (14.9 %), miscellaneous diseases (9.91 %), surgical intervention (5.71 %), and reproductive system diseases (2.47 %) and skin diseases (0.678 %). This improvement is due to distribution of selected elite sires in farmers' flocks and effective health coverage. There has been an increase in interest among farmers to get them registered in the project.

13. Osmanabadi Goat Field Unit, NARI, Phaltan, Maharashtra

The unit is operational at NARI, Phaltan, Maharashtra since April 2009 under the AICRP on Goat Improvement. In 2015-16, the production performance of goats in farmers' flocks was assessed in four clusters in four districts (one cluster in each district) in western Maharashtra State viz Satara, Solapur, Ahmednagar and Sangli districts. The work of refining and fine-tuning the MS Access database of the Osmanabadi field unit and putting it on the SQL platform for ease of data entry and data retrieval is almost finished. Six hundred and fourteen adult does (84, 204, 151 and 175 adult does in Satara, Solapur, Ahmednagar and Sangli districts respectively) are being recorded. These belong to 192 goat keepers, indicating that about three goats are reared per household on average. Detailed periodic recording has been done of their body weight, milk yield, reproduction, kid weights, mortality, morbidity, cost

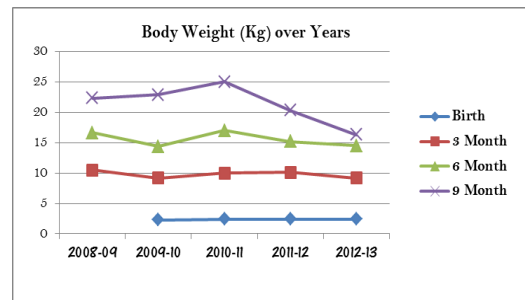


incurred for goat rearing and income earned. During the year, 1177 kids were born in 709 kidding making the average litter size of 1.66 which is slightly lower than 1.68 in 2014-15. The least squares mean three month weight of single-born kids (532 records) was 10.4 ± 0.1 kg and that of twin-born kids (1566 records) was 9.1 ± 0.1 kg. Thus does giving birth to twin kids produced almost 75% more kid weight at 3 months age than does giving birth to single kids. Similarly, the

weight of single-born and twin-born kids was 16.5 and 14.3 kg respectively at 6 months age, giving a 73% superiority of twinning goats in weight of kids produced. The overall least squares mean three month weight of Osmanabadi kids in this study was 10.5 ± 0.2 kg which was higher than the ~7 kg reported in the report of the Network Project on Osmanabadi Goats, MPKV, Rahuri (1995-99). The least squares mean 100-day milk yield was 114 litres. The 100-day milk yield of does that had single, twin and triplet kids was 68.9 kg, 103.7 kg and 139.2 kg respectively, indicating that milk yield increases with the number of kids. Mortality across all age groups and sexes was 6.1%. Mortality was similar among kids and adults. The major cause of mortality among adults was respiratory failure while it was diarrhoea/enteritis in kids. Four more twin-born bucks were purchased from the field in 2015-16, with six months weights of 16 to 19 kg and dam's milk yield 1 to 1.8 litres per day. The total number of bucks purchased since 2009 is 41. About 9,575 straws (0.25 ml French mini straws) of frozen semen of 30 Osmanabadi bucks have been produced so far in NARI's Frozen Semen Laboratory. During 2015-16, 1489 Osmanabadi buck straws were supplied to

A.I. technicians and farmers for breeding Osmanabadi goats. Conception rates of 50 to 55% have been reported by field technicians. Eight information booklets in Marathi language have been distributed to participating and other goat keepers for better goat management practices.

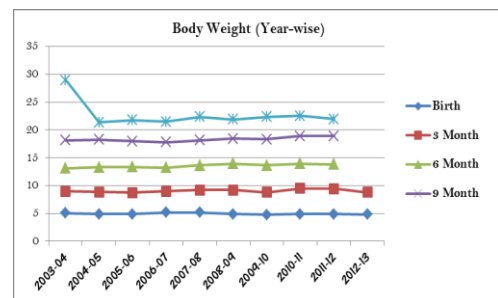
First aid treatment in sheep and goats – one booklet and one folded leaflet, Vaccination in sheep and goats - folded leaflet, Abortions in sheep and goats: prevention, treatment, nursing and precautions to be taken to avoid infection to humans, Misconceptions and superstitions in livestock treatment, Adverse effects of early breeding of young does: consequences and prevention, Goat rearing package of practices for small holders, Package of practices for goat artificial insemination (AI), Economics of stall-fed goat production, Regular preventive health care of goats was carried out in all villages including vaccinations, deworming and spraying against ecto-parasites. Goat keepers were trained in preventive health care of goats and first-aid treatment so that they can care for their goats themselves instead of having to rely on others. Another new village will be adopted in the Alkud cluster in Sangli district.



Regular preventive health care of goats was carried out in all villages including vaccinations, deworming and spraying against ecto-parasites. Goat keepers were trained in preventive health care of goats and first-aid treatment so that they can care for their goats themselves instead of having to rely on others. Another new village will be adopted in the Alkud cluster in Sangli district.

14. Sangamneri Goat Field Unit, MPKV, Rahuri , Maharashtra

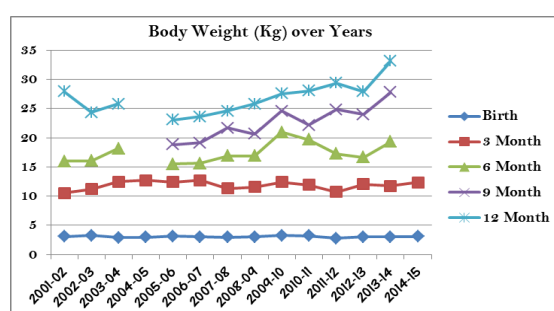
The unit is operational at MPKV, Rahuri, Maharashtra. The All India Co-ordinated Research Project on Sangamneri goat (field unit) is executed from 21.3.2002 with the main objective is to improve production performance in the farmer's flock of Sangamneri goat. Accordingly, the baseline information pertaining to growth, reproduction, production and management practices was collected. The programme was initiated by registering 500 does located in the breeding tract. However, as per the directives given during scientist meet the programme is extended by registering 1526 breedable does. The area under execution is divided in four centres (clusters) as Sangamner, Shrirampur, Rahuri and Belha covering three districts i.e. Ahmednagar, Nasik and Pune. Total 54 breeding bucks were rotated in the field during 2015-16 and total 2308 births were obtained in the field. The overall least square means obtained for 1,3,6,9 & 12 month body weight $4.99 \pm 0.04(12090)$, $9.09 \pm 0.09(10323)$, $14.24 \pm 0.21(4447)$, $18.42 \pm 0.24(2381)$ and $22.30 \pm 0.28(1600)$ kg, respectively. All the non-genetic factors i.e. village clusters, year, season & type of birth and sex resulted significant influence up to 12 months body weight, except the season and type of birth does not showed significant influence on the body weights at 12 months of age. The overall means for age at maturity, age at first conception and age at first kidding were $246.33 \pm 4.34(575)$, $307.46 \pm 10.31(983)$ and $459.53 \pm 10.37(965)$ days, respectively. While the service period and kidding interval were $116.86 \pm 6.75(1337)$ and $267.18 \pm 6.73(1281)$ days, respectively. The non-genetic factors i.e. village clusters, year of birth and season of birth had significant influence on pre-partum traits. Type of birth had non-significant influence on all the pre-partum reproductive traits under study. While the post-partum reproductive traits i.e. service period, kidding interval and no. of kids per kidding were significantly influenced by village cluster, year of kidding, season of kidding and kidding order, except season of kidding had no significant influence on no. of kids per kidding. The 90 days milk yield was 95.21 ± 1.26 lit, (1331) which was



significantly influenced by village, cluster, year of kidding and kidding order. Fourteen trainings were conducted by the unit for the farmers and leaflets were distributed.

15. Sirohi Goat Farm Unit , ICAR-CSWRI, Avikanagar, Rajasthan

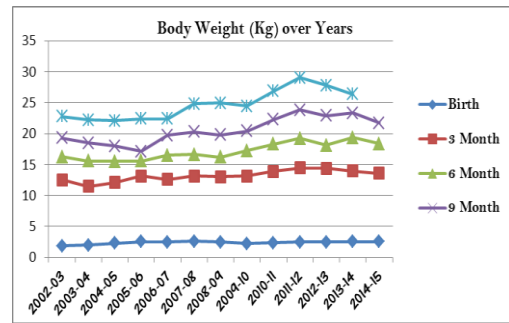
The unit is operational at CSWRI, Avikanagar, Rajasthan. The opening balance on 01.04.2015 was 202 males and 461 females totalling 663 animals. The additions during the year were due to birth of 130 male and 164 female kids and purchase of 10 males and 10 females. The reductions were due to deaths of 14 males and 26 females, culling of 18 males and 78 females, sale of 103 males and 69 females. The closing balance as on 31.03.2016 was 204 males and 462 females totalling 666 in all. The overall least squares means for live weights at birth, 3, 6, 9 and 12 months of age were 3.05, 12.16, 18.63, 25.85 and 30.47 kg, respectively. Males were heavier than the females at all stages of growth. The effect of year, sex and type of birth was significant on almost all the traits, except type of birth on PDG3-12 month. The growth rate in terms of per day average gain was 101.12 and 67.54 g/day from 0 to 3 months and 3 to 12 months of age, respectively. The overall least squares means for milk yield at 90 days, 150 days, total lactation milk yield and lactation length were 65.65, 92.52 and 105.15 kg, and 191.71 days, respectively. The effects of year of kidding and lactation order were significant on almost were 36 giving birth to twins and 1 does produced triplet during the year. The tugging percentage was 94.64. The breeding efficiency was 87.21 % on the basis of does available and 92.70%, on the basis of does tugged. The kidding percentage was 96.91 and 102.92 on the basis of does available and does tugged, respectively. The litter size was 1:1.15. The mortality rates in 0-3, 3-6, 6-12 month age group and in adults were 5.92, 1.60, 1.21 and 1.53 percent, respectively. The overall mortality rate based on animals available and exposed at different stages of growth was 2.67 percent. A total of 172 animals comprising of 103 males and 69 females were sold to the progressive farmers, Government and non-government agencies for improvement of their livestock for meat and milk production. In addition to these, five superior Sirohi buck were distributed free of cost to five registered goat farmers under MoU for breeding and improvement of their livestock. The unit was model centre for imparting trainings and demonstration to farmers on scientific goat rearing. Resource generation by the unit was Rs. 1577707.65



16. Sirohi Goat Field Unit, College of veterinary sciences & AH, Vallabhnagar, Rajasthan

The unit is operational at Collage of Vety Science and Animal Husbandry, Vallabhnagar, Rajasthan. On-going AICRP on goat improvement (Sirohi field unit) came in to financial existence on 1st January 2001, with the main objective to improve Sirohi farmers flock. As per technical programme base line information on production and reproduction traits, managerial practices, production trend and disease pattern were recorded and analyzed. The registration of farmer's flock and the identification of animals were carried out in four clusters. The data on growth, lactation and reproductive performance of Sirohi goats under field conditions have been analyzed using least squares analysis method since 2007. The closing balance of the registered flock was 1925 animals including 1132 adult females. During report period, 838 kids were born out of which 437 were males. During report period population growth was 77.76%. Total 240 males were sold out of which maximum 119 males

were sold at adult age group. The least squares means for body weight at birth, 3, 6, 9 and 12 months of ages were 2.44 ± 0.03 , 13.54 ± 0.25 , 17.74 ± 0.34 , 22.15 ± 0.61 and 25.94 ± 0.68 kg, respectively. Single born kids were significantly heavier than the multiple born kids at all the ages. The overall least squares means for milk yield over 30 days, 60 days, 90 days, 150 days, lactation yield and lactation length were 21.72 ± 1.33 , 48.49 ± 2.73 , 70.67 ± 3.44 , 102.21 ± 4.16 , 102.33 ± 4.13 lit. & 150.26 ± 0.19 days, respectively. Season of kiddings & type of birth had significant effect on milk yield.



The lactation order played a significant role in total milk yield. The overall least squares mean for age at first mating, weight at first mating, age at first kidding, weight at first kidding, service period, kidding interval and gestation period of test progenies were 482.17 ± 13.30 days, 28.98 ± 0.17 kg, 628.72 ± 13.12 days, 30.04 ± 0.14 kg, 251.90 ± 5.01 , 401.61 ± 5.01 and 148.98 ± 0.01 days, respectively. The kidding rate (litter size) was 1.16. During report period 4309 animals were dewormed, ecto-parasiticide was used in 4047 animals. Further, 1646 and 1073 animals were vaccinated for ET & PPR, respectively. The overall mortality was 3.45%. Farmers training programme were conducted for capacity building. Seasonal advisory and leaflet were provided to farmers on various aspects of goat production.

17. Surti Goat Field Unit, N.A.U., Navsari, Gujarat

The unit is operational at N.A.U., Navsari, Gujarat. Surti field unit came in to financial existence on 1 January 2001, with the main objective to bring about the genetic improvement of Surti goats in the farmers' flock. The registration of farmer's flock and the identification of animals were carried out in 18 villages under six clusters. The data on growth, lactation and reproductive performance of Surti goats under field conditions have been analyzed using least square techniques for the year 2015-16. The closing balance of the registered flock was 897 animals including 713 females. Out of these animals 713 animals were white coloured including 611 white coloured females. During the year, 29 new white coloured goats had kidded for the first time in different clusters. During current year, 548 kids were born out of which 290 were males. White coloured kids born during the year were 147 males and 143 females respectively. Major constraint faced during the year again remained non availability good quality white coloured Surti bucks. There is no appreciable trait or physical character in this breed that can be counted as defect, but negative selection pressure is operating on this breed at high intensity due to higher demand of white bucks during Id-ul-Fitar festival. Farmers raise white Surti type buck for sacrificial purpose on Id-ul-Fitar festival. This imparts high selection coefficient against this breed leading to genetic death of almost entire elite Surti germplasm from male side in natural breeding tract of this breed. Total 201 males were sold out of which maximum 112 males were sold between 6-12 months age. Overall population growth of 93.77% was recorded with the addition of 548 live kids. The least squares means for body weight (2011-2016) at birth, 3, 6, 9 and 12 months of ages was 2.022 ± 0.012 (2607), 7.975 ± 0.051 (1733), 12.827 ± 0.089 (1320), 17.880 ± 0.098 (1053), 20.90 ± 0.188 (485)kg, respectively. Significantly higher body weight had been observed among all the age groups during report period as compared to year 2011-12. Season of birth, sex of kid, colour and type of birth had also significantly affected the body weights. Kids born between November and February months had higher birth weights at all age groups. The least square mean weight of single born kids was found to be significantly higher than the twins and

triplet kids at all the age groups. The overall least square means for milk yield over 90 days, 150 days, lactational yield and lactation length was 98.33 ± 1.27 (720), 136.84 ± 1.79 (558), 152.87 ± 2.48 (720)Kg and 169.49 ± 1.77 (720) days, respectively. Significant increase in 90 and 150 day milk yield had been observed during report period as compared to 2011-12. Season of kidding has significant effect on milk yield and goat kidded during the July to October remained low producer throughout. Surti goats with higher litter size were found to be better producer compared to their counter parts. This phenotypic variation in milk yield among Surti goats gives possible scope for improvement in Surti Flock for total lactation yield using selection tools. Age at first mating, weight at first mating, age at first kidding, weight at first kidding, service period, kidding interval and gestation period was 486.76 ± 23.84 (29) days 21.10 ± 0.37 (29) Kg, 632.62 ± 23.68 (29) days, 22.62 ± 0.39 (29) Kg, 186.50 ± 3.92 (340), 336.83 ± 3.92 (340), 150.34 ± 0.31 (340) days, respectively. The kidding rate (litter size) was 1.49 justifying higher prolificacy in Surti Goats. Continuous significant improvement in reproductive traits had been observed over last five years in study area. Total 29 breeding bucks were provided to goat farmers of adopted villages and those have taken training from our centre to minimize the problem of non availability of Surti bucks. During current year 2250 animals were dewormed, Mineral mixture and antibiotics were distributed for use in 1625 animals. Around 150 doses of FMD, PPR and HS vaccine had been given to the goats maintained at Surti farm unit. Overall mortality in Surti flocks was 6.54%. Three (3) five day training programs entitled “Profitable goat farming through scientific methodologies” were organized by Surti farm unit in which 11, 15 and 08 farmers participated. Additionally, four (4) one day on campus trainings benefiting 234 farmers in collaboration with ATMA project were conducted.

18. Uttarakhand Local Goat Field Unit, GBPUA&T, Pantnagar, Uttrakhand



The unit is operational at G.B.P.U.A.T. Pantnagar, Uttrakhand. The project, ‘AICRP on Uttrakhand Goat Unit’ was sanctioned to G.B.P.U.A.T. Pantnagar vide letter No. F.No.AS/5/2/2012-ASR-II/ April 28, 2014 of ADG (AS), ICAR, New Delhi. The major objective of the project is to enhance the productivity. A detailed questionnaire was prepared and surveys were made on 306 households, covering 3,097 goats (with 29.67% Pantja population) in 47 villages of 5 clusters of U.S. Nagar and Nainital districts. It was observed that there was an edge of male literacy (78.87%) over female (63.41%) irrespective of castes. Majority of goat keepers (50.65%) followed animal husbandry and labour as their primary profession. The land holding was very less, with gross income limited below 1.0 lakh from all sources. Maximum goat farmers belonged to SC category (51.63%), followed by general (37.58%) class. Women were mainly involved in cleaning, feeding and care of young as well as sick animals, while men were involved in sale of animals and grazing irrespective of caste category.. Goat keepers maintained their flocks within shed (52.29%) with kaccha floor (75.82%) and temporary roof (90.20%) during night and allowed grazing from morning to evening (79.74%) on community land. They provide concentrate (23.53%) from home available ingredients. To fulfil the objectives, four clusters viz. Bara, Tilpuri, Bhimtal and Kunda were established. A total of 909 kids using 30 bucks and 673 doe have been produced during reporting period. The average values for body weight were observed as 1.8 ± 0.13 , 9.40 ± 0.11 , 13.00 ± 0.23 and 16.50 ± 0.21 kg, respectively at birth, 3, 6 and 9 months of age. Corresponding values for body height were 28.20 ± 0.13 , 47.30 ± 0.20 , 51.78 ± 0.21 and 55.94 ± 0.40 cm, for body length 26.55 ± 0.11 , 43.64 ± 0.18 , 47.70 ± 0.20 and 51.73 ± 0.23 cm and for chest girth 28.80 ± 0.16 , 48.28 ± 0.18 , 53.07 ± 0.26 and 57.32 ± 0.31 cm, respectively at birth, 3, 6 and 9 months of age. The overall age at first mating and weight at first mating were recorded as 283.94 ± 2.13 days and 17.13 ± 0.32 kg, respectively. Kid

mortality was recorded as 16.17% and the mortality in the total flock was 14.58%. Maximum kidding occurred from October to February. The kidding rate has been recorded as 1.49 %. Twinning and triplet kidding was observed as 46.79 and 1.48%, respectively. A nucleus flock of Pantja goats has been established at Pantnagar, where in 37 females and 25 males are being maintained (as on March 31, 2016). A facility of natural service to the local goats was created at Pantnagar during initial year, and was continued this year also. During the year, 21 bucks were distributed for breed improvement programme. Training programmes were conducted. Preventive health care carried out.

(B) RESEARCH EVALUATION
MONITORING & EVALUATION OF UNITS

Monitoring and Evaluation is an important factor to depict the progress of the project in right direction. A proforma for evaluation has been developed by Project Coordinator unit during the year, which is being used by in charge PC to evaluate the performance of the unit while visiting any AICRP Unit. This proforma will help to analyze the performance in uniform manner. Moreover, a quantitative evaluation proforma has been developed and the performance of all the units will be evaluated basing on those criteria.

Checklist for Monitoring and Evaluation by PC Unit

	भा.कृ.अ.प.-केन्द्रीय बकरी अनुसंधान संस्थान, ICAR-Central Institute for Research on Goats मखदूम फरह-281122, मथुरा उ०प्र० Makhdoom, P.O. Farah- 281122, Mathura U.P. Phone & Fax 0565-2763325 Email: pcgaicrp@gmail.com AICRP on Goat Improvement			
<u>Monitoring and Evaluation by PC</u>				
<u>Check list</u>				
S.No	Particulars	Status	If no give reasons	Remarks
1.	Whether maintaining all the registers* in the given format	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2.	Percentage of fund utilization			
3.	Implementation of Technical Programme a) Number of Cluster b) Number of Animals c) No. of Enumerators			
4.	Whether the facilities approved under the project have been created.			
5.	Animal identification Method			
6.	Performance recording of animal in village condition a) Data register b) Collection frequency			
7.	Is Staff strength as per the project?			
8.	Selection of buck (number.)			
9.	Distribution & Performance of buck			
10.	No. of training conducted			
11.	Visit schedule of PI to field			
12.	Technology transfer/ demonstration schedule			



13.	Impact of Programme			
14.	Visit of any of the dignitaries			
15.	Seasonal Advisory to farmers			
16.	Leaflet etc. distributed to farmers			

Register Compliance for units

- | | |
|--|--------------------------|
| a) Register for Buck Distribution | <input type="checkbox"/> |
| b) Register for Growth | <input type="checkbox"/> |
| c) Register for Livestock | <input type="checkbox"/> |
| d) Milk Register | <input type="checkbox"/> |
| e) Register for Mortality | <input type="checkbox"/> |
| f) Baseline data format | <input type="checkbox"/> |
| g) Breed Registration format | <input type="checkbox"/> |
| h) Baseline data Collection Sheet | <input type="checkbox"/> |
| i) Baseline Information of the Village | <input type="checkbox"/> |
| j) Training Registers | <input type="checkbox"/> |
| k) Training feedback form | <input type="checkbox"/> |
| l) Training feedback Analysis form | <input type="checkbox"/> |
| m) Technology transfer survey | <input type="checkbox"/> |
| n) Performa for survey | <input type="checkbox"/> |

Weightage criteria



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AICRP on Goat Improvement



Score sheet for Evaluation of AICRP Unit

Activity	Rating Scale	Weightage criteria					
		100%	90%	80%	70%	60%	Below 60%
Implementation of technical Programme	40	PC's Unit Evaluation					
Timely submission of 6 monthly target & Achievement (Oct - March)	7.5	07.04.2016	10.04.2016	12.04.2016	14.04.2016	15.04.2016	
Timely submission of 6 monthly target & Achievement (April - Sept)	7.5	07.10.2015	10.10.2015	12.10.2015	15.10.2015	-----	-----
Provisional Annual AUC Submission	6.5	10.04.2016	11.04.2016	12.04.2016	17.04.2016	15.04.2016	
Final AUC submission	6.5	20.07.2016	24.07.2016	26.07.2016	28.07.2016	31.07.2016	
Timely Submission of Annual Report	10	15.04.2016	20.04.2016	22.04.2016	23.04.2016	24.04.2016	
Quarterly submission of Fund Utilization	5	Within 7 th day of Quarter	Within 8 th day of Quarter	Within 9 th day of Quarter	Within 10 th day of Quarter		
TSP Report (if Applicable)	3	2 th day of month	3 th day of month	3 th day of month	5 th day of month		
Technology Intervention/ Demonstration	2						
Training Organized	10	6	5	4	3	2	1
Percentage of fund Utilization	2	98	96	94	92		
Total	100						

Rating Scale*Criteria Value/100=Final Score

The progress of research work of different unit were evaluated by the in charge PC Unit

Table 5: Monitoring & Evaluation of AICRP on Goat Improvement Units

S N.	Details of monitoring activity by PC unit
1.	Attended meeting at ICAR, New Delhi, regarding adoption of Sidhabari Village, Kolkata under on Goat Improvement. Dated April 06, 2015(Dr. S. K. Singh)
2.	Visited Gaddi Field Unit, CSKHPKV, Palampur to monitor the progress of the project. Dated May 06 to 13, 2015
3.	Director's Conference, ICAR, NASC Complex, New Delhi dated May 15 to 17, 2015
4.	Conducting Annual Review Meet during September 07-08, 2015
5.	Attended Goat Information Sharing Meeting, Sirohi field Unit, Udaipur and evaluation of performance of Sirohi field unit. Dated Nov 04 to 05, 2015 (Incharge PC & Dr. M.S. Dige)
6.	Evaluation of the progress of Sirohi farm unit, CSWRI, Avikanagar. Dated Feb 19 to 20, 2016
7.	Performance review of Ganjam field Unit. Dated June 24,2015 (Dr. M. S. Dige)
8.	Performance review of Marwari field unit, Bikaner. Dated March 05 to 09, 2016
9.	Performance review of Ganjam field Unit. dated April 26-29, 2016

Table 6: Grading pattern of Units

Grade	Excellent	Very Good
Percentage	Above 90%	85-90%
Number	7	11

(B) Research Evaluation: 2015-16

Project Coordinating Unit, CIRG, Mathura PI- 1. Dr. S.K. Singh (April,2015 – Sept. 2015) 2. Dr. P. K. Rout, Principal Scientist (AGB) & In charge, AICRP on Goat Improvement (Sept. 2015 – March, 2016) PC’S evaluation:				
Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints /shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<ul style="list-style-type: none"> •Monitoring of performance of 18 AICRP Units for implementation of technical programme. •Development & distribution of different formats, baseline data collection, format for Annual report & Presentation. •Testing, hosting &standardisation of goat production management Information system for central data repository. •Conducting training program for working hands of AICRP units. •Release of budget & its monitoring. •Evaluate performance of various units 	<ul style="list-style-type: none"> • Developed & circulated various formats for uniform data collection, reporting and analysis. • Developed &hosted Goat Production Management system (GMIS), AICRP website is available as “http://pcgoatcirg.icar.gov.in” • Conducted 5 days training programme on “Data Recording, Record keeping & analysis of goat production system “for better implementation of the project. • Monitoring of 18 units • Developed ‘Monitoring & Evaluation proforma’s for evaluating unit after visit • PC report preparation. 	<ul style="list-style-type: none"> • No regular information from units regarding budget utilization. • We need to standardize performance-recording data in all the units. 	<ul style="list-style-type: none"> • Creation of genetic evaluation facility • Monitoring and evaluation of 18 centres. • Standardization phenotypic data recording in all the units. • Impact analysis. 	<ul style="list-style-type: none"> •Need more manpower & better utilization of funds. •Establishment genetic evaluation lab for monitoring.

Andaman Goat Field Unit, ICAR-CIARI, Port Blair, A & N Island

PI - Dr. Jay Sunder, Principal Scientist (Microbiology)

PC's evaluation: 85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/s hortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<ul style="list-style-type: none"> •Survey of farmers in new adopted villages •Recording the biometric dimensions and body weight of the goat at different ages. •Collection of information on mortality, sale, newborn etc. •Identification of superior male kids in the farmer's field. •Distribution of male bucks to farmers for breeding. •Training program for farmers. 	<ul style="list-style-type: none"> •Surveyed new villages such as Manpur, Guptapara, Collinpur, Indranagar, Mitakhari, and Namunagar. A total of 37 new farmers were registered and 439 new goats were added. •Performance recording was carried out in 2021 animals. •Recorded the body weight and biometric dimensions of goats at different age groups 605 kids. •A total of 329 goats died due to different disease. •Sixteen Superior male kids were identified and purchased. •Seven bucks were distributed to the farmers of different areas. •Deworming was carried out 472 animals. •Six trainings were organised. 	<ul style="list-style-type: none"> •20 bucks should be distributed to farmers for breed improvement •Base-line data collection •Disease recording pattern is not proper. •Total kids born were 605 during the year however birth weight was recorded in 106 animals. •Flock statistic in table 4 is not properly presented. •PPR & EP vaccination was not carried out during the year. •30 days Test day milk recording should be carried out. 	<ul style="list-style-type: none"> • Survey of farmers in new areas • Recording the biometric dimensions and body weight of the goat at different ages. • Collection of information on mortality, sale, newborn etc. • Identification of superior male kids in the farmers' field. • Distribution of male bucks to farmers for breeding. • Baseline data collection. • Linkage with other organisations. • Production system characterisation. • Conducting trainings for farmers. 	<ul style="list-style-type: none"> •Biometric diamentions and body weight growth are two different parameters for data recording •Target & achievement should be provided in given format. •Working in desired direction to improve the productivity goats in inland ecosystem.

Assam Hill Goat Field Unit, AAU, Khanpara, Guwahati, Assam

PI - Dr. N. Nahardeka, Professor (AG&B),

PC's evaluation: 85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<ul style="list-style-type: none"> • Baseline data collection sheet in newly adopted villages. • Performance recording in kids for body weight • Reproductive performance recording. • Selection & distribution of bucks. • Self help group formation. • Conducting training for farmers. • Preventive health care. 	<ul style="list-style-type: none"> • Body weight recording was carried out in 700 kids. • Reproductive performance recorded in 425 animals. • Nine trainings were conducted for farmers. • Eleven bucks were distributed for breeding purpose. • Preventive health care was provided to 3115 goats. 	<ul style="list-style-type: none"> • Disease recording pattern is not proper. • Impact analysis. • Technology validation in farmers's flock • Test-day milk yield recording up to 30-45 days 	<ul style="list-style-type: none"> • Distribution of superior bucks amongst farmers of adopted villages and also to the goat farmers of the state for genetic improvement purpose. • Documentation of breed characteristics & production system characterization. • Impact analysis. 	

Barbari Goat Farm Unit, ICAR-CIRG, Makhdoom, Uttar Pradesh

PI - Dr. M.K. Singh, Principal Scientist (AG&B)

PC's evaluation: Above 90% (Excellent)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance recording</p> <ul style="list-style-type: none"> • Body weight at 3, 6, 9 & 12 months of age. • Milk Yield recording • Reproductive performance. • Selection of buck for breeding • Distribution of improved animals for breed improvement programme. • Selection of farmer for multiple flocks. • Training for farmers. • Genetic parameter estimation. 	<ul style="list-style-type: none"> • Body weight recording was carried out in 397 animals. • Milk yield recording was carried out in 231 animals. • Improved animals supplied for breed improvement programme 152. • Eight Multiplier flocks have been adopted. • Participated in 4 national trainings and other sponsored training programme. • Kidding rate was 1.49 	<ul style="list-style-type: none"> • This project is contributing significantly in conservation and genetic improvement of Barbari goats in its habitat. • The unit is to increase the number of adult dose as per technical programme • Need to provide the facilities to carry out for village work. 	<ul style="list-style-type: none"> • Adopt farmers for technology validation and improvement of goats in the farmers flock, • Distribution of bucks to adopted farmers • Estimation of genetic progress and breeding value of animals. • Impact analysis. 	<p>A model project towards sustainable breeding programme.</p>

Bengal Goat Field Unit, BAU, Kanke, Ranchi, Jharkhand

PI - Dr. L. B. Singh, Professor (AG&B)

PC's evaluation: 85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/s hortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance Recording</p> <ul style="list-style-type: none"> Recording of Observation of body weight-240 Recording of breeding of Animal-146 Baseline data collection for newly adopted villages-20 Buck distribution-20 <p>Technology transfer</p> <ul style="list-style-type: none"> Health Camp – 6 Exposure Visit-2 Goshti/Meeting Conducted-3 General Awareness Created-2 <p>Capacity Building</p> <ul style="list-style-type: none"> No. of Training-30 	<ul style="list-style-type: none"> Distributed 27 bucks to farmers flock for breeding Purpose in adopted area. Body weight recording in 1115 animals. Baseline data collected from villages. Vaccination was given to 2650 animals & deworming to 2819. Sixteen trainings were organised. Three tribal villages covered for technological intervention. 	<ul style="list-style-type: none"> Coverage of more tribal villages Disease recording pattern is not proper. Linkage with other organisations. Not following minimum number of animals to be covered under project. Reproductive performance for the year 2015-16 is not correct; it should be recalculated and reported again. Morbidity table is not given. Goat pox vaccination should be provided to all the animals. No information on literature distributed. Research articles from the project. 30 days Test day milk recording should be carried out. 	<ul style="list-style-type: none"> Estimation of genetic progress and breeding value of animals. Documentation of the breed and impact evaluation of the programme. Performance recording for body weight Baseline data collection. Linkage with other organisation. 	<ul style="list-style-type: none"> Biometric dimensions and body weight growth are two different parameters for data recording. This unit has adopted four clusters at distant locations to cover variations the breeding tract.

<p align="center">Black Bengal Goat Field Unit, WBUV and FS, Kolkata, West Bengal PI – Dr. P.K. Senapati, Dean and Professor (AG&B) PC's evaluation: 85-90% (Very Good)</p>				
Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/hortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance Recording</p> <ul style="list-style-type: none"> •Recording of body weight-1000 nos. of registered doe with their followers •Recording of breeding of animal- 1000 nos. of registered doe •Buck distribution-12 <p>Technology transfer</p> <ul style="list-style-type: none"> •Field demonstration - 4 •Health camp •Exposure visit- 4 •Seasonal advisory- 8 •General awareness created-14 <p>Capacity Building</p> <ul style="list-style-type: none"> •No. of Training- 4 	<ul style="list-style-type: none"> • Body weight recording were carried out in 1358 animals. • Breeding of animal's recorded in 761 does. • Twelve bucks were distributed for breed improvement programme. • Vaccination was provided to 3413 animals and 5327 animals were provided deworming. • Eighteen health camps were organized. • Six trainings were conducted. 	<ul style="list-style-type: none"> •Disease recording pattern is not proper. • Data analysis and genetic parameter estimation. •Milk recording up to 30 days period is required •Less number of bucks supplied. •Trainings need to be conducted for farmers. • The unit need to show improvement in its activities and in implementation the technical programme. 	<ul style="list-style-type: none"> •Distribute approximately 20-30 bucks to farmers flock for breeding purpose in adopted area •Performance recording of body weight. •Twenty bucks need to be distributed for breed improvement programme. •Test-day milk yield recording up to 45 days. •Organisation of training programmes. 	<ul style="list-style-type: none"> •Reproductive performance data needs to be rechecked. •Genetic correlation with birth weight needs to be rechecked. •Vaccination calendar must be followed. •As per the evaluation by QRT, the performance is not satisfactory. The project may be relocated to ICAR Institution in Kolkata.

Changthangi Goat Field Unit, SKUAST, Kashmir, Leh-Ladakh, J&K

PI - Dr. Feroz Seikh, Assistant Professor (AG&B)

PC'S evaluation: 85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<ol style="list-style-type: none"> 1. Distribution of Improved bucks to all the 27 beneficiaries in the adopted clusters for breed improvement 2. Distribution of Low cost kid shelter to the breeders. 3. Distribution of improvised combs 4. Provision of solarised lamp for efficient Management of Goats during night hours. 5. Tagging of all the pashmina goats in the adopted clusters (Approx. 11,000) 6. Base line data generation from all the farmers of the 3 clusters as per the new format issued in Sept 2015 by CIRG. 7. Provision of improved Gumboots to the shepherds. 8. Fodder Land Development (5 hectare) at HMAARI at Leh. 9. Introduction/trial for Silage making in Leh for the first time. 10. Composite making with goat manure (tree leaves, local fermented barley etc). 11. Identification of pasture grasses. 	<ul style="list-style-type: none"> • Twenty two Improved bucks distributed to 22 beneficiaries in the adopted clusters • Twenty seven Low cost kid shelter/Silpaulin distributed to check kid mortality. • Twenty seven solarized lamps distributed for efficient Management of Goats during night hours. • Base line data from all the farmers of the 3 clusters • A total of 4567 goats were treated for various ailments during the period and 7433 animals were dewormed. • One day training programme organised in all the clusters. • Women self help group in 2 clusters Kharnak and Samad formed. 	<ol style="list-style-type: none"> i. The unit has to produce baseline information on goats and goat farmers. ii. Disease recording pattern is not proper. iii. Information of pashmina yield. iv. Milk Yield up to 30 days need to be recorded as test day recording. 	<ul style="list-style-type: none"> • To create a document on economic status of Goat farmers and feasibility to improve goat productivity. • Selection of 30--50 bucks based on growth. • Baseline data collection performance recording with respect to growth & pashmina yield. • Development of need based technologies for improved goat production. • Body weight recording. • Pashmina Yield. • Selection of buck • Distribution of at least 40 bucks for adopted villages. 	<ul style="list-style-type: none"> • The unit has to start work on pedigree, performance recording and technology validation. • Baseline data collection.

<p>12. Health Management to all the goats in the project area.</p> <p>13. Training programme to breeders of Changthang</p> <p>14. Formation of Women self help group for social upliftment.</p>				
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<p align="center">Gaddi Goat Field Unit, HPKVV, Palampur, Himachal Pradesh PI - Dr. P.K. Dogra, Professor (AG&B) PC'S evaluation: 90% (Excellent)</p>				
Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shorfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<ul style="list-style-type: none"> • Performance recordings of animals on growth, reproduction (350 animal) • Registration and tagging of new born kids (125 kids). • Health coverage under migratory field conditions. (350 animals) • Purchase of kids from farmer's flock (25 kids). • Breeding buck distribution to farmers. (15 bucks) • Strategic supplementation. • Trainings to farmers. 	<ul style="list-style-type: none"> • Performance recording of 778 animals on growth, reproduction and health has been accomplished. • Registration and tagging of 570 young kids have been done. • A total of 1255 animals were provided health coverage under migratory field conditions. • A total of 47 male kids of 4-6 months age group have been purchased. • Twenty six bucks were distributed to different farmers as breed improvement programme. • Mineral mixture and concentrate feed were supplied to the beneficiaries. • Eleven health camps were organised • Three exposure visits were carried out. 	<ul style="list-style-type: none"> • Selection of bucks & 20 bucks need to be distributed for breed improvement programme. • Disease recording pattern is not proper. • Need to record milk yield up to 30 days as test day recording. • Trainings for farmers. • Need to adopt some more animals under the project. 	<ul style="list-style-type: none"> • Distribution of 20bucks to farmers flock for breeding purpose. • Impact evaluation of the programme. • Follow-up action plan for performance recording when goats are on migration to high altitudes. • Economics of Goat production. • Performance recording in kids for body weight • Training for farmers in scientific goat production. • Development of small bulletins in local language. 	<ul style="list-style-type: none"> • This unit works in high altitude. • Large goats flocks remains in migration making it difficult to record the performance.

Ganjam Goat Field Unit, OUAT, Bhubaneswar, Orissa

PI - Dr. D. K. Karna, Associate Professor (AG&B)

PC'S evaluation: 85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/ constraints/ shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance Recording</p> <ul style="list-style-type: none"> • Recording of Observation of body weight -2326 • collection for newly adopted villages for the new field Centers at Bhanjanagar <p>Technology transfer</p> <ul style="list-style-type: none"> • Health Camp -3 • Exposure Visit - 1 • Literature Provided - 2 • Goshti/Meeting Conducted- 3 meetings conducted each month. • General Awareness Created 	<ul style="list-style-type: none"> • Performance recording was carried out in 2326 animals. • Seventeen bucks were selected. • Three health camp were organised • Preventive health care provided to 4000 animals • Deworming provided to 5895 goats. • One exposure visit was taken • Two leaflets were provided. 	<ul style="list-style-type: none"> • The unit need to show improvement in its activities and in implementing the technical programme. • Disease recording pattern is not proper. • Performance recording not provided to farmers. • Data recording and analysis need to be relooked. • Test –day milk recording to be carried out. 	<ul style="list-style-type: none"> • About 100 male kids are to be identified on the basis of type of birth and weaning weight. • Distribution of breeding bucks. • The unit need to carry out pedigree & performance recording. • Body weight recording in kids at different ages. • Test da y milk recording. • Trainings to farmers on scientific goat production. 	<ul style="list-style-type: none"> •The Ganjam breed has got great potential and it is suitable model for community based breeding programme.

**Himalayan Local Goat Field Unit, ICAR-IVRI Campus, Mukteshwar,
Uttarakhand**

PI - Dr. A. K. Sharma, Principal Scientist,

PC'S evaluation:-85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance Recording</p> <ul style="list-style-type: none"> Recording of body weight in selected cluster (Khola and Gandhak) (300 animals) Recording of breeding of 250 Baseline data collection from 6 new villages <p>Technology transfer</p> <ul style="list-style-type: none"> Field demonstration-deworming for helminth Health control Goshti/Meeting conducted - kisan Ghosti General Awareness Created - Awareness on goat farming. 	<ul style="list-style-type: none"> Performance recording was carried out in 417 goats Baseline data of 6 villages were collected. Six health camps were organised. 	<ul style="list-style-type: none"> Need to establish the clusters Disease recording pattern is not proper. Baseline data collection Buck distribution to farmers. Trainings for farmers need to be conducted. Reproductive performance was recorded in very less number of animals. Production system characterization data should be provided. 30 days Test day milk recording should be carried out. 	<ul style="list-style-type: none"> To register farmers, record the performance of goats, provide health care and superior bucks for improvement. Selection of 30-50 bucks based on type of birth and weaning weight. Baseline data collection on goat production system. Body weight recording at different ages. Reproductive performance Distribution of 20-30 bucks to farmers for breed improvement programme. 	<ul style="list-style-type: none"> There is a need to develop infrastructure, register farmers, and record the performance of the animals on priority so as to run the project as per technical programme.

Jamunapari Goat Farm Unit , ICAR-CIRG, Makhdoom, Uttar Pradesh
PI - Dr. P. K. Rout, Principal Scientist (AG&B),
PC'S evaluation: Above 90% (Excellent)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shorfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<ul style="list-style-type: none"> • Performance recording of body weight at 3, 6, 9 & 12 months of age. • Milk Yield recording • Selection of buck for breeding • Distribution of improved animals for breed improvement programme. • Selection of farmer for multiple flocks. • Training for farmers. • Feed lot experiment in growing kids. • Reproductive performance recording. 	<ul style="list-style-type: none"> • Body weight recording was carried out in 294 kids. • Milk yield recording was carried out in 161 does. • A total of 294 kids born during the year. • A total of 205 Improved animals supplied for breed improvement programme. • Two Multiplier flocks & 1 Govt. flock have been adopted. • Participated in 4 national trainings and other sponsored training programme. • Reproductive performance was recorded in 213 does. • Semen doses preserved 2500 	<ul style="list-style-type: none"> • This project is contributing significantly in conservation and genetic improvement of Jamunapari goats in its habitat. • The unit is to be maintaining about 300 adult doe as per technical programme. • More condition with adopted farmer's flock 	<ul style="list-style-type: none"> • Distribution of 30 bucks to farmers flock for breeding purpose • Health care to goats in adopted farmers • Body weight recording at different ages. • Milk Yield recording • Reproductive performance recording. 	<ul style="list-style-type: none"> •Need to provide proper infrastructure to carry out village programme •Eighteen to 20 generations of selection have bought positive genetic trend and was able to precisely estimate genetic and phenotypic variances, co-variances and genetic parameters.

Malabari Goat Field Unit, KV&ASU Mannuthy, Thrissur, Kerala PI - Dr. Thirupathy Venkatechalapathy, Assistant Professor. (AG&B) PC'S evaluation: 90% (Excellent)				
Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance Recording</p> <ul style="list-style-type: none"> Recording of body weight in 600 animals Recording of milk yield – 339 animals Recording of breeding of animal -339 Baseline data collection for newly adopted villages Buck distribution <p>Technology transfer</p> <ul style="list-style-type: none"> Field demonstration - 5 Health Camp - 2 Exposure Visit - 2 Literature Provided - 2 Goshti/Meeting Conducted - 4 <p>Capacity Building</p> <ul style="list-style-type: none"> No. of Training - 15 <p>Technology Developed</p> <ul style="list-style-type: none"> Name - Body weight measuring Tape Patent Filled – 1 <p>Major Problem Identified - Multiple parasitic infections</p> <p>Linkage created - NABARD, State Animal Husbandry Department & Kannur Goat breeder's company Ltd.</p> <p>Other prioritized activities - Developing a cost effective model goat shed suitable to high rainfall areas with provision to collect clean urine.</p>	<ul style="list-style-type: none"> Body weight recording in 906 animals. Recording of milk yield was carried out in 339 does. Twenty four bucks were distributed for breed input programme. Linkage created with 4 different organizations. Baseline data collection in 102 animals. Twenty five trainings were organized for farmers & students. Vaccination provided to 1100 animals and deworming to 2442 animals. Developed value added products from goat milk. Developed body measurement tap for recording of body weight without balance. 	<ul style="list-style-type: none"> Disease recording pattern is not proper. Population growth table should be recalculated. Least squares table should provide the no. of observation. Reproductive performance table should be recalculated 	<ul style="list-style-type: none"> Estimation of genetic progress and breeding value of animals. Production system characterisation Body weight recording at different ages. Milk yield recording Distribution of bucks for breeding purpose. Training programme for farmers. Preventive health care to different animals. Economics of Goat rearing Impact evaluation of the programme. 	<ul style="list-style-type: none"> Achievement in the target in all the aspects and develop technology and filed patent. This unit has been able to demonstrate positive impact on production of goats being reared by farmers.

Marwari Goat Field Unit, RAJUVAS, Bikaner, Rajasthan

PI - Dr. G. C. Gahlot, Professor (AG&B)

PC'S evaluation: 85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance recording</p> <ul style="list-style-type: none"> • Recording of observation of body weight - 500 • Recording of milk Yield - 100 • Recording of breeding of animal - 100 • Buck distribution - 20 bucks <p>Technology transfer</p> <ul style="list-style-type: none"> • Field demonstration - 5 • Health Camp - 5 • Exposure Visit - 2 • Literature Provided - 2 • Goshti/Meeting Conducted - 4 <p>Technology Developed</p> <ul style="list-style-type: none"> • Body weight measuring Tape 	<ul style="list-style-type: none"> • fifteen bucks have been distributed for breed improvement. • Performance recording was carried out in 1451 animals. • Milk yield was recorded in 1597 does. • Preventive health care was provided to 12796 animals. • Five training programmes were conducted. 	<ul style="list-style-type: none"> • Data recording is not proper and not carried out as per the technical programme. • Disease recording pattern is not proper • Population growth was not calculated as per the given formula. 	<ul style="list-style-type: none"> • Pedigree recording should be done to generate genetic parameters • Performance recording should be carried out as per the format of annual report. • Distribution of 20-30 bucks to farmers flock for breeding purpose. • Documentation of the breed and impact evaluation of the programme. 	<ul style="list-style-type: none"> • Milk yield recording should correlate with no. of doe's period during the year. • The university authorities have to review the management of the project by redeploing the manpower and infrastructure facilities. • The unit may be shifted to any other ICAR institute in Bareilly.

Osmanabadi Goat Field Unit, NARI, Phaltan, Maharashtra

PI - Dr. Chanda Nimbkar, Director,

PC'S evaluation: 90% (Excellent)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance Recording</p> <ul style="list-style-type: none"> • Recording of observation of body weight - 500 • Recording of Milk Yield (test-day) – 300 • Recording of breeding of animal – 300 • Buck distribution – 10 <p>Technology transfer</p> <ul style="list-style-type: none"> • Field demonstration – 5 • Health Camp–6 • Exposure Visit – 3 • Seasonal Advisory – 3 • Literature Provided - 5 • Goshti/Meeting Conducted - 2 • General Awareness Created - yes <p>3.Capacity Building</p> <ul style="list-style-type: none"> • No. of Training - 10 	<ul style="list-style-type: none"> • Performance recording was carried out in 1177 kids • Milk yield recording was carried out in 709 does. • Vaccination provided to 2481 animals and 2262 animals were provided for deworming and ecto parasites. • Twelve Bucks were distributed. • Six Training programmes were organised for farmers. 	<ul style="list-style-type: none"> • The production and productivity of goats got significantly improved by implementing scientific goat husbandry practices. • Number of observation for least squares for growth, body measurement and milk yield should be provided. • Recording of milk yield at 90 & 140 days needs to be calculated. • Recording of 12M body weight. 	<ul style="list-style-type: none"> • Distribution of 20-30 bucks to farmers flock for breeding purpose in adopted area • Impact analysis of the programme. • Recording of body weight • Recording of Milk yield. • Buck distribution. • Trainings for farmers. 	<ul style="list-style-type: none"> • Genetic parameters estimation. • Adequate semen doses were preserved for conservation from elite bucks. • This project is being implemented by an NGO and implementing the technical programme.

Sangamneri Goat Field Unit, MPKV, Rahuri , Maharashtra

PI - Dr. Sanjay Mandakmale, Associate Professor (LPM)

PC'S evaluation: 85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<ul style="list-style-type: none"> • Minimum 250 breeder does including their followers in each cluster • 1000 does in 4 clusters will be covered • Distribution of bucks in adopted area • Purchasing and rearing of male kids • Establishment of co-operative / self help group • Organization of training/group meeting camps. • Baseline data collection. 	<ul style="list-style-type: none"> • Performance recording was carried out in 2308 animals. • Fifty four Bucks were distributed. • Seventeen bucks were selected. • Preventive health care provided to 4168 animals. • Organised 14 training programme. • four health camps were organised. • Established 3 Goat Associations. • Recording Milk yield of 253 doe. • Baseline data collected of 5 villages. • A total of 5550 frozen semen doses was stored. 	<ul style="list-style-type: none"> • Disease recording pattern is not proper • Recording of milk yield. • Birth weight is not recorded. • Flock size is not as per technical programme. • Total milk yield/ 140 days not recorded. • Details of trainings not given. • Leaflet/pamphlet need to be developed and distributed. 	<ul style="list-style-type: none"> • Selection male kids from farmer's flock. • Distribution of 20-30 bucks • Breeding of flocks and recording of pedigree and performance data. • Collection of data on socio-economics and managerial practices. • Collection of semen from improved bucks and storage in semen bank. • Collection information on marketing • Establishment of co-operative/ self-help groups. • Recording of body weight & milk yield. • Organisation of training programme. 	<ul style="list-style-type: none"> • Instead of birth weight the unit recorded one month weight.

Sirohi Goat Farm Unit , ICAR-CSWRI, Avikanagar, Rajasthan

PI - Dr. S.S. Misra, Senior Scientist (AG&B)

PC'S evaluation: Above 90% (Excellent)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance Recording</p> <ul style="list-style-type: none"> • Recording of body weights and milk yield • Selection of breeding bucks • Recording of reproductive performance • Recording of milk yield. 	<ul style="list-style-type: none"> • Recording of body weights were carried out in 280 kids. • Forty six bucks selected from different six groups. • Milk yield recording in 112 does. • A total of 177 Improved animals were supplied. • One training programme was carried out. • Six goat farmers have been adopted as multiplier flock. 	<ul style="list-style-type: none"> • The unit should maintain atleast 300 breedable doe. • Disease recording should be reported as per disease status. • Reproductive performance table should be recalculated. • No. of semen doses preserved is not provided. 	<ul style="list-style-type: none"> •To work in collaboration with Sirohi field unit, Vallabh Nagar •To adopt farmers for technology validation. •Distribute approximately 20-30 bucks to farmers flock for breeding purpose in adopted area •Necessary health care to goats in adopted farmers need to be provided. •Supply of the improved goats. •Awareness camp/ farmer ghosti need to be conduct. 	<ul style="list-style-type: none"> • Effective collaboration is necessary to disseminate improved genetics in field condition. • No. of observation not matching in report.

Sirohi Goat Field Unit, College of Veterinary Science Vallabhnagar & Animal Husbandry, Rajasthan

PI - Dr. R. K. Nagda, Dean and Professor (LPM)

PC'S evaluation: 90% (Excellent)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints/shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance Recording</p> <ul style="list-style-type: none"> •body weight Recording – 1300 •Milk yield Recording – 600 •Recording of breeding animals – 500 •Baseline data collection for newly adopted villages – 25 •Buck distribution – 30 <p>Technology Transfer</p> <ul style="list-style-type: none"> • Field demonstration – 3 • Health camp – 5 • Exposure visit- 45 • Seasonal Advisory -10 • Literature Provided -50 • Goshti/Meeting Conducted – 20 • General Awareness created - 10 <p>Capacity building</p> <ul style="list-style-type: none"> • No. of training - 10 	<ul style="list-style-type: none"> • Body weight recording was carried out in 838 animals. • Milk yield recording was carried out in 738 does • Recording of breeding animals 725. • Thirty five breeding buck were distributed. • Preventive health care to 2619 animals & deworming was provided to 4309 animals. • Four Trainings were conducted for farmers. • Baseline data was carried out in 5 villages 	<ul style="list-style-type: none"> • There has been positive impact on economy of the farmers. • Disease recording pattern is not proper. • Buck distribution in field should be more and impact analysis should be carried out. • Technology validation needs to carry out in farmer's flocks. • Genetic parameter need to be estimated. • Economics of Goat rearing. 	<ul style="list-style-type: none"> • To work in collaboration with Sirohi farm unit, CSWRI, Avikanagar. • The demands of the breeding bucks are very high for this breed. The Unit has to strengthen capabilities to identify, select and make farmers rear superior goats for future breeding purpose apart from implementing the technical programme. • Selection and purchase of male kids from farmers' flock. • Distribution of 20-30 bucks, breeding of flocks and recording of pedigree and performance data. • Collection of data on socio-economics and managerial practices. • Collection of semen from improved bucks and storage in semen bank. • Collection information on marketing. • Production system characterisation. 	<ul style="list-style-type: none"> •Needs to cover all adult animals by providing improved bucks. •Vaccination calendar needs to be followed. •This unit has been able to create a very good Sirohi flocks in farmer's flock by introducing genetically superior bucks and health control measures. The impact is visible in farmer's flocks. The performance is satisfactory.

Surti Goat Field Unit, N.A.U., Navsari, Gujarat
PI - Dr. K.K. Tyagi, Associate Professor (AG&B),
PC'S evaluation: 85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints /shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<p>Performance Recording</p> <ul style="list-style-type: none"> Recording of body weight at different ages. Recording of Milk Yield Recording of breeding of Animal- Age at first mating (Days), Baseline data collection for newly adopted Buck distribution - 16 bucks <p>Technology transfer</p> <ul style="list-style-type: none"> Field demonstration -15-20 (App.) Health Camp - 5 Exposure Visit -2-5 Literature Provided -15-30 farmers (Book in vernacular language) Goshti/Meeting Conducted - 5-10 General Awareness Created -15-20 <p>Capacity Building</p> <ul style="list-style-type: none"> No. of Training -1 	<ul style="list-style-type: none"> Performance recording was carried out in 548 kids from birth to 12 month of age. Milk yield recording in 70 does. Baseline data collection in 5 new villages. Distribution of 16 bucks for breeding purpose. Three trainings were carried out. ten health camps were organized. Seven new goat milk corporate have been registered 	<ul style="list-style-type: none"> Need to distribute 20 bucks for breeding purpose every year. Disease recording pattern is not proper Random milk recording should not carry out; it should be carried out in registered population only. 	<ul style="list-style-type: none"> Mapping of breeding tract and dividing the breeding tract into 4 clusters Distribution of 20bucks, breeding of flocks and recording of pedigree and performance data. Collection of data on socio-economics and managerial practices. Selection of male Establishment of co-operative/ self-help groups. Recording of body weight in 530 kids. Recording of milk yield in 150 does. Goat Breeders society registration. 	<p>This unit has come up strongly from being one of the poorest units to become one of the best performing units in the recent past. As Surti is threatened goat bread this unit has been able to significantly improve population and performance of Surti in the farmer's flock. This unit has also been able to establish goat cooperatives and awareness in the farmers about goat husbandry. For doing commendable work this unit also needs appreciation.</p>

Uttarakhand Local Goat Field Unit, GBPUA&T, Pantnagar, Uttarakhand

PI - Dr. Brajesh Singh, Professor (AB&B),

PC'S evaluation: 85-90% (Very Good)

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints /shortfalls / excess and reason thereof, if any	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<ul style="list-style-type: none"> • Survey • Baeline data collection. • Registration of farmers • Performance recording • Preventive health care. • Buck selection • Distribution of buck 	<ul style="list-style-type: none"> • Performance recording was carried out in 117 animals. • Body weight was recorded in 736 animals. • Milk yield recording was carried out in 363 does. • Baseline data is collected in 47 villages. • Twenty one bucks were distributed in the field. • Four awareness programmes were conducted. • Preventive health care were provided to 1021 animals. 	<ul style="list-style-type: none"> • Disease recording pattern is not proper • Trainings are not conducted to farmers. • Milk yield performance needs to be verified. 	<ul style="list-style-type: none"> • To register farmers, record the performance of goats, provide health care. • Selection of 30-50 bucks based on type of birth and weaning rate. • Buck distribution • Preventive health care 	<p>Disparity of data between total kids born and body weight recorded.</p>

(C)Financial/administrative performance

BUDGET ALLOCATION AND FUND PROVISIONS

For the financial year 2015-16, a total of Rs 495.88 lakhs was allocated as RE by ICAR New Delhi.

Table 7: Comprehensive Head wise RE for the financial year 2015-16

S. No	Head / Sub-Head	Other than NEH	NEH	TSP	Total
	CAPITAL				96.75
1	Works				96.75
A.	Land	0.00	0.00	0.00	0.00
B.	Building				58.00
(i)	Office building (Goat Sheds etc)	55.50	0.00	0.00	0.00
(ii)	Residential building	0.00	0.00	0.00	0.00
(iii)	Minor works	2.50	0.00	0.00	0.00
2	Equipments (Livestock Related)	35.75	0.00	0.00	35.75
3	Information Technology	0.00	0.00	0.00	0.00
4	Library books & Journals	0.00	0.00	0.00	0.00
5	Vehicles & Vessels	0.00	0.00	0.00	0.00
6	Livestock	0.00	0.00	0.00	0.00
7	Furniture & fixtures	1.00	0.00	0.00	1.00
8	Others	2.00	0.00	0.00	2.00
	REVENUE				407.95
1	Establishment Expenses				62.77
A.	Salaries				62.77
(i)	Establishment Charges	62.77	0.00	0.00	62.77
(ii)	Wages	0.00	0.00	0.00	0.00
(iii)	Overtime allowances	0.00	0.00	0.00	0.00
B.	Pension & other retirement benefits	0.00	0.00	0.00	0.00
C.	Loans & advances	0.00	0.00	0.00	0.00
2	Travelling allowances				35.05
A.	Domestic TA / Transfer TA	35.05	0.00	0.00	35.05
B.	Foreign TA	0.00	0.00	0.00	0.00
3	Research & Operational Expenses				300.31
A.	Research expenses	90.31	10.00	30.00	130.31
B.	Operational expenses (Salary of RA/SRF/Contractual Staff)	170.00	0.00	0.00	170.00
4	Administrative expenses				0.00
A.	Infrastructure	0.00	0.00	0.00	0.00
B.	Communication	0.00	0.00	0.00	0.00

C.	Repairs & maintenance				0.00
(i)	Equipments, vehicles & others	0.00	0.00	0.00	0.00
(ii)	Office building	0.00	0.00	0.00	0.00
(iii)	Residential building	0.00	0.00	0.00	0.00
(iv)	Minor works	0.00	0.00	0.00	0.00
D.	Others (excluding TA)	0.00	0.00	0.00	0.00
5	Miscellaneous expenses				1.00
A.	HRD	0.00	0.00	0.00	0.00
B.	Other items (Capacity Building of farmers etc.)	1.00	0.00	0.00	1.00
C.	Publicity & Exhibitions	0.00	0.00	0.00	0.00
D.	Guest House – maintenance	0.00	0.00	0.00	0.00
E.	Other miscellaneous	0.00	0.00	0.00	0.00
TOTAL		455.88	10.00	30.00	495.88

Table 8: Head-wise Progressive Budget allocation Actual and Expenditure from 2012-16

Head	2012-13 (Actual)	2013-14 (Actual)	2014-15 (Actual)	2015-16 (R.E)	2016-17 (B.E)
A. CAPITAL					
1. Works	0.00	5.00	5.00	0.00	0.00
A. Land	0.00	0.00	0.00	0.00	0.00
B. Building	0.00	0.00	0.00	58.00	20.00
(i) Office Building	0.00	0.00	0.00	0.00	0.00
(ii) Residential building	0.00	0.00	0.00	0.00	0.00
(iii) Minor works	0.00	5.00	0.00	0.00	0.00
2. Equipment	0.00	3.00	17.00	35.75	5.00
3. Information Technology	0.00	0.00	0.00	0.00	0.00
4. Library Books & Journals	0.00	0.00	0.00	0.00	0.00
5. Vehicles	0.00	0.00	0.00	0.00	0.00
6. Livestock	0.00	0.00	0.00	0.00	0.00
7. Furniture & fixtures	0.00	2.00	4.00	1.00	0.00
8. Others (specify)	0.00	0.00	0.00	2.00	0.00
Total Capital (A)	0.00	10.00	26.00	96.75	25.00
B. REVENUE					
1. Establish. expenses Salaries	139.33	155.00	103.00	62.77	85.00
i. Establish. Charges-Regular	139.33	155.00	0.00	0.00	0.00
ii. Establish. Charges-Arrears	0.00	0.00	0.00	0.00	0.00
2. Traveling Allowances	10.52	21.00	16.00	35.05	37.00
a) Domestic T.A.	10.52	21.00	16.00	0.00	0.00
b) Foreign T.A.	0.00	0.00	0.00	0.00	0.00

3. Research & Operational Expenses	124.65	160.00	186.00	300.31	338.00
a) Research	124.65	90.00	0.00	130.31	135.00
b) Operational	0.00	70.00	0.00	170.00	203.00
4. Administrative Expenses	0.00	0.00	0.00	0.00	0.00
a) Infrastructure	0.00	0.00	0.00	0.00	0.00
b) Communication	0.00	0.00	0.00	0.00	0.00
c) Repairs & Maintenance	0.00	0.00	0.00	0.00	0.00
5. HRD	0.00	7.00	0.00	0.00	0.00
a) Within India	0.00	7.00	0.00	0.00	0.00
b) Abroad	0.00	0.00	0.00	0.00	0.00
6. Other items, if any, (specify)	0.00	7.00	2.00	1.00	0.00
Total Revenue (B)	274.50	350.00	307.00	399.13	460.00
Grand Total (A+B)	274.50	360.00	333.00	495.88	485.00

Table 9: Head Wise Unit Wise Revised Estimate for the Financial Year 2015-16**(Rs. in Lakhs)**

S. No.	AICRP on Goat Improvement	Capital				Estt. Charges	General				Total
		Work	Equipment	Furniture	Others		TA	Contingency		Other (Cap. Build)	
								General	NEH/TSP		
1	PC Unit, CIRG, Mathura	0.00	3.00	0.00	0.00	0.00	3.00	5.09	0.00	1.00	12.09
2	Andaman Goat Unit, Port Blair	0	2.00	0	0	0	2.25	15.29	0.00	0.00	19.54
3	Assam Hill Goat Unit	2.50	3.25	1.00	0	0	2.50	16.82	10.00	0.00	36.07
4	Barbari Farm Unit, CIRG,	5.50	1.00	0	0	0	1.20	8.93	0.00	0.00	16.63
5	Bengal Goat Unit ,Ranchi	0	1.50	0	0	0	2.50	16.74	5.50	0.00	26.24
6	Black Bengal Goat Unit, Kolkata	1.00	1.75	0	0	6.70	1.40	14.85	3.50	0.00	29.2
7	Changthangi Goat Unit,	0.00	2.75	0.00	0.00	0.00	3.00	13.53	6.00	0.00	25.28
8	Gaddi Field Unit, Palampur	0.00	2.00	0.00	0.00	0.00	1.25	11.74	6.00	0.00	20.99
9	Ganjam Field Unit, OUAT,	0.00	2.00	0.00	2.00	2.70	2.00	20.62	0.00	0.00	29.32
10	Himalayan Goat Unit, IVRI,	4.50	2.00	0.00	0.00	0.00	2.25	12.75	0.00	0.00	21.5
11	Jamunapari Farm Unit, CIRG,	32.5	0.00	0.00	0.00	0.00	0.40	10.55	0.00	0.00	43.45
12	Malabari Field Unit, Kerala	0.00	1.75	0.00	0.00	12.65	1.00	14.75	0.00	0.00	30.15
13	Marwari Field Unit, Bikaner	0.00	1.75	0.00	0.00	6.70	1.80	13.52	0.00	0.00	23.77
14	Osmanbadi Unit,	0.00	1.75	0.00	0.00	0.00	2.10	18.73	0.00	0.00	22.58
15	Sangamneri Field Unit, Rahuri	0.00	1.50	0.00	0.00	20.52	2.05	17.35	0.00	0.00	41.42
16	Sirohi Farm Unit, Avikanagar	12.00	2.00	0.00	0.00	0.00	0.50	18.65	0.00	0.00	33.15
17	Sirohi Field Unit, Vallabhnagar	0.00	1.75	0.00	0.00	7.50	1.85	6.97	5.50	0.00	23.57

18	Surti Field Unit, N.A.U, Navsari	0.00	2.00	0.00	0.00	6.00	2.10	8.83	3.50	0.00	22.43
19	Uttrakhand Goat Unit, Pantnagar	0.00	2.00	0.00	0.00	0.00	1.90	14.6	0.00	0.00	18.5
Total		58.00	35.75	1.00	2.00	62.77	35.05	260.31	40.00	1.00	495.88
Grand Total		96.75				62.77	336.36				

Financial/administrative Proforma AICRP on Goat Improvement 2015-16

Name of centre	Year of Initiation	No. of sanctioned post and designation (Annexure -I)	No. of post filled (Annexure -I)	No of post vacant (vacant since when)(Annexure -I)	Funds released during the year (Rs. Lakhs) (ICAR share)	Previous balance (Rs. Lakhs)	Funds utilized (Rs. in Lakhs) (ICAR share)	Closing balance (Rs. in Lakhs)	Remarks by PC
PC Unit, CIRG	1972	13	6	-	12.09	0	11.22	0.78	Two SRFs were appointed in the project. One position of RA is still vacant.
Andaman Goat Hill		-	*	-	19.54	6.31	16.61	2.93	Revised AUC for 2014-15 has been submitted by the unit . Overall fund position is satisfactory.
Assam Hill Goat Unit (NEH)*	2009	-	*	-	36.07	0	47.93	-11.86	Excess funds are utilised by the unit. RE should be communicated timely.
Barbari Farm Unit	1993	6	3	3	16.63	0	12.09	4.54	The Unit need to exert more to utilise allocated fund within time as Rs. 4.54 lacs remain unspent this year.
Bengal Goats , Ranchi (TSP)*	2009	-	*	-	26.24	6.09	23.71	2.53	The unit has deployed sufficient scientific and supporting staff and has been able to utilize funds properly. Overall fund position is satisfactory.
Black Bengal Unit, Kolkata	2001	6	3	3	29.2	7.67	28.68	0.52	98.22% funds are utilised by the unit during the year.
Changthangi Goat Unit Leh,	2014	-	*	-	25.28	0	24.20	1.08	The fund has been provided to build the infrastructure, equipment to strengthen the unit.
Gaddi Field Unit *(TSP)	2009	-	*	-	20.99	0	19.22	1.77	Financial position of this unit is satisfactory and staff position is fine.
Ganjam Field Unit, OUAT, Bhubanaeshwar	2001	5	6	1	29.32	10.17	16.81	12.51	57.33% funds are utilised during the year. Rs. 8.09 lacs remain unspent under contingency head. The performance of the unit was evaluated during this year.
Himalayan Local Goat Unit Mukteshwar.	2014	-	*	-	21.5	1.79 56	10.67	9.62	This unit was strengthening by providing funds under work and equipment head. The unit needs to reorganise the facilities to carry out the technical programme.

Jamunapari Farm Unit	1993	7	6	1	43.45	0	42.12	0.43	96.94% funds are utilised by the unit during the year. Overall fund position is satisfactory.
Malabari Field Unit, Kerala	2001	5	6	Nil	30.15	0	36.65	-6.5	Financial position of this unit is satisfactory and staff position is fine.
Marwari Field Unit, Bikaner	1988	8	3		23.77	4.17	22.32	1.45	94% funds are utilised by the unit during the year.
Osmanabadi Unit*	2009	-	*	-	22.58	0	22.58	0	100% funds are utilised by the unit during the year. Financial and staff position is as per norms.
Sangamneri Field Unit	2001	7	7	Nil	41.42	-4.15	38.27	-1	Most of the funds are disburse under salary head. So it is not possible to pay salary from AICRP Unit. The university authorities are requested to redeploy the staff and pay the salary from university.
Sirohi Farm Unit, Avikanagar	1993	5	5	8	33.15	0	39.16	-6.01	The unit was provided 12.00 lacs under work head to renovate the existing sheds.
Sirohi Field Unit, RAJUVAS, Vallabhagar	2000				23.57	0	24.65	-1.08	Revised AUC for 2014-15 has been submitted by the unit. Overall fund position is satisfactory.
Surti Field Unit (TSP), NAU, Navsari	2000	5	2	5	22.43	4.28	22.59	-0.16	Revised AUC for 2014-15 has been submitted by the unit. Overall fund position is satisfactory.
Uttarakhand Local Goats	2014	-	*	-	18.5	3.04	14.71	3.88	They have refund back the whole amount. Rs. 6.09 lacs. The unit needs to be strengthened.

Note: *Work is being carried out through contract or through Research Associates, Senior Research Fellows etc.

** The information is enclosed in Annexure 1.

(D) Success Stories

1. Assam Hill Goat Field Unit, AAU, Khanpara, Guwahati

Mrs. Bhanu Kalita, W/o. Gurudev Kalita, Village: Nahira, Kamrup (Metro)

Mrs. Dipty Deka, has been living at Batabari village of Darrang district with her husband and two children, one boy and a girl. It was not easy for the family to carry on the life only with the wage of her husband. She enrolled herself as one of the beneficiaries of the “All India Coordinated Research Project on Goat Improvement” in the year 2009 with only two breeding does which has



increased to 27 healthy goats inspite of selling her goats at regular interval. She could sell around 9 goats during this report period with an income of around thirty five thousand. The AICRP on Goat Improvement has played an very important role to support her in all possible ways



and helped her a lot to improve her financial condition. Under the project, she has been receiving all the necessary veterinary cares viz. treatment, vaccination, feed etc. for her goats together with elite breeding buck for healthier future progeny. As a beneficiary of the project, Mrs. Deka has participated in various training

programs encompassing different aspects of goatery development which has upgraded her technical know-how in goat rearing. With all the knowledge and technical support from the project, her goatery has boomed from an infant stage to a presently flourished condition.

Mrs. Deka is very happy and leading a peaceful and busy life with her goats. She is very enthusiastic and looking forward to maintain her goat to present numbers and to sale her goats at regular interval to uplift her economic condition.

2. Andaman Goat Field Unit, ICAR- CIARI, Port Blair, A & N Island

Progressive Farmer: Smt. Ramjiyayi, Kodiyaghat, S. Andaman

Smt Ramjiyayi, aged 56 years, a resident of Kodiyaghat, South Andaman started goat farming with 5 goats about four years back. Presently, she is having a total of 23 goats which are being maintained in wooden shelter with pucca floor. During the field survey by the project staffs she was explained the mandates of the project and gladly agreed to be included in the project. After managerial intervention in feeding i.e. fodder supplement and mineral mixtures there is an increase in body weight of the goats and milk production in cows. She is very much interested about the scientific way of goat rearing and contacted the ICAR-CIARI for technical advice for improving the

productivity. ICAR-CIARI Scientists visited Smt Ramjiyayi's house and suggested the technical guidance regarding, feeding, housing, timely deworming, health management and selection of superior germplasm. With the constant support and guidance of ICAR-CIARI, she has increased her stock to 23 goats and is very much happy about the progress. She has started feeding mineral supplementation and doing regular deworming which has caused great impact in term of body weight gain and increase in reproductive efficiency. She informed that they are earning approximately Rs. 50000 per annum by selling of goats. With the earning from goat farming they have been supporting their family and are totally dependent on goat farming for livelihood.



3. Bengal Goat Field Unit, BAU, Kanke, Ranchi, Jharkhand

Sri Kishun Oraon is a marginal farmer of village Bantola, Chamguru, Dist Ranchi. He has two children besides his sister. He has passed matriculation. He was laborious student, but due to early demise of his parents and poor financial condition he cannot continue his studies and got married later on. Due to few means of earning i.e. agriculture his family face very hardship. So he was forced to work as labourers. By seeing other landless and marginal farmers keeping goats in consultation of our Chamguru center. One day his wife suggested him to keep goats for subsidiary income.

He purchased two female goats in 2012. After one year he got 2 adult male goats from which he got Rs 6500=00 form its sale. This additional income made him to think for keeping more goats. So he had purchased four more adults female goats but at the same time he encounters death of 2 goats.

In order to check the mortality and morbidity he comes to us for training on goat rearing. Kishun Oraon thus came to our contact. He has also taken 3 days training at RVC goat farm. We provided him health care like dipping, deworming, vaccination and supplementary feeding. His flock grew and grew and at present he has 25 heads with no death since last two years. He is now earning Rs 70000-75000 per year. He is using this amount for education of his children and wellbeing of his family.

4. Malabari Goat Field Unit, KV&ASU Mannuthy, Thrissur, Kerala

Breed savior award winner – 2015

Name of Livestock Keeper: Sri. Manoharan
Full Address: Kovilakaththazhakkuni, Thiruvulloor, Badagara.
Phone: 09495755047

Family Details:

Name	Sex	Age	Education	Occupation	Relationship
Sri. Manoharan	M	39	Std 7	Goat keeping, Coolie	Self
Smt. Rajitha.	F	32	Pre-degree	Toddy tapper	Wife
Aswin	M	14	Std 9	Student	Son
Anunanda	F	11	Std 6	Student	Daughter



Sri.Manoharan, Kovilakaththazhakkuni, Badagara a coolie labourer, owner of 36 cents of land started goat rearing a decade ago as a small unit with few does, since he didn't have a consistent job in the sector. After few years the productivity of the goats reduced abruptly, the kids born were weak and were susceptible to diseases and eventually led to a great loss. Subsequently AICRP registered the farmer as a beneficiary and provided superior bucks to him and created awareness about the consequences of inbreeding and importance of buck rotation. He is now rearing a unit of 40 goats with the advice of AICRP on Malabari goat and started to realize the potential of sustained income. He earns a good income of about Rs.9000/month through the sale of kids, milk and manure.

5. Osmanabadi Goat Field Unit, NARI, Phaltan, Maharashtra

Goat rearing of Mrs. Vijaya Dadaso Mandale

Mrs. Vijaya Dadaso Mandale of Alkud is an excellent goat keeper and is helping her family by earning about 75% of the family income through Osmanabadi goat keeping for the last 20 years. She has always kept 10-12 adult goats in her flock and earned good income by selling their kids.

- **The beginning:** As the family has only 5 are land, Mrs. Vijaya Mandale decided to do goat rearing full time. Her husband Mr. Dadaso Mandale works as a labourer on constructions or other farmers' farms. But, there is no surety of getting this work. Therefore, income from goat rearing is the main source of income for them.

- **Goat management:** Goats of Mrs. Mandale are completely dependent for grazing on nearby wastelands, hills, plateaus and crop residues. Every morning at 10 am she takes her goats for grazing and till 6.00 pm she tries to source maximum and good fodder for goats. Before the goats are taken for grazing and after they return, the whole family helps with suckling of kids to their dams, administering home remedies to sick animals and giving fodder and water to the young kids that are kept at home. Kided goats are given supplementary feed till kids become 4 months of age. Their annual expenditure on supplementary feed is as given in the table below.

Annual expenditure on supplementary feed

Supplementary feed type	Rate per Kg (Rs.)	Quantity used per year (Kg.)	Total expenses (Rs.)
Maize	15/-	200	3000/-
Wheat from the Public Distribution System (under Food Security Scheme)	2/-	100	200/-
Total			3200/-

- Due to supplementary feed given to kided goats, they have abundant milk resulting in rapid growth of kids and hence she can sell the kids early.
 - The total cost of supplementary feed for about 10 goats is Rs.3, 200/-, which means Rs.320/- per doe per year and 90 paise daily per doe. According to Mrs. Mandale, these expenses are negligible and this also helps in a reduction in the kidding interval of goats.
 - She maintains only regularly kidding does and their female kids for further breeding and culls the rest.
- **Sales management:** Miraj is a good market for goat keepers of Alkud (M) and nearby villages to get good rates for their goats. Every Wednesday local traders from Miraj as well as from Karnataka and Andhra Pradesh come for purchase. Plenty of vehicles are available in Miraj therefore the cost of taking a goat to the market is the same as the ticket for a person (Rs.25).

Details of kids sold by Mrs. Mandale for the last two years

Year	Total kids sold	Price per kid (Rs.)	Total sale proceeds (Rs.)
2013-14	15	4000/- to 5000/-	70,000/-
2014-15	16	2000/- to 2500/-	35,000/-
2015-16	18	4000/- to 5000/-	81,000/-

- In 2014-15, 20 kids were born but 4 died and remaining 16 were sold. The Osmanabadi Field Unit had not adopted this village at that time and there was no good breeding buck in the village. Three goat keepers brought a buck from a nearby village, as it was available for free. The buck was of

poor quality (mixed in colour, poor health, jungle). Hence the majority of kids born during that time were tiny, unhealthy and poor quality and fetched a much lower price. In 2015, the Osmanabadi Unit has given four excellent Osmanabadi bucks to the village and as a result, this year's kid crop is excellent.

- The Mandale family has built a house of two rooms and a good quality pen for goats. Her children are obtaining higher education. Her elder daughter completed education and got married, younger daughter is studying in B.Sc. (Agri) and her son is in class 12 (Science). Most importantly, she has improved her financial status without receiving any government help for goat rearing.

Her annual income from goat rearing in 2015-16 after deducting the cost of Rs.3200/- spent on supplementary feed and medications is Rs.77,800/-. It means she earns Rs.6483/- per month i.e. Rs.213/- per day. This is 60% more than the daily wage rate for women labourers. As NARI is providing good quality bucks for breeding and medication in time, she hopes to earn an income up to one lakh rupees annually.

6. Gaddi Goat Field Unit, HPKVV, Palampur, Himachal Pradesh

Sardaru Ram S/o Sh. Hirdu Ram, Vill. Sughar, P.O. Tea Estate Bandla, Palampur, Kangra(H.P)

Sh. Sardaru Ram is a traditional goat rearer belonging to Gaddi community of Kangra District of the state. He is involved in this occupation for last 10-15 years. He had a flock size of 70 goats at the time of inclusion in the project. During survey while interacting with the project staff the farmer had opined that goat rearing in the state is becoming difficult for traditional goat rearers mainly due to decrease in pasture areas, increase in wild animal attacks, and theft during migration, disease losses and decline in profitability productivity. Further there is lack of institutional and Government support especially for better breeding efficiency.



Sh Sardaru Ram was explained the mandates of the project and he gladly agreed to be included in project as one of the field units. After managerial intervention in feeding (feed and mineral mixtures), health (vaccination and routine health check up during migration) and breeding (superior

buck) for two year after initial implementation of the project, there is increase in productivity as reflected by gradual increase in various growth traits and reduction in mortality especially pre weaning, which eventually resulted increase in profitability as comparatively higher young ones reached marketable age and flock size increased from 70 to 110. An increase in kid survival rate due to decrease in pre weaning and post weaning mortality is being observed which in turn has led to profitability and net income through selling of surplus stock. The farmer is earning approximately Rs. Four lakh per year through selling of surplus stock (approx. Rs. 6500 to 7000 per pair of kid). The farmer is now taking keen interest in his goat farming activities and is quite satisfied with the progress of his flock.

1. Project Co-ordinating unit, ICAR-CIRG Makhdoom, Mathura

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Project coordinator – 1 Senior Scientist – 1 Scientist – 1 Sr. programmer – 1 Sr. computer – 1 Jeep driver - 1 Assistant administrative officer – 1 Assistant account officer – 1 Office superintendent – 1 Jr. stenographer - 1 Junior Clerk – 1 Livestock Attendant – 1 Messenger - 1	Dr. P.K.Rout, PS (AG&B) has been designated as In charge AICRP by ICAR as his additional duty. Dr.M.S Dige, Scientist is also associated as a part timer with PC Unit. Assistant Administrative Officer Technician T-II Livestock Attendants -1 SRF(Management)-1 SRF(Computer Application)-1	The project coordinator's post has been withdrawn and director of the institute also worked as a project coordinator. Other posts are vacant
Comments	A post of RA could not be filled in spite of requisition sent to this effect. The PC unit and two associate Unit need higher cooperation in utilising fund, posting staff, purchasing goods etc.		

2. Barbari Unit, ICAR-CIRG Makhdoom, Mathura

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Senior Scientist – 1 Assistant Farm Manager – 1 Livestock Assistant - 2 Lab. Attendant – 1 Junior Clerk – 1 Livestock Attendant - 17	Senior Scientist – 1 Livestock Assistant – 1 Young Professional - 1 Livestock Attendants – 13	Assistant Farm Manager – 1 Livestock Assistant – 1 Lab. Attendant - 01 Junior Clerk – 1 Livestock Attendants – 3
Comments	One SRF and 3 supporting staff have been provided to carry out the technical programme.		

3. Black Bengal Unit, Kolkata

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Senior Scientist – 1 Veterinary Officer— 1 Tech. Asstt. – 2 , RA – 1 SRF – 1, Clerk – 1	Three faculty staff is associated with the unit Tech. Asstt. – 3 , Clerk – 1 RA – 1 SRF – 1	Veterinary Officer-1
Comments	The salary fund provided to them could not be utilised by the Unit. This unit need to reallocate staff and do more to fulfil its obligations.		

4. Ganjam Unit, OUAT, Bhubaneswar

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Senior Scientist – 1 Vety Officer-1 Tech Asstt. – 1 Livestock Asstt.- 3 Clerk-1	Senior Scientist – 1 Tech Asstt. – 1 Clerk-1 SRF-2 Data Enumarators- 5	Vety. Officer-1 Livestock Asstt.- 3
Comments	Funds are not utilised in time frame manner, unutilised funds are not returned back in time to CIRG. The Unity is under scrutiny.		

5. Jamunapari Unit, ICAR-CIRG, Makhdoom

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Senior Scientist – 1 Scientist – 1 Assistant Farm Manager –1 Livestock Assistant – 2 Lab. Attendant – 1 Clerk – 1 Livestock Attendant – 19	Scientist – 1 Technical Staff – 3 Lab Attendant – 1 Livestock Attendant – 14	Assistant Farm Manager –1 Livestock Attendants – 3
Comments	One SRF and 3 supporting staff have been provided to carry out the technical programme.		

6. Malabari Unit, Thrissur, Kerala

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Senior Scientist/Associate Professor- 1 Asst. Professor/(Veterinary Officer)- 1 Technical Officer - 1 Livestock Assistants- 3 Jr. clerk - 1	Senior Scientist/Associate Professor- 1 Asst. Professor/(Veterinary Officer)- 1 Asst. Grade II- 1 Senior Research Fellow- 1 Livestock Assistants- 3	Technical Officer Gr.II- 1 (since July 2012)

7. Marwari Unit, RAJUVAS, Bikaner

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Sr. Scientist-1 Veterinary Officer-1 Fam manager- 1 Jr. technical officer-1 Livestock Assistant -3 Livestock Attendant .- 5	Sr. Scientist-1 Veterinary Officer-1 SRF-2 Livestock Assistant -5(contract basis)	Fam manager- 1 Jr. technical officer-1
Comments	The University authorities need to examine staff posted and reshuffle them on the basis of their performance. The performance is not at par with other units therefore, immediate action is required to depute staff who can undertake project work. properly		

8. Sangamneri Unit, MPKV, Rahuri, Maharashtra

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Senior Scientist- 1 Veterinary Officer-1 Technical Assistant -1 Livestock Assistant -3 Jr. Clerk-1	Senior Scientist- 1 Veterinary Officer-1 Technical Assistant -1 Livestock Assistant -3 Jr. Clerk-1	Nil
Comments	The salary component of staff is extremely high. The University was requested to reshuffle staff to reduce financial burden.		

9. Sirohi Unit, ICAR-CSWRI, Avikanagar, Rajasthan

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Senior Scientist – 1 Scientist - Four Assistant Farm Manager –1 Farm manager-1 Livestock Assistant - 2 Office suptd. - 1 Junior Clerk – 1 Livestock Attendant - 15	Senior Scientist – 4 Assistant Farm Manager –1 Farm manager-1 Other work is done on contract basis	Livestock Assistant - 2 Office suptd. - 1 Junior Clerk – 1 Livestock Attendant - 15
Comments	The Unit was taking its staff from non-plan budget of CSWRI and erstwhile WRRIC of CIRG. The Institute, it appears has withdrawn the staff and undertaking work on contract basis, therefore demanding extra money from contingency grant.		

10. Sirohi Unit, RAJUVAS, Vallabhnagar (Raj.)

Particulars	Detail	No. of posts filled	No. of posts vacant (vacant since when)
No. of sanctioned posts and designation	Senior Scientist- 1 Veterinary Officer-1 Technical Assistant -1 Livestock Assistant -3 Jr. Clerk-1	Senior Scientist- 1 Veterinary Officer-1 Technical Assistant -1 Livestock Assistant -3 Jr. Clerk-1	--
Comments	Staff position if fine.		

11. Surti Unit, NAU, Gujarat

Particulars	Detail	No. of posts filled	
No. of sanctioned posts and designation	Senior Scientist- 1 Veterinary Officer-1 Technical Assistant -1 Livestock Assistant -3 Jr. Clerk-1	Senior Scientist- 1 Jr. Clerk-1 Work is being carried out through contractual staff.	Veterinary Officer-1 Technical Assistant -1 Livestock Assistant -3
Comments	The Unit is not provided with Data Enumerator and they need to post Data Enumerator in all adopted village for proper data recording.		

**ICAR-Central Institute for Research on Goats
AICRP on Goat Improvement
Makhdoom, Farah, Mathura 281122 UP, INDIA**

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Proceedings

The 15th Annual Review Meet of AICRP on Goat Improvement held at ICAR-Central Institute for Research on Goats (Mathura) on Sept 7-8, 2015

At the outset, in the inaugural session Dr S. K. Agrawal, Director, CIRG, Farah, Mathura welcomed Dr KML Pathak, DDG (AS), Dr R. S. Gandhi, ADG (AP&B), Dr Arjava Sharma, Director, NBAGR, Karnal, Dr SMK Naqvi, Director, CSWRI, Avikanagar, Dr Vineet Bhasin, Principal Scientist, ICAR, all the in charges of AICRP units, I/C AICRP on Goat Improvement and scientists of the institute. The programme was started with invocation and the lighting of lamp. Dr S K Agarwal, Director CIRG presented briefly the achievements of this project and the institute. Dr R. S. Gandhi, ADG (AP&B) in his inaugural deliberation emphasised on research on goat improvement through self-help groups, formulation of multiplier flocks, conservation of threatened goat breeds, value addition of goat milk and meat, capacity building of stakeholders and development of package of management practices. Dr KML Pathak, DDG (AS) in his address congratulated the CIRG for the significant achievement of the goat improvement project contributing toward higher productivity in terms of higher body weight gain and milk yield. Dr KML Pathak in his inaugural deliberation emphasised to work towards conservation of goat breeds, better value addition and popularizing goat milk. Dr KML Pathak, DDG (AS) released PC report, CIRG at a glance along with Sirohi Bakari Palan book.

The inaugural session ended with vote of thanks by Dr S K Singh, Principal Scientist and I/C AICRP, CIRG, Farah, Mathura.

The technical session I was chaired by Dr KML Pathak, Co-chaired by Dr S.K. Agarwal, Director, CIRG and Dr R S Gandhi, ADG (AP&B). Dr. M.K. Singh and Dr. P. K. Rout was the Rapporteur for this session. The PC report was presented by Dr. S. K. Singh, I/c AICRP

on Goat improvement. The research output, evaluation of performance, budget Utilization, etc. were presented and discussed in detail.

The technical session II was chaired by Dr.R S Gandhi, ADG (AP&B) co-chaired by Dr Arjava Sharma, Director, NBAGR. Dr M S Dige was the Rapporteur for this session. Assam Hill Goat Field Unit, Khanpara, Black Bengal Field Unit, Kolkata, Black Bengal Field Unit, Ranchi, Gaddi Field Unit Palampur, Ganjam Field Unit, Bhuvneshwar, Malabari Field Unit, Trichur, Marwari Field Unit Bikaner and Osmanabadi Field Unit, Phaltan, Sirohi Field Unit Vallabh Nagar, Surti Field Unit, Navsari Himalayan Local Goats, IVRI, Mukteshwar, Uttarakhand Local Goats, GBPUA&T, Pantnagar, Andaman Goat Unit, CARI, Port Blair, Changthangi Goat Unit, SKUAST-K, Leh (J&K), Barbari farm Unit, CIRG, Makhdoom, Jamunapari Farm Unit, CIRG, Makhdoom and Sirohi Farm Unit and CSWRI Avikanagar presented the progress report for the year 2014-2015. Following recommendations were emerged from deliberations.

MAJOR RECOMMENDATIONS:

- 1.** PC unit should provide proforma for identification and characterisation of the breed especially for new centres. Format for identification and characterization developed by NGABR for goat will be used and will be circulated to all the PI of each unit in October, 2015 **for future use.** (Action: I/c AICRP)
- 2.** PC unit should provide proforma for the socioeconomics survey to all the units and all units should carry the socioeconomic survey and impact assessment. The proforma for base line data collection, socio-economic analysis, and economics of goat rearing will be circulated within November, 2015. (Action: I/c AICRP)
- 3.** There should be uniform proforma for the Annual report as well as power point presentation. Format for Annual Report and power point presentation have been circulated earlier; however the same will be circulated by end of December, 2015. (Action: I/c AICRP)
- 4.** All the units will carry out proper data analysis and interpretation and genetic progress. (Action: PI of All the AICRP units)
- 5.** All the units should submit the annual report by end of April and AUC by 31 July. (Action: PI of All the AICRP units).
- 6.** All units should develop at least 3 monographs/leaflets per year in local language and distribute them to the farmers. (Action: PI of All the AICRP units).

7. All units should submit the budget utilization and fund position quarterly. (Action: PI of All the AICRP units).
8. Action Taken Report (ATR) should be presented in tabular format. (Action: I/c AICRP and Unit In-charges)
9. The status paper on each breed **may be prepared** by each unit by 31 March, 2016. (Action: PI of All the AICRP units).
10. **PC should ensure timely release of funds to the unit after receipt of funds from ICAR HQRs.** (Action: I/c AICRP)
11. Semen preservation of improved buck should be initiated by all the units and **ensure required doses to NBAGR, Karnal.** (Action: **All units of AICRP**)
12. PC unit should organise trainings to the project workers (RA, SRF, Technical Officers, Data enumerators, Veterinary Officer) at CIRG on different aspects of Scientific Goat Rearing. Two trainings will be organised by the PC Unit on breed characterization, data **recording and economic impact analysis.** (Action: I/c AICRP)
13. Information on anthelmintic resistance and physiological response needs to be collected for each region.(Action: **all units on consultation with CIRG, Makhdoom**)
14. The letter **may be written to VC's of the respective universities regarding poor performance of Marwari Unit, Bikaner and Ganjam Unit, Bhubaneswar under intimation of ICAR HQRs.**(Action: Director, CIRG)
15. A 30 minute film on AICRP goat **may be shot and completed by 2016.** (Action: I/c AICRP)

UNIT-WISE RECOMMENDATIONS:

i. Assam Hill Goat Field Unit, Khanpara (Assam)

The report was presented by Dr. N. Nahardeka, PI, Assam Hill Goat unit. The unit has adopted Batabari (Dighirpar) of Darrang district and Khetri of Kamrup district of Assam as the four field clusters under the project covering 209 beneficiaries. The unit has shown considerable improvement in goat production. Following recommendations have been made.

- i. The per doe productivity should be estimated.
- ii. Estimation of **variance**/covariance components for different traits.

- iii. Impacts analysis of improved breeding and socioeconomic studies should be carried out and documented.

2. Black Bengal Field Unit, Kolkata

The report was presented by Dr. Uttam Sarkar, Co-PI of the project, WBUAFS, Kolkata. A new village Beliapukur with 86 does of Murshidabad district was adopted in collaboration with KVK, Digha. He indicated the budget constraints in salary head. Performance of the unit was not satisfactory. Following recommendations have been made.

- i. Efforts should be made to improve the production performance of goats in adopted area.
- ii. The Audit Utilization Certificate should be submitted in **requisite** format.
- iii. The genetic parameter such as heritability **should be** was not properly estimated and estimation of **variance**/covariance components for different traits **also** needs to be **done**.
- iv. The number of CO-PI in the project should be reduced and work should be assigned to each CO-PI in the project.
- v. Work should be carried out strictly as per technical programme.
- vi. **In charge AICRP may visit the farm and submit his report regarding the performance of farm to council latest by 30th November, 2015.**

3. Black Bengal Field Unit, Ranchi

The report was presented by Dr. L. B. Singh, PI, Black Bengal Field Unit, Ranchi. There are four clusters namely in Beko (Jamshedpur), Plajori (Deoghar), Tiko (Lohardaga) and Chamguru (Ranchi). They informed that during a year 46 bucks were exchanged between centers to avoid inbreeding. Regular health care facilities, vaccination and dipping have been provided to the flocks. Performance of the unit was satisfactory. Following recommendations have been made.

- i. Estimation of **variance** /covariance components for different traits.
- ii. Impacts analysis of improved breeding and socioeconomic studies should be carried out and documented.
- iii. The unit should adopt farmers with bigger flocks and include areas where the animals have comparatively higher body weights.

4. Gaddi Field Unit, Palampur

Dr. P. K. Dogra, Prof. (Animal Breeding) and Uncharged of the unit presented the report. Because of migratory nature of flocks it was difficult to follow up goats during migration. He informed that unit had purchased 25 male kids from the migratory farmers flock for production of breeding bucks and 16 breeding bucks were distributed to the farmers after final selection. He also presented performance of Gaddi goats in field area. The performance was satisfactory. Following recommendations have been made.

- i. Unit should **purchase and** exchange goats from different regions **for distribution** to the farmers.
- ii. Unit should devise mechanism to follow-up goats during migration for performance recording and for the provision of requisite technical inputs.
- iii. The unit should outline new plans for the farming society the regions in coming years.

5. Ganjam Field Unit, Bhubaneswar

Dr. D.K. Karna, In charge of Ganjam unit presented the report. The unit has adopted three new villages Bharasa, D Guhariapat and K Guhariapat in the Khallikote cluster. The unit was able to provide adequate health control measures. Because of large flocks, and bushy landscapes, animal identification was a little problem. **Performance of the unit was not satisfactory.** Following recommendations have been made.

- i. Animal identification and performance recording should be followed as per technical programme and need to be relooked and checked at regular intervals
- ii. Authentication of the recorded data should be **ensured.**
- iii. Estimation of **variance**/covariance components for different traits.
- iv. Impacts analysis of improved breeding and socioeconomic studies should be carried out and documented.
- v. **In charge AICRP may visit the farm and submit his report to council latest by 30th November, 2015.**

6. Malabari Field Unit, Thrissur

Dr. Thirupathy Venkatachalapathy, PI, Malabari Field Unit, Thrissur presented the report. The project is **being undertaken** in six field centers viz. Thalassery, Badagara, Tanur, Parambra, Thalaiparamba and Kottakkkal located in the North Kerala. During the year 16 training sessions were conducted **for** 395 farmers and Samagrerafoat village scheme has

been launched to establish 20 elite Malabari goats breeding units. The performance is satisfactory. Following recommendations were made.

- i. Efforts should be made to adopt farmers with larger flock size and socioeconomically backward regions.
- ii. The tuppung percentage is very low, unit should educate farmers regarding heat detection and encourage them to increase flock size.
- iii. Estimation of with 86 Does **variance**/covariance components for different traits.
- iv. The AUC need to be submitted timely.

7. Marwari Field Unit, Bikaner

The report was presented by Dr. G.C. Gahlot, PI of Marwari Field Unit. The discussion was on part of budget and salary head. One new centre has been established in Dalalsar village of the Churu district. The Performance of Unit was satisfactory and the following recommendations have been made.

- i. Proper animal identification, pedigree recording should be carried out on priority.
- ii. Performance recording should be done on the basis of actual age and not on dentition pattern.
- iii. Validation of milk production and growth and reproduction records should be done.
- iv. Impacts analysis of improved breeding and socioeconomic studies should be carried out and documented.

8. Osmanabadi Field Unit, NARI, Phaltan

The report was presented by Dr. Chanda Nimbkar, PI of the project. She presented the body weight growth, milk and reproduction data. The unit works in four village clusters Wadgaon in Solapur district, Kamone in Solapur district and Sakat and Borls in Ahmadnagar district. Training of village level project staff and interested goat owners in goat health and providing first-aid were conducted. This unit has started using and disseminating AI technology in field. The performance of the unit was satisfactory and following recommendations were made.

- i. The Unit should have at least three clusters in the home tract of the breed.
- ii. Superior animals should be purchased from the farmers and reared for buck production.
- iii. Large number of goats should be included in the project.

- iv. AI should be validated under field condition.

9. Sangamneri Field Unit, Rahuri

Dr. S. Mandakmale, PI of the Unit presented the report including data on body weight growth, milk and reproduction. The unit works in four clusters viz. Sangamner, Shrirampur, Rahuri and Belha located in 3 districts Ahmadnagar, Nashik and Pune. It was observed that the data needs to be properly analysed for different traits and covariance component should be estimated. The unit should distribute fresh bucks for replacing old bucks. The performance of the unit was satisfactory and following recommendations were made.

- i. Unit should produce bucks for breed improvement in **the** home tract.
- ii. Impact analysis should be carried out.
- iii. Impacts analysis of improved breeding and socioeconomic studies should be carried out and documented.
- iv. Estimation of **variance**/covariance components for different traits.

10. Sirohi Field Unit, Vallabhnagar

The report was presented by Dr. R.K. Nagda, Incharge Sirohi unit. The performance was observed to be satisfactory and the following recommendations were made.

- i. **Expenditure should not exceed the budget allotted to this unit.**
- ii. Animal Identification, pedigree and performance recording should be continued.
- iii. The unit should produce and supply more number of elite bucks to farmers and other agencies.
- iv. Estimation of **variance**/covariance components for different traits.
- v. This unit should actively collaborate with Sirohi **breed** Farm Unit at CSWRI, Avikanagar.

11. Surti Field Unit, Navsari

Dr. K. K. Tyagi, In charge of the Surti unit presented the report. The unit has shown significant improvement. The area covered under project has got further scope for improvement. The lactation performances of goats were recorded. The performance of the unit was satisfactory and the following recommendations were made.

- i. The animal identification need to be implemented immediately.
- ii. Efforts should be made to strengthen goat breed society in the area.

- iii. The provision for money Rs 5000-6000 may be utilized from contingency for the formation **and registration** of cooperative societies to maximum 1 lakh per year.
- iv. Write a booklet on the scientific development of surti goat.

12. Barbari Farm Unit, ICAR-CIRG Makhdoom

Dr. M.K. Singh, in charge Barbari unit presented the report. Performance of present generation goats was compared with **the** base population. Improvement was observed in growth and lactation traits. The pedigree analysis was done **on date** for 16 generation data and inbreeding was estimated. Performance was satisfactory and the following recommendations were made.

- i. Efforts should be made to utilize budget.
- ii. The Unit has to adopt two–three progressive farmers/NGOs for evaluating breed performance in farmers flock. Necessary funds from allocated budget may be used for this purpose.
- iii. Estimation of **variance**/covariance components for different traits.

13. Jamunapari Farm Unit, ICAR-CIRG Makhdoom

The report was presented by Dr. P.K. Rout, PI of the project. The comparative performance over the years was presented. Improvement was observed in growth and lactation traits and **the** performance was satisfactory. Based on the discussions following recommendations were made.

- i. Efforts should be made to utilize budget provided to unit.
- ii. The Unit has to adopt two–three progressive farmers/NGOs for evaluating breed performance in farmers flock. Necessary funds from allocated budget may be used for this purpose.
- iii. Estimation of covariance components for different traits.
- iv. The performance was satisfactory.

14. Sirohi Farm Unit, ICAR-CSWRI, Avikanagar

The report was presented by Dr. S.S. Misra, Incharge of the unit. A comparison was made for body weight growth and milk production over the years. Performance was satisfactory. The following recommendations were made.

- i. The unit needs to improve the performance of animals.
- ii. The unit needs to improve the **animal** housing and staff constraints.

- iii. This unit should actively collaborate with Sirohi field unit at Vallabhnagar.
- iv. The Unit has to immediately adopt farmers and two–three KVK's for validation of technologies and breed improvement in farmers flock.

15. Uttarakhand Goat Unit, GBPUA&T, Pantnagar

The report was presented by Dr. Rajesh Singh, PI of the project presented the performance recording and baseline data collection regarding the newly registered Pantja goat. The performance was satisfactory. Based on the discussions following recommendations were made.

- i. The unit should document the economic status of the goat farmers.
- ii. The unit should start to select 30-50 superior bucks based on type of birth and weaning weight.
- iii. The unit needs to improve the housing and infrastructure in timely manner.

16. Changthangi Goat Unit, SKUAST-K, Leh

The report was presented by Dr. Feroz Seikh, PI of the project presented the performance recording of the Changthangi goat. The performance was satisfactory. Based on the discussions following recommendations were made.

- i. The unit should document the economic status of the goat farmers.
- ii. The unit should start to select 30-50 superior bucks based on type of birth and weaning weight.
- iii. The unit needs to improve the housing and infrastructure in timely manner.
- iv. The reasons mortality in kids should be checked/ analyzed.
- v. The selection criteria in breed should be finalized.

14th Annual Review Meet ended with vote of thanks by I/C PC Dr. S. K. Singh On this occasion Hon'ble ADG and Director CIRG gave their blessings to all units.

List of Participants

S. No	Name of Participant
1.	Dr. K. M. L. Pathak, DDG (AS), ICAR, New Delhi
2.	Dr. R S Gandhi, ADG (AP&B), ICAR, New Delhi
3.	Dr. S. K. Agarwal, Director , ICAR-CIRG, Makhdoom, Farah, Mathura
4.	Dr. Arjava Sharma, Director, NBAGR, Karnal
5.	Dr SMK Naqvi, Director, ICAR-CSWRI, Avikanagar
6.	Dr. Vineet Bhasin, Principal Scientist(AG&B) , ICAR, New Delhi
7.	Dr. S. K. Singh, I/C AICR, ICAR-CIRG, Makhdoom, Farah, Mathura
8.	Dr. Chanda Nimbkar, Osmanabadi Field Unit, Phaltan –(MH)
9.	Dr. M. K. Singh, Pr. Scientist, ICAR-CIRG
10.	Dr. S. P. Dixit, Pr. Scientist, NBAGR
11.	Dr. P. K. Rout, Pr. Scientist, ICAR-CIRG
12.	Dr. Sanjay Mandakmale, Senior Scientist, Sangamneri Field Unit, MPKV, Rahuri
13.	Dr. G.C. Gahlot, Marwari Field Unit, Bikaner (Rajasthan)
14.	Dr. L.B. Singh, Black Bengal Field Unit, Kanke Ranchi
15.	Dr. Jay Sundar, ICAR-CIARI, Port Blair
16.	Dr. R.K. Nagda, Sirohi Field Unit Vallabh Nagar Udaipur Raj.)
17.	Dr. D.K. Karna, Ganjam Field Unit Bhubaneswar (Orissa)
18.	Dr. Mahesh Dige, Scientist, PC Unit, ICAR-CIRG
19.	Dr. P. K. Dogra, Gaddi Field unit Vidyalaya Kangra Palampur (HP)
20.	Dr. N. Nahardeka, Assam Hill Field unit , Burnihat, Kamrup (Assam)
21.	Dr. S.S. Misra, Sirohi Unit Avikanagar–(Via-Jaipur) Tonk (Raj.)
22.	Dr. D. V. Singh, Prof GBPUAT, Pantnagar
23.	Dr. Thiruparthi Venkatechalapathy, Malabari Field Unit, Wayanad (Kerala)
24.	Dr. Uttam Sarkar, Black Bengal Field Unit, Balgachia, Kolkata (WB)
25.	Dr. Brajesh Singh, Prof., GBPUA&T, Pantnagar
26.	Dr. A. K. Sharma, ICAR-IVRI, Mukteshwar
27.	Dr. Kuldeep Tyagi, Surti Field Unit, Navsari

28.	Mr. Pravesh Sethi, PC, Unit, ICAR- CIRG
29.	Mr. Shantanu Kumar Singh, PC Unit, ICAR-CIRG
30.	Madhumita Singh, PC Unit, ICAR-CIRG
31.	Mr. C S Sagar, PC Unit, ICAR-CIRG